Improving Oral Health Services Utilization Among WV's Perinatal Eligible Populations

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Presenter Disclosures

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(1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose

There are two ways to live your life.

One is as though nothing is a miracle.

The other is as though everything is a miracle

-Albert Einstein

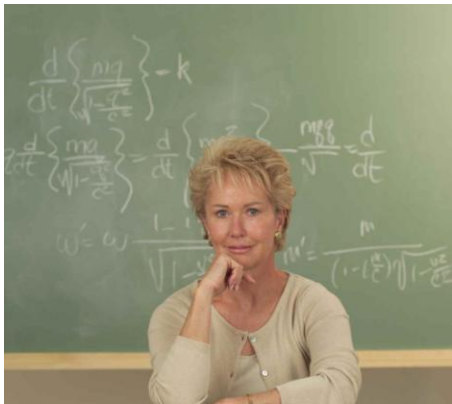
Almost heaven…..

-Became separate state in 1863
-Coal Mining and Tourism
-Total Population- 1,808,344
-Famous West Virginians; Mary Lou Retton, Jennifer Gardner, Don Knotts, Chuck Yeager, Kathy Mattea, and Jerry West

The Greenbrier

WV Economics

- Total Population; 1,808,344
- Unemployment Rate is 8.9%
- Median Household Income is $46,560
- Leading Single Employer; State of WV followed by Wal-mart
- 14% of Adults hold a Bachelor Degree or Higher
- 95% of total population is Caucasian



Forbes.com Cost of Doing Business – US Census 2008

WV at Glance

Since 1990 there are 20,000 live birth annually-

- Over ¼ (27.2%) are born to mothers that smoked
- 9.7% of all births were low birth weight
- 12.4% of all births were pre-term

WV at a Glance continued

- Of the 2,020 low birth weight 67.7% were pre-term (1,367)
- Over half are funded by Medicaid
- In 2005, 27.7% of women of childbearing age were obese

Snapshot of birth outcomes in WV

In an average week in West Virginia:

- 56 babies are born preterm (less than 37 weeks)
- 9 are born very preterm (less than 32 weeks)
- 37 are born low birthweight (less than 2500 g or 5.5 pounds)
- 6 are born very low birthweight (less than 1500 g or 3.3 pounds)

Source-Peristats, March of Dimes

Scope of the Problem

- In WV, between 1994 and 2004, the rate of infants born preterm increased 31%.
- Risk factors (medical, behavior and environmental and genetic)

Note: Causes of preterm labor and delivery are likely due to multiple risk factors as opposed to any single isolated risk factor.

Source-Peristats, March of Dimes

Preterm Birth and Low Birth Weight Lifestyle and Environmental Risk Factors

- Lack of, Poor or Late prenatal care
- Smoking
- Alcohol
- Domestic Violence- physical ,sexual or emotional abuse
- Lack of social support
- Stress
- Long working hours with long periods of standing

Source: Oral Health Care during Pregnancy and Early Childhood Practice Guidelines, New York State Department of Health August 2006

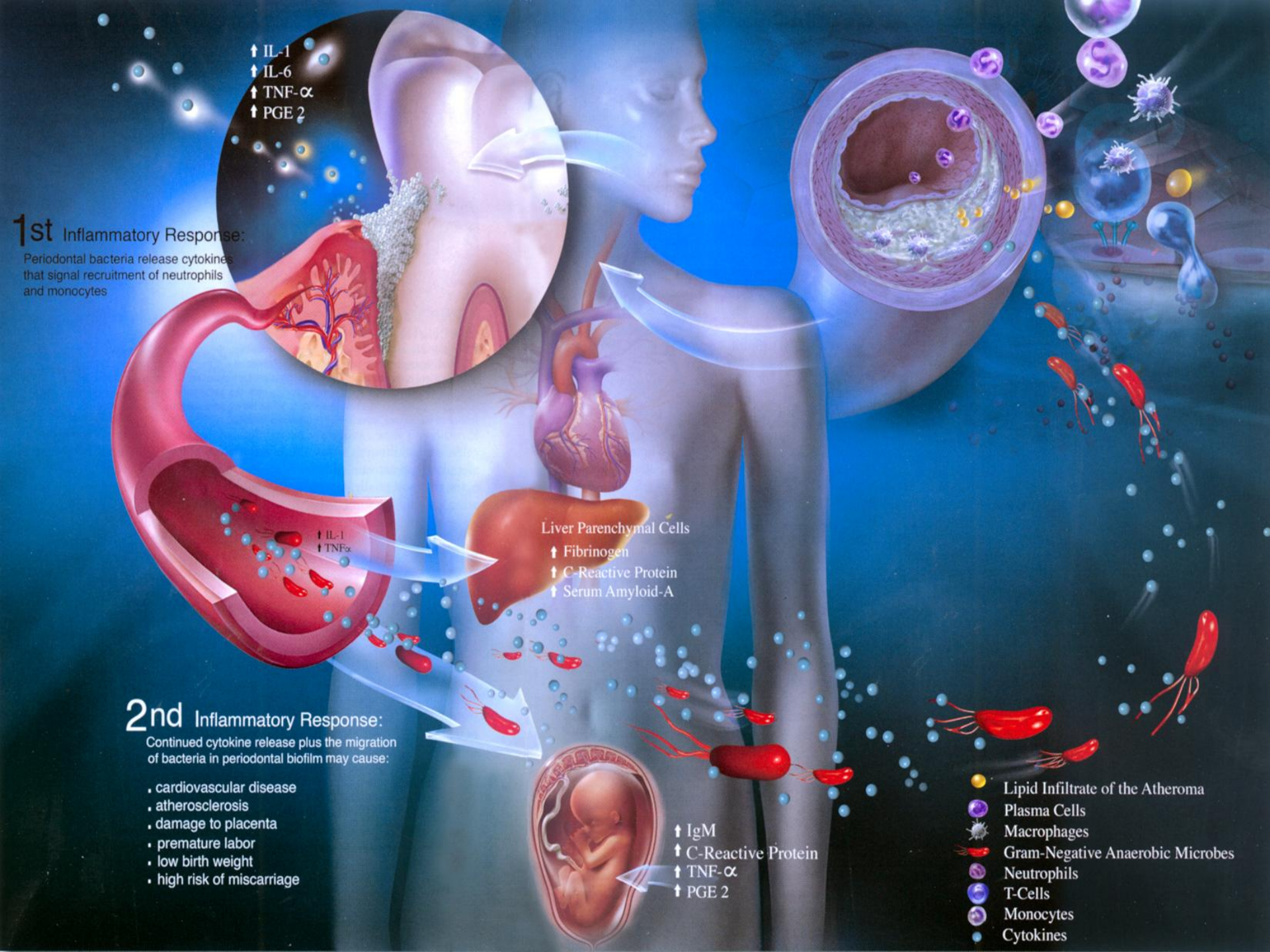
Financial Burden of Prematurity

- The average cost of hospital charges for newborns w/out complications run $1,500.
- The average cost of hospital charges for infants w/a principal dx of prematurity averages $79,000.
- Long term costs associated with prematurity

Source-Peristats, March of Dimes, WVU Birth Score Office

Pregnancy is a teachable Moment

There is an associated connection between good oral health and good birth outcomes


↑ IL-1
↑ IL-6
↑ TNF-α
↑ PGE 2
1st Inflammatory Response:
Periodontal bacteria release cytokines that signal recruitment of neutrophils and monocytes
↑ IL-1
↑ TNFα
Liver Parenchymal Cells
↑ Fibrinogen
↑ C-Reactive Protein
↑ Serum Amyloid-A
2nd Inflammatory Response:
Continued cytokine release plus the migration of bacteria in periodontal biofilm may cause:
• cardiovascular disease
• atherosclerosis
• damage to placenta
• premature labor
• low birth weight
• high risk of miscarriage
↑ IgM
↑ C-Reactive Protein
↑ TNF-α
↑ PGE 2
Lipid Infiltrate of the Atheroma
Plasma Cells
Macrophages
Gram-Negative Anaerobic Microbes
Neutrophils
T-Cells
Monocytes
Cytokines

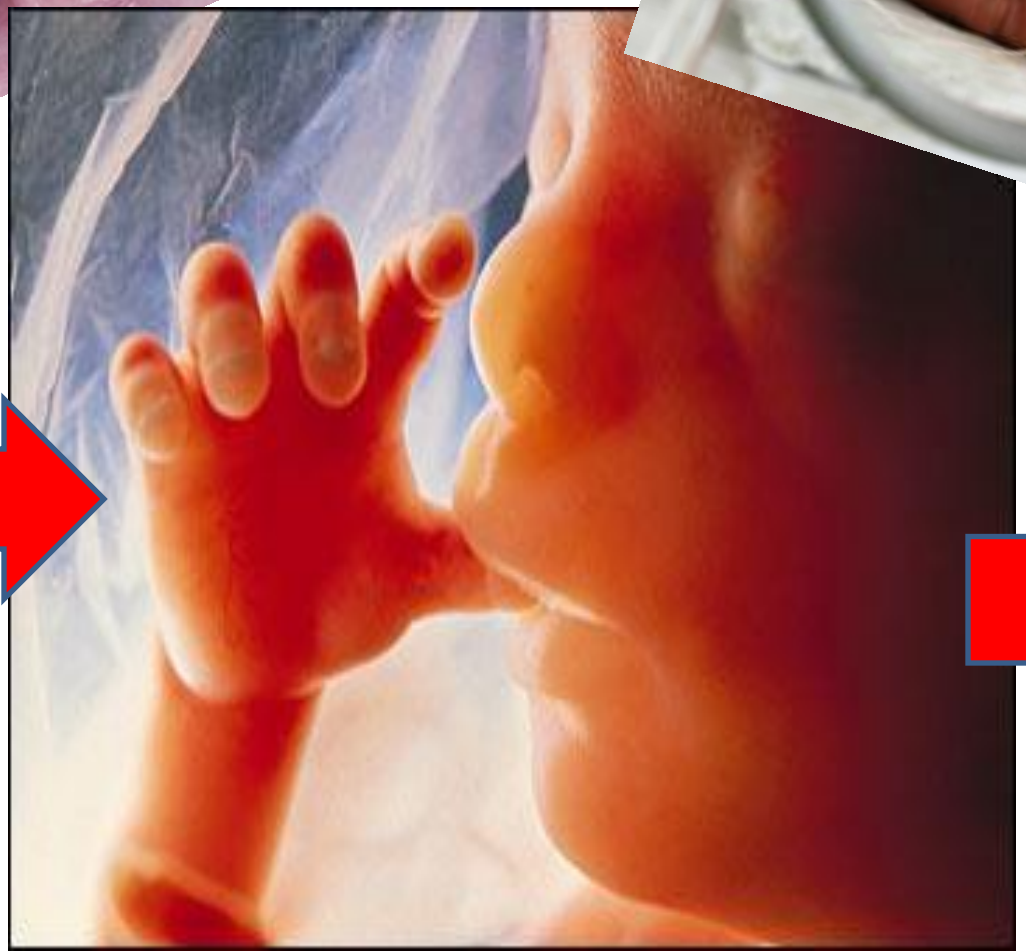
First Trimester: Organogenesis and Teratogenesis

- In order for an environmental factor to be considered a teratogen, exposure must occur during organogenesis.
- Performing dental procedures during early pregnancy has **NEVER** been reported to increase the rate of physical defects.

Teratogen=an agent or substance that may cause physical defects in the developing embryo or fetus

Organogenesis=development of the organs (takes place in the first ten weeks of gestation)

Source: Oral Health Care during Pregnancy and Early Childhood Practice Guidelines, New York State Department of Health August 2006



Oral-Facial Growth and Development

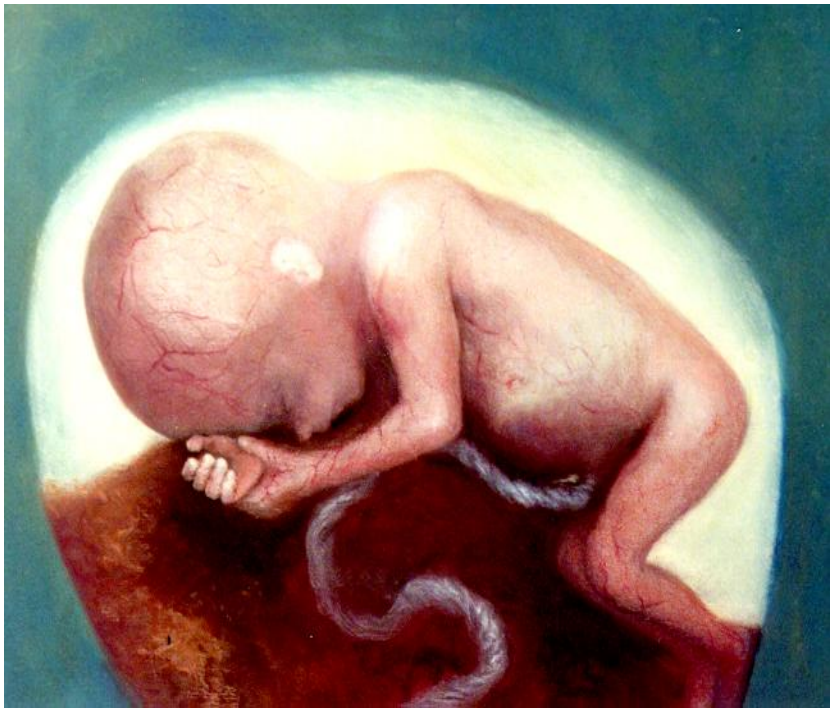
4-5 weeks – primary tooth buds

4-7 weeks – lips

8-12 weeks – roof of mouth

12 weeks – primary teeth start to harden

6 months - permanent tooth buds



Developing a Treatment Plan

- Old Best Practices: Providers have traditionally postponed non-emergent dental treatment until the first trimester has passed or delivery.

- New Best Practices: There is no compelling evidence that precludes dental treatment any time during pregnancy including the first trimester.

Developing a Treatment Plan

- Oral health professionals should consider the gestational age of the fetus and the estimated date of delivery.
- Second trimester (14 to 20 weeks gestation) is considered the best time to provide treatment, as teratogenicity has passed, nausea and vomiting are less common.
- Opportunity to provide Intervention to combat harmful maternal behaviors

Source: Oral Health Care during Pregnancy and Early Childhood Practice Guidelines, New York State Department of Health August 2006

WV Perinatal Partnership

Mission*- *We are a statewide partnership of health care professionals and public and private organizations working to improve perinatal health in West Virginia.

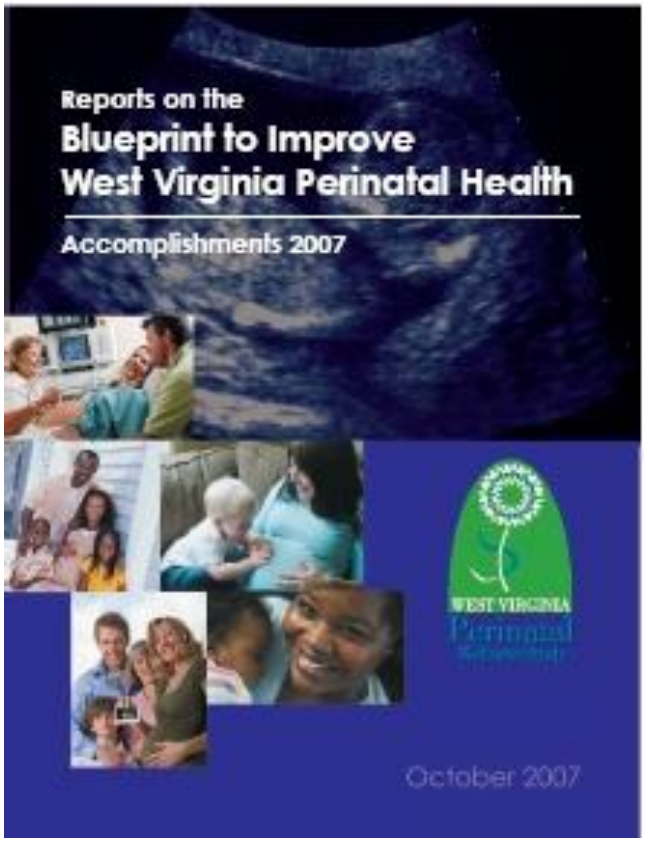
- We want health care providers to be able to best care for pregnant women and their babies.
- We encourage new laws that promote better health for pregnant women and their babies.
- We create opportunities for perinatal professionals to share their expertise with each other.
- We spread the latest knowledge about perinatal health through educational programs.
- We work to reduce tobacco and drug use among pregnant women and foster oral health care in pregnant women and infants.
- We study research and trends in mother/child health and work to distribute that information.

Work plan;

2006 Key Informant Survey

Established a Website and Work Group

Blueprint to Improve WV Perinatal Health 2006, 2007, 2008



Committee on the Lack of Oral Health Care in Pregnancy

Committee Members –

Gina Sharps RDH, BS - Chair WVU HSC
Dr. Elliott Shulman – WVU Pediatric Dentist
Dr. Richard Meckstroth – WVU Dentist
Dr. Eros Chaves – WVU Periodontist
Dee Messinger RN- RFTS
Paula Darby RN- RFTS
Jeannie Clark- RFTS
Jeff Allen- Council of Churches
Dr. David H. Walker- WV Dental Director

Staff- Bobbi Muto RDH, BS- MU SOM
Mary Bee Antholz- WVHCA

Policy Recommendations

- Provide Preventive Dental Care to WV PEIA covered Pregnant Women

- Provide Dental Coverage to all Medicaid Eligible Woman

Looking at WV Medicaid

Medicaid Patients are identified as high risk-

- Just 27.7% of pregnant WV women sought and received dental exams
- Of those 3.7% received treatment for oral health

2002-2004 Data, WV HCA, May 2007

Facts going in.....

- Pregnant women in WV can receive Medicaid
- WV Medical Card-Covers dental treatment for pregnant women under the age of 21
- Age 21 and over will only cover emergency care (exam, x-ray, and extraction)
- A majority of RFTS Clients were Medicaid Recipients

Take Home Messages for the Dental Team

- Definitive treatment should **NOT** be postponed because of pregnancy.
- Appropriate treatment of pain and infection is important.
- Emergency dental treatment to relieve pain, swelling, bleeding or infection should be sought ASAP no matter what stage of pregnancy (↑ Stress and Pain is unhealthy for the fetus)
- WV Medicaid Coverage
- Use of antibiotics and analgesics for treating infection and controlling pain is acceptable.
- Pharmacotherapeutics should not be a substitute for appropriate and timely dental procedures!

Take Home Messages for the Perinatal Providers

- Definitive treatment should **NOT** be postponed because of pregnancy.
- WV Medicaid Coverage
- Referrals to the Dental Team should be as routine as ultrasound referrals
- Appropriate treatment of pain and infection is important.
- Emergency dental treatment to relieve pain, swelling, bleeding or infection should be sought ASAP no matter what stage of pregnancy (↑ Stress and Pain is unhealthy for the fetus)
- Use of antibiotics and analgesics for treating infection and controlling pain is acceptable.

Take Home Messages for Pregnant Patients

- Encourage all women to schedule an oral health exam during pregnancy.
- Dental care is safe and effective.
- First trimester diagnosis and treatment can be undertaken safely.
- Delay in treatment could result in adverse effects for the mother and child.

WV Perinatal Partnership Policy Recommendation Revised

RECOMMENDATIONS:

- Encourage and support a broad partnership of health professionals to work together to assure that all health care providers are aware of the association between oral health and overall health, therefore recognize the correlation between infectious oral disease and unfavorable birth outcomes.
- Encourage and support programs working with families to promote oral care before, during, and after pregnancy as a key strategy to improve maternal health, fetal development, infant health, and birth outcomes.
- The Bureau for Medical Services should review the reimbursement rates for Medicaid-covered dental services and evaluate the positive impact of preventable dental services for all women of childbearing age. Dental care for all pregnant women may result in an overall cost savings by reducing the number of PT/LBW incidence.

Getting our "Messages" out there…..

Start with the front lines- RFTS, MIHOW, WIC, and Early Head Start

Grab Attention of Dental Professional with Free CEU's

Work with Perinatal Provider Professional Groups

NEEDED Funding!

Worked with RFTS Case Managers

Identified top three barriers to access to oral health care;

Educational Voids- who, what, when

Lack of Dental Provider willing to See Pregnant Patient

Prenatal Providers unsure of standard of Oral Health Care during Pregnancy

Trained WV RFTS

- 8 regions
- Nurses and Social Workers
- Armed them with Front line knowledge and tools
- Oral Health Kits to Expectant Mothers and Siblings
- Training Modules Developed for future use
- Development of Dental Provider Linkages for referrals

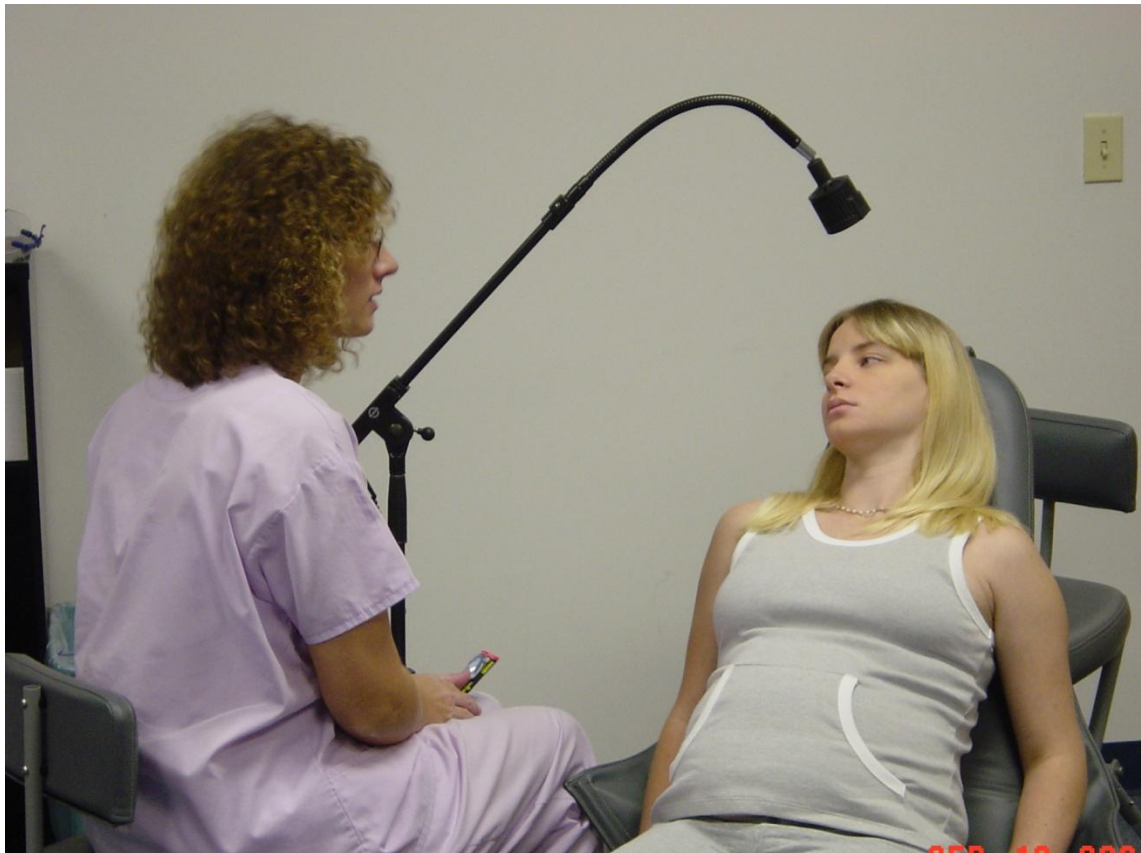
"First Smiles CE Campaign"-conducted with Dental and Non-Dental Professionals

- Dental components could elect either a 4 hr. CE course or a 6 hr. CE course
- 6 hr. course included Perinatal Oral Health
- Organizations participating in CE include: WV Right from the Start Program, WIC, WVDA, WVDHA, WVAPA & WV AAP

WEST VIRGINIA WIC

Helps You Help Your Family

Pilot Projects
With WV WIC
Programs for
Expectant Mothers



Mailings to Non-Dental providers

- Received a copy of the Summary Guidelines/ Brochure with a letter from ED/Pres
- Within the letter, participants are urged to complete the on-line training module offered by the University of Albany (CE available to medicine, nursing and dental)
- Barrier of Coverage quickly became an issue- 21yrs and over faced extraction or pay scenario

Pregnancy
and Dental Care

Continue to see a dentist and dental hygienist for check-ups even when you are pregnant.

Having healthy teeth and gums when you are pregnant will help keep you healthy.

There are germs in your mouth that cause tooth decay. These germs can be passed to your baby.

Moms with healthy teeth and gums are less likely to pass these germs to their babies.

Learn more at http://www.nyhealth.gov/publications/0824.pdf

This project was made possible by funding from US Department of Health and Human Services, Health Resources Services Administration.

2008-2009 Highlights

- Educate the OB and Dental Providers in the state-
  - Various grant funding to provide training, education and the development and printing of WV guidelines for Oral Health and Pregnancy

Two Healthy Smiles

Tips to Keep You and Your Baby Healthy

Taking care of your mouth while you are pregnant is important for you and your baby. Brushing, flossing, eating healthy foods, and getting dental checkups and treatment will help make you and your baby healthy.

Changes to your body when you are pregnant can make your gums sore, puffy, and red if you do not brush and floss every day. This problem is called gingivitis ("gin-gih-vi-tis"). If gingivitis is not treated, it may lead to periodontal ("pear-ee-oh-don-tuhl") disease.

Give your baby a healthy start! Here are tips to keep you and your baby's teeth and gums healthy.

While You Are Pregnant

Brush and Floss

- To prevent or control tooth decay, brush your teeth with a soft toothbrush and toothpaste with fluoride ("floor-ide") twice a day.
- Floss once a day.
- If you can't brush your teeth because you feel sick, rinse your mouth with water or a mouth rinse that has fluoride.
- If you vomit, rinse your mouth with water.

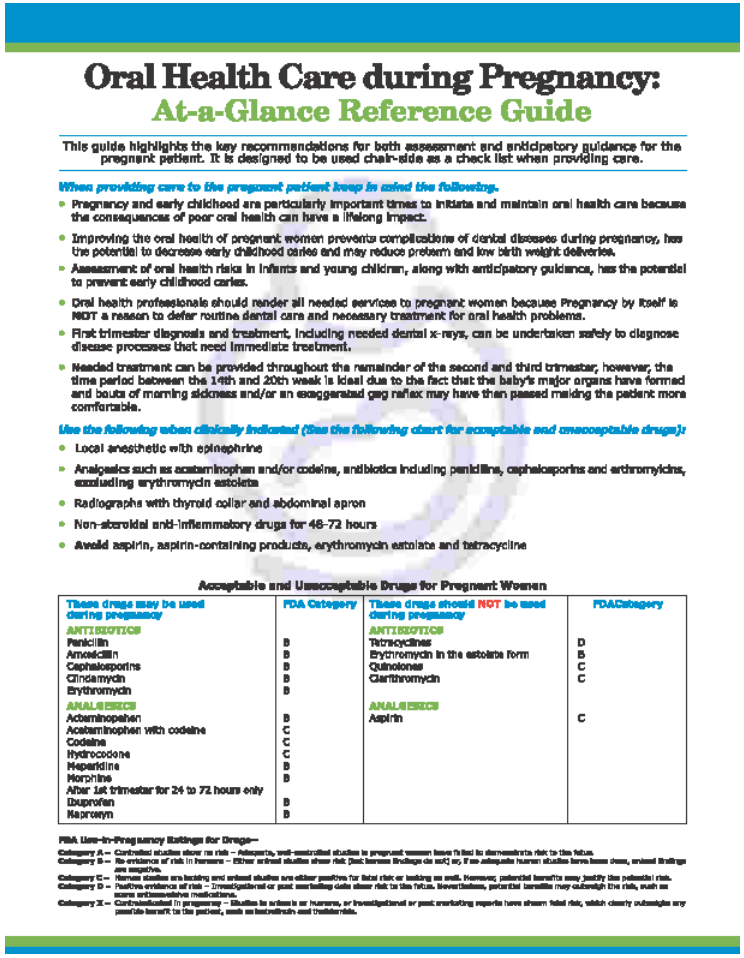
Eat Healthy Foods

- Eat fruits, vegetables, whole grain products like bread or crackers, and dairy products like milk, yogurt, or cheese. Lean meats, fish, poultry, eggs, beans, and nuts are also good choices. Eat foods that have sugar at mealtimes only.
- Drink water or low-fat milk instead of fruit juice, sport drinks, or pop or soda.
- Drink water at least a few times a day, especially between meals and snacks.
- Cut down on sweets like candy, cookies, cake, and sugary drinks (like sport drinks, pop, or soda).
- Look for products (like chewing gum or mints) that are sugar-free or contain xylitol ("zy-lih-tohl").

Get Dental Care

- Get a dental checkup. It is safe to have dental care when you are pregnant. Don't put it off until after you have the baby.
- Tell the dental office staff that you're pregnant and your due date. This will help the dental team keep you comfortable.
- The dental team may recommend rinses with fluoride or chewing gum with xylitol, which can help reduce bacteria that can cause tooth decay and gingivitis.
- Talk to your doctor if you need help getting dental care or making an appointment.

Chair-side Resource



Oral Health Care during Pregnancy:
At-a-Glance Reference Guide

This guide highlights the key recommendations for both assessment and anticipatory guidance for the pregnant patient. It is designed to be used chair-side as a check list when providing care.

When providing care to the pregnant patient keep in mind the following.

- Pregnancy and early childhood are particularly important times to initiate and maintain oral health care because the consequences of poor oral health can have a lifelong impact.
- Improving the oral health of pregnant women prevents complications of dental diseases during pregnancy, has the potential to decrease early childhood caries and may reduce preterm and low birth weight deliveries.
- Assessment of oral health risks in infants and young children, along with anticipatory guidance, has the potential to prevent early childhood caries.
- Oral health professionals should render all needed services to pregnant women because Pregnancy by itself is NOT a reason to defer routine dental care and necessary treatment for oral health problems.
- First trimester diagnosis and treatment, including needed dental x-rays, can be undertaken safely to diagnose disease processes that need immediate treatment.
- Needed treatment can be provided throughout the remainder of the second and third trimester, however, the time period between the 14th and 20th week is ideal due to the fact that the baby's major organs have formed and bouts of morning sickness and/or an exaggerated gag reflex may have then passed making the patient more comfortable.

Use the following when clinically indicated (See the following chart for acceptable and unacceptable drugs):

- Local anesthetic with epinephrine
- Analgesics such as acetaminophen and/or codeine, antibiotics including penicillins, cephalosporins and erthromycins, excluding erythromycin estolate
- Radiographs with thyroid collar and abdominal apron
- Non-steroidal anti-inflammatory drugs for 48-72 hours
- Avoid aspirin, aspirin-containing products, erythromycin estolate and tetracycline

Acceptable and Unacceptable Drugs for Pregnant Women

These drugs may be used during pregnancy	FDA Category	These drugs should NOT be used during pregnancy	FDACategory
ANTIBIOTICS		ANTIBIOTICS	
Penicillin	B	Tetracyclines	D
Amoxicillin	B	Erythromycin in the estolate form	B
Cephalosporins	B	Quinolones	C
Clindamycin	B	Clarithromycin	C
Erythromycin	B		
ANALGESICS		ANALGESICS	
Acetaminophen	B	Aspirin	C
Acetaminophen with codeine	C		
Codeine	C		
Hydrocodone	C		
Meperidine	B		
Morphine	B		
After 1st trimester for 24 to 72 hours only			
Ibuprofen	B		
Naproxyn	B		

FDA Use-in-Pregnancy Ratings for Drugs—

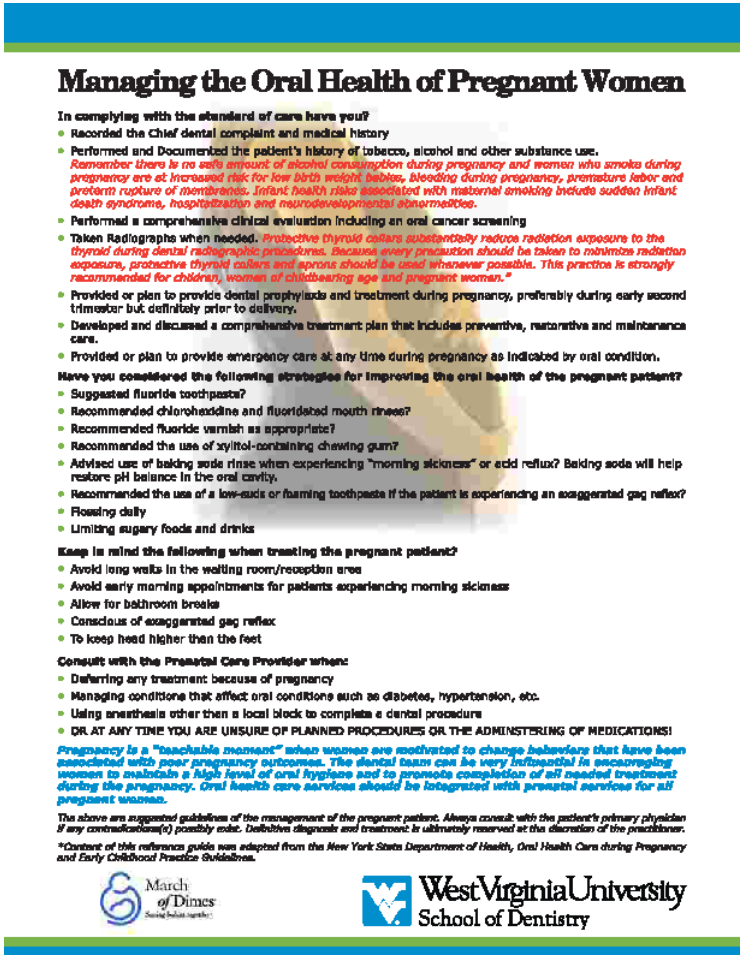
Category A — Controlled studies show no risk – Adequate, well-controlled studies in pregnant women have failed to demonstrate risk to the fetus.

Category B — No evidence of risk in humans – Either animal studies show risk (but human findings do not) or, if no adequate human studies have been done, animal findings are negative.

Category C — Human studies are lacking and animal studies are either positive for fetal risk or lacking as well. However, potential benefit may justify the potential risk.

Category D — Positive evidence of risk – Investigational or post marketing data show risk to the fetus. Nevertheless, potential benefits may outweigh the risk, such as serve antimicrobial medications.

Category X — Contraindicated in pregnancy – Studies in animals or humans, or investigational or post marketing reports have shown fetal risk, which clearly outweighs any possible benefit to the patient, such as tetracyclines and thalidomide.



Managing the Oral Health of Pregnant Women

In complying with the standard of care have you?

- Recorded the Chief dental complaint and medical history
- Performed and Documented the patient's history of tobacco, alcohol and other substance use.
  Remember there is no safe amount of alcohol consumption during pregnancy and women who smoke during pregnancy are at increased risk for low birth weight babies, bleeding during pregnancy, premature labor and preterm rupture of membranes. Infant health risks associated with maternal smoking include sudden infant death syndrome, hospitalization and neurodevelopmental abnormalities.
- Performed a comprehensive clinical evaluation including an oral cancer screening
- Taken Radiographs when needed. *Protective thyroid collars substantially reduce radiation exposure to the thyroid during dental radiographic procedures. Because every precaution should be taken to minimize radiation exposure, protective thyroid collars and aprons should be used whenever possible. This practice is strongly recommended for children, women of childbearing age and pregnant women."*
- Provided or plan to provide dental prophylaxis and treatment during pregnancy, preferably during early second trimester but definitely prior to delivery.
- Developed and discussed a comprehensive treatment plan that includes preventive, restorative and maintenance care.
- Provided or plan to provide emergency care at any time during pregnancy as indicated by oral condition.

Have you considered the following strategies for improving the oral health of the pregnant patient?

- Suggested fluoride toothpaste?
- Recommended chlorohexidine and fluoridated mouth rinses?
- Recommended fluoride varnish as appropriate?
- Recommended the use of xylitol-containing chewing gum?
- Advised use of baking soda rinse when experiencing "morning sickness" or acid reflux? Baking soda will help restore pH balance in the oral cavity.
- Recommended the use of a low-suds or foaming toothpaste if the patient is experiencing an exaggerated gag reflex?
- Flossing daily
- Limiting sugary foods and drinks

Keep in mind the following when treating the pregnant patient?

- Avoid long waits in the waiting room/reception area
- Avoid early morning appointments for patients experiencing morning sickness
- Allow for bathroom breaks
- Conscious of exaggerated gag reflex
- To keep head higher than the feet

Consult with the Prenatal Care Provider when:

- Deferring any treatment because of pregnancy
- Managing conditions that affect oral conditions such as diabetes, hypertension, etc.
- Using anesthesia other than a local block to complete a dental procedure
- OR AT ANY TIME YOU ARE UNSURE OF PLANNED PROCEDURES OR THE ADMINISTERING OF MEDICATIONS!

Pregnancy is a "teachable moment" when women are motivated to change behaviors that have been associated with poor pregnancy outcomes. The dental team can be very influential in encouraging women to maintain a high level of oral hygiene and to promote completion of all needed treatment during the pregnancy. Oral health care services should be integrated with prenatal services for all pregnant women.

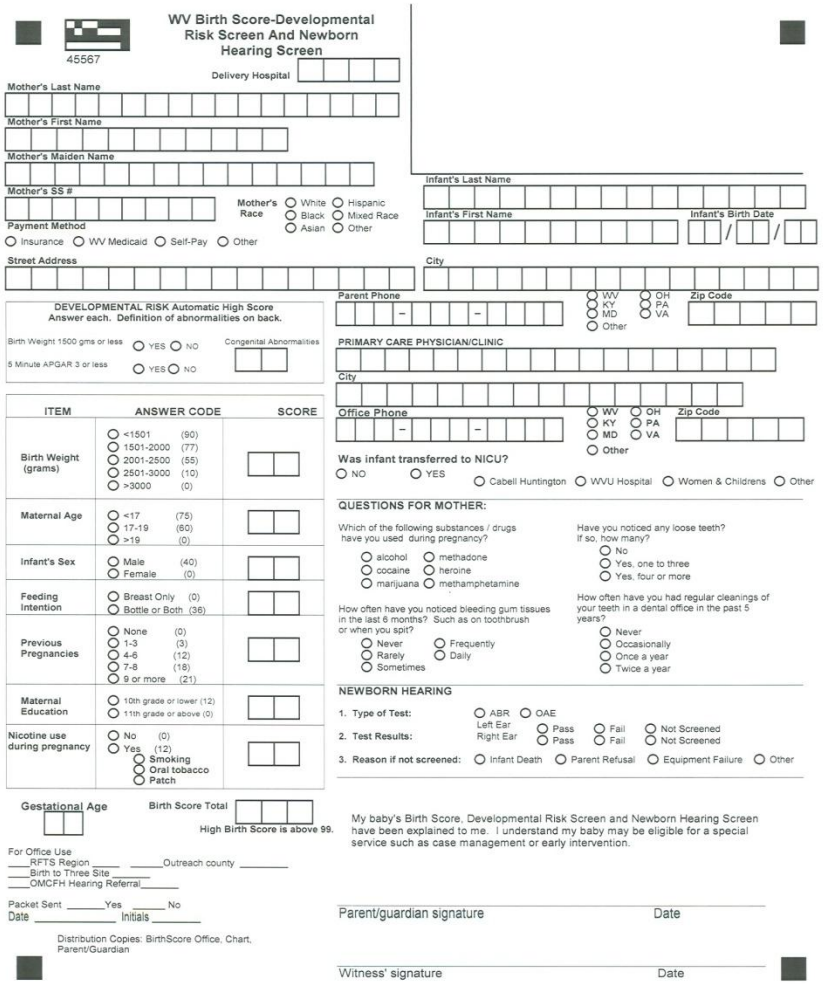
The above are suggested guidelines of the management of the pregnant patient. Always consult with the patient's primary physician if any contraindications(s) possibly exist. Definitive diagnosis and treatment is ultimately reserved at the discretion of the practitioner.

**Content of this reference guide was adapted from the New York State Department of Health, Oral Health Care during Pregnancy and Early Childhood Practice Guidelines.*

March of Dimes

WestVirginiaUniversity School of Dentistry

Birth Score Office Adds Oral Health Questions to Screening



WV Birth Score-Developmental Risk Screen And Newborn Hearing Screen

45567

Delivery Hospital

Mother's Last Name

Mother's First Name

Mother's Maiden Name

Mother's SS #

Mother's Race: White, Black, Asian, Hispanic, Mixed Race, Other

Payment Method: Insurance, WV Medicaid, Self-Pay, Other

Infant's Last Name

Infant's First Name

Infant's Birth Date

Street Address

City

Parent Phone

WV, KY, MD, OH, PA, VA, Other

Zip Code

DEVELOPMENTAL RISK Automatic High Score
Answer each. Definition of abnormalities on back.

Birth Weight 1500 gms or less: YES NO

5 Minute APGAR 3 or less: YES NO

Congenital Abnormalities

ITEM	ANSWER CODE	SCORE
Birth Weight (grams)	<1501 (90); 1501-2000 (77); 2001-2500 (55); 2501-3000 (10); >3000 (0)	
Maternal Age	<17 (75); 17-19 (60); >19 (0)	
Infant's Sex	Male (40); Female (0)	
Feeding Intention	Breast Only (0); Bottle or Both (36)	
Previous Pregnancies	None (0); 1-3 (3); 4-6 (12); 7-8 (18); 9 or more (21)	
Maternal Education	10th grade or lower (12); 11th grade or above (0)	
Nicotine use during pregnancy	No (0); Yes (12) Smoking, Oral tobacco, Patch	

Gestational Age

Birth Score Total

High Birth Score is above 99.

For Office Use
____RFTS Region ____ _____Outreach county _____
____Birth to Three Site ____
____OMCFH Hearing Referral_____

Packet Sent _____Yes _____No
Date _____ Initials _____

Distribution Copies: BirthScore Office, Chart, Parent/Guardian

PRIMARY CARE PHYSICIAN/CLINIC

City

Office Phone

WV, KY, MD, OH, PA, VA, Other

Zip Code

Was infant transferred to NICU? NO YES

Cabell Huntington, WVU Hospital, Women & Childrens, Other

QUESTIONS FOR MOTHER:

Which of the following substances / drugs have you used during pregnancy?
alcohol, cocaine, marijuana, methadone, heroine, methamphetamine

Have you noticed any loose teeth? If so, how many?
No, Yes, one to three, Yes, four or more

How often have you noticed bleeding gum tissues in the last 6 months? Such as on toothbrush or when you spit?
Never, Rarely, Sometimes, Frequently, Daily

How often have you had regular cleanings of your teeth in a dental office in the past 5 years?
Never, Occasionally, Once a year, Twice a year

NEWBORN HEARING

1. Type of Test: ABR OAE
2. Test Results: Left Ear Pass Fail Not Screened; Right Ear Pass Fail Not Screened
3. Reason if not screened: Infant Death, Parent Refusal, Equipment Failure, Other

My baby's Birth Score, Developmental Risk Screen and Newborn Hearing Screen have been explained to me. I understand my baby may be eligible for a special service such as case management or early intervention.

Parent/guardian signature Date

Witness' signature Date

1- Have you noticed any loose teeth?

2- Bleed Gums in the past 6 months?

3- Have you had regular cleaning in the past 6 years in a dental office?

Issue:

Self Reported Data

Oral Health Brochure: A Parent's Guide for Healthy Teeth

Project

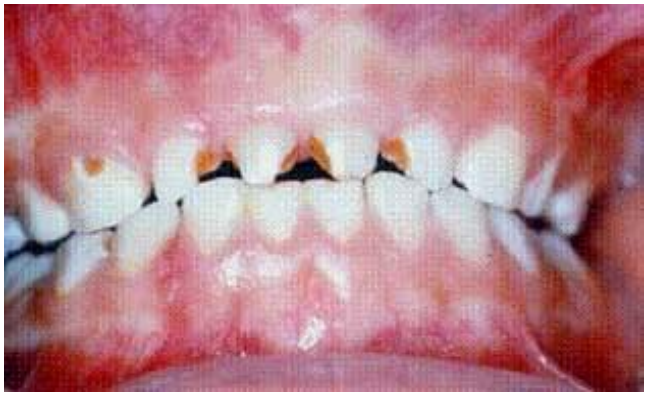
- Designed as a collaborative project between WVU Birth Score Office and WVU School of Dentistry
- Distributed to EVERY Birth Mother in WV
- Along side of three oral health questions

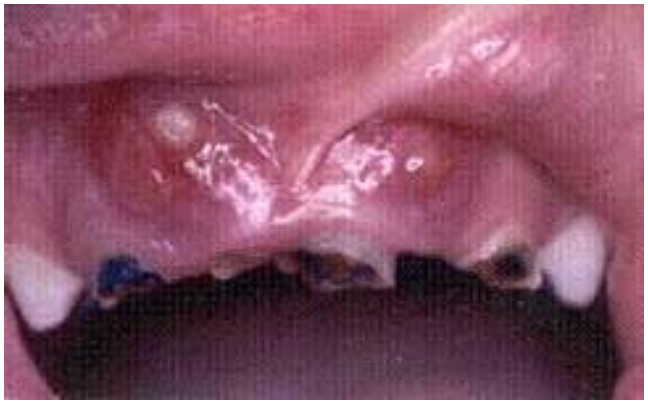
Endorsements

WVDA, WV Hospital Association, WV Chapter-American Academy of Pediatrics, WV Academy of Family Physicians, WV Chapter American College of Nurse Midwives, WV OMCFH and WV Healthy Start/HAPI Project

Brochure Highlights

- Don't let the infant fall asleep with a bottle unless it has **plain water**
- Teach use of a cup by one year
- Wean from a bottle by 12-14 month
- Constant sippy-cup use with sugar drinks should **not** be allowed
- As baby teeth begin to appear avoid **frequent** on demand feedings during the night
- Thumb sucking
- Cleaning Gums
- Vertical Transmission
- Establishment of Dental Home by Age 1





Hospitals

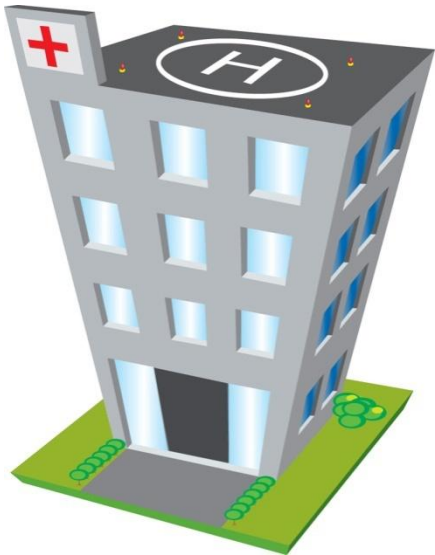
New Partners –

Labor and Delivery

Newborn Nursery

Pediatric Nurses

Received Funding from WV Grant makers to target Three of WV Delivery Hospitals for Lunch and Learns – for nursing staff



Other Highlights

- Several grants awarded to partners for education, outreach and training (Head Start, CHC's etc)
- National Recognition of Efforts
- Data now accessible

Results to be Proud of ????

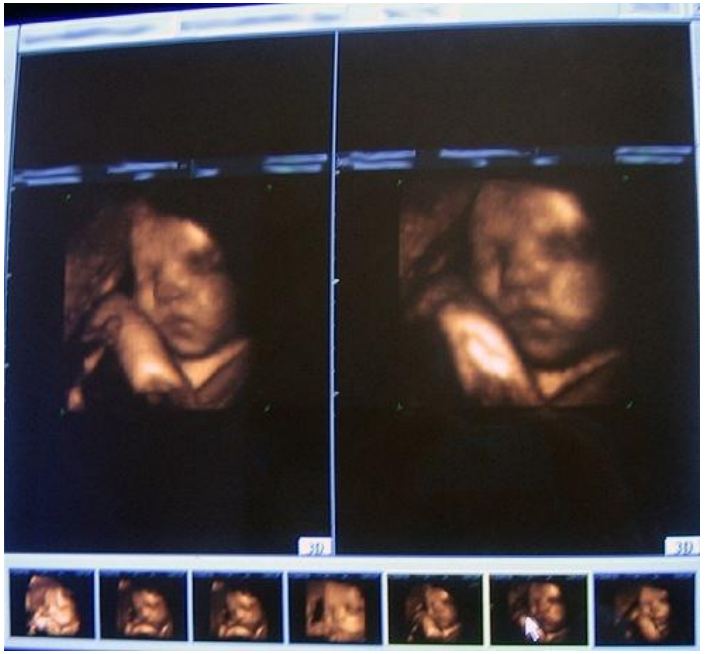
2006/07-

24% Sought a Dental Exam

48% Sought Dental Treatment

2002-2005 Data, WV HCA, May 2007, 2006-2007 Data, WV HCA, May 2009

Preventive Dental Care and Treatment should be as routine as an ultrasound for every Woman



Oral Health Committee Focus for 2009

2009 Goal-

Continue to improve utilization of services in that population where there is coverage- ideally like to reach 50% utilization rate for Treatment

Continue to address barriers identified during training sessions;

- Dental Providers uncomfortable seeing pregnant patients
- OB unsure of referral and releases
- Lack of education of services available

Educate Policy Makers influence policy decisions

Dr. Samelson: An appreciation for how oral health is part of and integral to overall health, that the separation of oral health from medical care is artificial and dangerous, and that the key is prevention with education.

Thank You for Your Attention!
Questions & Comments

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