Discussion Goals

- Demystify pregnancy
  - Please don't be scared of pregnant patients!
- Discuss the impacts of oral health concerns on pregnancy, and pregnancy on oral health
  - Highlight safety issues for pregnant dental care providers
- Build collaboration between Dentists and OBGYNs
Objective. To compare the opinions of dentists, obstetricians, and patients on dental care in pregnancy: its necessity, accessibility, and safety.

Methods. A 35-item questionnaire was distributed within Ohio, to 400 patients and 1000 providers between October 2004 and July 2005. Univariate comparisons between dentists and obstetricians were made by Fisher's exact test. Adjustments for confounding were made through logistic regression models.

Results. Most providers rated prenatal dental screening as important, agreeing that poor dental hygiene related to adverse pregnancy outcomes. Although 84% of patients reported dental visits as safe only 44% received care; the main limitation was financial. Providers agreed that pregnant patients could undergo dental cleanings, caries treatments, and abscess drainage but disagreed regarding the safety of X-rays, periodontal surgery, amalgam, and narcotic usage. In general, obstetricians were more comfortable than dentists with procedures and medication usage but less often reported recommending routine prenatal dental care.

Conclusions. Different respondent perceptions exist regarding the safety, accessibility, and necessity of prenatal dental treatments. Professional guidelines about oral health screening in pregnancy and the safety of dental procedures would benefit our patients and colleagues.
Just Google it...

Pregnancy and Dental Work: Safety & Medications


Mar 12, 2017 - Pregnant woman having dental work done...

... Routine x-rays, typically taken during annual exams, can usually be postponed until after the birth. ... harm to the baby for those electing to visit the dentist during this time frame.

When to Visit the Dentist During Pregnancy | Oral-B


If you go to the dentist during your first trimester, tell your dentist that you're pregnant and have only a checkup and routine cleaning. If possible, postpone any major dental work until after the first trimester...
“Why Dentists Should Not Be Afraid of Pregnant Women!”
Pregnant Women are SCARY!!
Fear of pregnant people

- Many health care providers are leary of taking care of pregnant women
  - MDs who are not OBGYN
  - Dentists
  - Physical Therapists
  - Massage Therapists
  - Hairdressers
- Fear of hurting baby
- Fear of causing miscarriage
- Fear of litigation
But it’s all OKAY!
Pregnancy related oral health changes
Changes to Oral Health with Pregnancy

- Pregnancy Gingivitis
Changes to Oral Health with Pregnancy

- Benign oral gingival lesions
  - Pyogenic granulomas
Changes to Oral Health with Pregnancy

- Tooth mobility
Changes to Oral Health with Pregnancy

- Tooth erosion
Changes to Oral Health with Pregnancy

- Caries
Changes to Oral Health with Pregnancy

- Periodontitis
Periodontal Disease and Pregnancy

- High prevalence of periodontal disease in pregnancy (40%)
- Risk factors
  - African American
  - Smokers
  - Medicaid
Why does it matter?
Oral Health and Pregnancy Outcomes

- Preterm labor
- Low birth weight
- Preterm low birth weight
- Preeclampsia
Oral Health and Pregnancy Outcomes

- Preterm Births
  - Several studies support association
  - Mechanism?
    - Bloodborne Gram - anaerobic bacteria
    - Inflammatory mediators
      - Lipopolysaccharides
      - Cytokines
Oral Health and Pregnancy Outcomes

- Recent Meta-analysis show no benefit of periodontal therapy during pregnancy in reduction of preterm birth and LBW infants
- More research needed
If we can’t fix it...

Why do we still care?

Pregnancy is a teachable moment

Medicaid coverage allows access to care
Mom’s oral health impacts babies oral health
Prevention, diagnosis, and treatment of oral conditions are SAFE during pregnancy

- X-rays with shielding
- Local anesthesia
- Extractions
- Root canals
- Caries
X-ray safety for pregnant patients

The ADA recommends the use of aprons and thyroid shields for pregnant patients.

<table>
<thead>
<tr>
<th>Ionizing Radiation Source</th>
<th>Exposure in millirems</th>
<th>Equivalent # of Low Dose Digital Dental X-Rays</th>
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<tbody>
<tr>
<td>CT Scan</td>
<td>1100</td>
<td>12,200</td>
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<tr>
<td>Mammogram</td>
<td>500 - 1000</td>
<td>5,500 - 11,000</td>
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<td>Annual Background Radiation</td>
<td>360</td>
<td>4000</td>
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<tr>
<td>Chest X-Ray</td>
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<td>100 - 400</td>
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<td>Daily Exposure from Nature</td>
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<td>Traditional Dental X-Ray</td>
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<td>Airline Flight (per hour)</td>
<td>0.3 - 0.9</td>
<td>3-10 per hour of flight</td>
</tr>
<tr>
<td>Our Digital Dental X-Ray</td>
<td>0.09</td>
<td>1</td>
</tr>
</tbody>
</table>
X-Ray exposure in providers

- A pregnant worker can continue working in an X-ray department as long as there is reasonable assurance that the fetal dose can be kept below 1 mGy during the pregnancy.

- Dental professionals who take radiographs should be provided with a personal dosimetry badge and the manufacturer’s instructions should be followed to ensure that the occupational radiation exposure does not exceed 0.5 millisieverts (mSv) per month.
Medications safety in pregnant patients

**FDA drug classification for pregnancy**

- **Category A** = Controlled Studies in women fail to demonstrate a risk to the fetus in the first trimester and the possibility of fetal harm appears remote
- **Category B** = Animal studies show no risk, or if risk shown in animals, controlled trials in women showed no risk
- **Category C** = Studies in animals with adverse effects and no human studies, OR no animal or human studies, but benefits of use may outweigh potential harms
- **Category D** = There is evidence of human fetal risk, but benefits may outweigh risks
- **Category X** = Contraindicated
LIDOCAINE

TRADE NAMES: Burn-O-Jel, Burnamed, Lidocaine, Topicaine, Xylocaine

DRUG TYPE: Local anesthetic

USAGE Dose: Varies by indication.

PREGNANCY RISK: Benefits are likely to exceed risk

RELATIVE INFANT DOSE: 0.5% - 2.1%

SIDE EFFECTS: Bradycardia, confusion, cardiac arrhythmia, drowsiness, seizures, bronchospasm.

ALTERNATIVE MEDS:

T1/2: 1.8 h
ORAL BIOAVAILABILITY: <35%
MW: 234
Analgesics

- Ok any trimester:
  - Tylenol
  - Tylenol + codeine
  - Tylenol + hydrocodone
  - Tylenol + oxycodone
  - Codeine
  - Meperidine
  - Morphine

- Ok 2nd Trimester
  - Aspirin
  - Ibuprofen
  - Naproxen
Antibiotics

- **OK any trimester**
  - Amoxicillin
  - Cephalosporins
  - Clindamycin
  - Metronidazole
  - Penicillin

- **NOT OK EVER**
  - Ciprofloxacin
  - Clarithromycin
  - Levofoxacin
  - Moxifloxacin
  - tetracycline
Anesthetics

- Local anesthetics with epinephrine: OK ANY TRIMESTER
  - Bupivacaine
  - Lidocaine
  - Mepivacaine

- Nitrous Oxide (30%)
  - May be used during pregnancy when topical or local anesthetics are inadequate
Nitrous for pregnant patients

Used for labor analgesia since 1800’s
Why the hubbub?

- N2O can affect DNA production
  - Effects are questionable
  - Animal studies only
  - Heterogeneous data
  - Data is not applicable to humans
- Evidence exists for
  - Genomic alterations and instability
  - Cytotoxicity
  - Proliferative changes
- Clinical significance remain in debate
So...

You’re telling me Nitrous is SAFE?

- We know safe in labor
- Would avoid 1st trimester
- Extrapolate ok in 2nd trimester
Nitrous exposure in pregnant dental providers

Concern for miscarriage

- Increased risk of SAB
  - Early studies only
  - Pre-scavenging era
  - American Society of Anesthesiologists Task Force: “No data suggesting that waste anesthetic gases are a danger to those women contemplating pregnancy or who are already pregnant.”

- Risk likely ameliorated by exposure control

- Best Practice & Research Clinical Anaesthesiology 32 (2018) 113-123
I'm pregnant,
I'm uncomfortable,
I'm crabby...

...were you about
to say something?
Comfort for pregnant patients

- Keep head higher than feet
- Semi-reclining position
- Allow for frequent position changes
- Small pillow under one hip
  - Roll further as needed
Anatomy matters
• Conduct an **oral health assessment** during the first prenatal visit.
• **Reassure** patients that prevention, diagnosis, and treatment of oral conditions, including dental X-rays (with shielding of the abdomen and thyroid) and local anesthesia (lidocaine with or without epinephrine), are **safe during pregnancy**.
• Inform women that **conditions that require immediate treatment**, such as extractions, root canals, and restoration (amalgam or composite) of untreated caries, may be managed at any time **during pregnancy**. Delaying treatment may result in more complex problems.
Bridging the Gap

OBGYNs should:

- Assess oral health history at first prenatal visit
- Advise there is no need to delay oral health care during pregnancy
- Assure of safety of oral health care for mom and baby
- Form collaborative relationship with oral health providers
- Explain to our patients why it matters.

To Do List

1. So
2. Many
3. Things
Pregnancy and Dental Care
By the numbers

- Most women do not seek dental care
  - Pregnancy Risk Assessment Monitoring System
    - 56% did not have dental care
    - 60% did not have teeth cleaned
    - Black and Hispanic Women less likely
      - 59% received no counseling
- Counseling is highly correlated to routine dental cleanings.
  - Other studies show 80-90% of OBGYNs don’t screen for oral health care
Coordinated Care for Pregnant Teens & Women

- **Pilot Study**
- **Children’s Oral Health Coalition**
- **Cook Children’s Hospital**
- **Targeted Oral health screening and training at first prenatal visit**
- **Network of referrals**
  - Goal to recruit 30-40 dentists
  - Currently 12 OBGYNs
- **Track data**
- **Improve use of resources**
Andrea Palmer, MD

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