Thank you for attending

**Oral Health Basics for the Primary Care Provider**

*A Live and Archived Webcast*
*Sponsored by Community Health Association of Mountain/Plains States (CHAMPS)*
*Presented by Michael Crutcher, DDS on Tuesday, June 24, 2008*

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**Supplementary Information Packet**

**Contents:**

- Learning Objectives
- AAFP Statement
- Biography of Michael Crutcher
- Description of CHAMPS
- Presentation Slides
- Oral Health Quick Reference Card
- Additional Online Resources
**Learning Objectives**
During this educational event, participants will understand:
- Caries as a completely preventable infections/transmissible disease
- Detection of Early Childhood Caries (ECC) and use of fluoride varnish
- Relationship of Periodontal Disease with cardiovascular disease, diabetes, reproductive outcomes, and pancreatic cancer
- Effects of oral contraceptives, heart medicines, antidepressants, and other prescribed medicines on the oral tissues
- Detection of caries on adolescent/adult teeth: meth mouth and soda caries
- Effects of tobacco products on the oral soft and hard tissues

**AAFP Statement**
This live webcast has been reviewed and is acceptable for up to 1.5 Prescribed credits by the American Academy of Family Physicians (AAFP). Application for 1.5 hours of Prescribed CME credit for the archived version of this webcast will be filed immediately after the live event. Michael Crutcher has indicated that he has no relationships to disclose relating to the subject matter of his presentation. The AAFP invites comments on any activity that has been approved for AAFP CME credit. Please forward your comments on the quality of this activity to cmecomment@aafp.org.

**Biography of Michael Crutcher**
Dr. Michael Crutcher has been a dental provider at Community Health Center of the Black Hills in Rapid City, South Dakota for the past two and a half years, managing a clinic with eight operatories and eight employees. Previously, Dr. Crutcher spent over 20 years working with the Indian Health Service at sites in Arizona, Montana, North Dakota, and South Dakota, including multiple Isolated Hardship Assignments. He is an experienced clinic director, instructor, and presenter, and served on the National Oral Health Council Executive Committee for five years. He was awarded his Doctor of Dental Science from the Indiana University School of Dentistry in Indianapolis, Indiana, and currently serves as a dental representative on the Mountain/Plains Clinical Network Steering Committee.

**Description of CHAMPS**
CHAMPS, the Community Health Association of Mountain/Plains States, is a non-profit organization dedicated to providing a coordinating structure of service to the non-profit primary health care programs whose primary purpose is to serve the medically indigent and medically underserved of Region VIII (CO, MT, ND, SD, UT, and WY). CHAMPS also serves the Region VIII State Primary Care Associations that assist those nonprofit primary health care programs (CCHN, MPCA, CHAD, AUCH, and WYPCA).

Currently, CHAMPS programs and services focus on education and training, collaboration and networking, policy and funding communications, and the collection and dissemination of regional data for Region VIII Community, Migrant, and Homeless Health Centers (CHCs) and Primary Care Associations. For more information, please visit www.champsonline.org or call (303) 861-5165.
Oral Health Basics for the Primary Health Care Provider

Michael E. Crutcher, DDS
Oral Health Provider for Rapid City Community Health Center
June 24, 2008

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Introduction

In our search for better overall general health for our patients, a key body part has been overlooked...the mouth!

Dental Disease

Inside Dentistry Journal / March 2007 reports:
- Dental Disease accounts for more than:
  - 20 million lost work days
  - 12 million days of restricted activity
  - 117,000 lost school hours per 100,000 children
  - 6 million days of disability

Call to Action

In June of 2003 A National Call to Action to Promote Oral Health was released by Surgeon General Richard H. Carmona

Goals

- Three Goals of the Call to Action:
  - Promote Oral Health
  - Improve quality of life
  - Eliminate oral health disparities
Concepts

- Three concepts to consider:
  - Oral Health means more than “healthy teeth”
  - Change perceptions of oral health so that it is an accepted component of overall general health
  - Integrate oral health into the existing patient care processes that exist in our health care facilities

Traditional Thinking

- Why has the mouth been overlooked when treating overall health?
  - In the past... most patients had dentures by an early age.
  - Teeth were pulled, not restored
  - Patients did not live as long as they do now
  - Doctors took care of the body, not the mouth...dentists took care of the mouth

Anatomy of the Mouth

- There is more to the mouth than just teeth....
  - Bone
  - Tissue
  - Salivary glands
  - Tongue
  - Sinus structures
  - ??? Can you name others???

What is the Problem?

- Why consider the mouth now or at all???
  - Diets have changed considerably over the past couple of decades
  - Patients are living longer
  - Diagnosis of more diseases
  - Use of oral medications is increasing to treat disease diagnoses
  - Patients are retaining their teeth into older age
  - Patients are concerned about their teeth

What is the Problem? continued

- Why consider the mouth?
  - Recent developments of the relationship between periodontal disease with CVD, Diabetes, Pancreatic Cancer, and Reproductive outcomes
  - Importance of teeth in esthetics; eating; speech...

Dental Caries

An Infectious Disease
Infectious Disease

- Definition of an Infectious Disease
  - A Communicable disease; an illness that arises through the transmission from an infected person to a susceptible host.
  - A disease caused by a particular microorganism or agent which has "infected" an individual.

Dental Caries Bacteria

The Bacteria found in dental caries is mutans streptococcus (MS)

Streptococcus Mutans

- Streptococcus Mutans (MS):
  - The bacteria metabolize sucrose to produce an adhesive which allows it to attach to tooth structure
  - There are greater than 1 million MS/ml of saliva
  - MS is only transmitted through human saliva
  - MS is usually acquired somewhere between the ages of 6 - 31 months

MS continued

- Babies are not born with this bacteria
  - Success of transmission of this bacteria largely depends on the magnitude of the inoculum
  - Mothers or care takers with high levels of MS provide a greater risk of transmitting the bacteria to the child
Approach for Dental Caries

- All health professionals need to approach dental caries as an infectious disease...this includes physicians, dentists, dental hygienists, midlevel providers and nurses.
- We need to educate the patient on the fact that it is an infectious disease and that it can be prevented.

Dental Myth #1

All dental plaque on teeth is considered pathogenic. All dental plaque causes tooth decay
- True
- False

Answer to Myth #1

Dental Myth #1
- False
- Not all dental plaque harbors sufficient numbers of pathogens to cause dental disease
- Several factors are needed to actually create a cavitated lesion

Dental Myth #2

Dental Caries is inevitable.
- True
- False

Answer to Myth #2

Dental Myth #2
- False
- Caries in preventable!!

Dental Myth #3

All diagnosed dental cavities require restoration with some type of material.
- True
- False
Answer to Myth #3

- Dental Myth #3
  - False

Some lesions can be reversed with preventive measures such as fluoride

Some lesions are actually arrested and not active

Answer to Myth #4

- Dental Myth #4
  - False

- History of dentistry – we were taught that to drill and fill was the ultimate benefit to the patient.
- However this is the worst we can do!
- Prevention of the disease is the “ultimate benefit” not restoration.

Dental Myth #4

Dental restorations are considered a curative approach.
- True
- False

Medical Model View

- The medical model allows us to view dental caries as an infectious disease caused by specific pathogens rather than as a “lesion”
- Consider the following analogy:

Individual Risk Level

- Individual patients and individual teeth are a different levels of risk due to tooth shape, diet, history of caries, microflora presence, hygiene habits, medical conditions, and oral medication use

Medical Model View continued

- Historically all patients were thought to be at the same risk for caries, but this is not true.
- All patients received the same general treatment regime...exam, x-rays, fillings, cleaning....
- Risk assessment was not done.
Paradigm Shift

- Treatment Paradigm Shift
  - Surgical model of treatment is in the past
  - Now a less invasive approach is surfacing
  - Focus on maximum conservation of tooth structure
  - Focus on education and prevention of this infectious disease

Surgical model of treatment is in the past
Now a less invasive approach is surfacing
Focus on maximum conservation of tooth structure
Focus on education and prevention of this infectious disease

Treatment Options

- Treatment options
  - Fluoride - varnish, topical treatments, toothpastes with fluoride
  - Education
  - Nutrition counseling
  - Dental sealants
  - Xylitol gum
  - Innoculation with “good” bacteria

Names for ECC?

- Can you list three other names for ECC?
  1) Baby Bottle Tooth Decay
  2) Nursing Caries
  3) Rampant Caries
  4) Nursing bottle caries
  5) Incisal caries
  6) Bottle mouth caries

Names for ECC

- Baby Bottle Tooth Decay
- Nursing Caries
- Rampant Caries
- Nursing bottle caries
- Incisal caries
- Bottle mouth caries
Early Childhood Caries

Definition of ECC

The American Academy of Pediatric Dentistry defines Early Childhood Caries as: the presence of 1 or more primary teeth affected by decay in a child 71 months (just under 6 years) of age or younger.

ECC Statistics

- ECC
  - The most common chronic and infectious disease of childhood
  - 5 times more common than asthma
  - 7 times more common than hay fever

  - US Public Health Service 2000

Primary Transmission

- Primary transmission is vertical – from mother or primary care giver to infant
  - Sharing feeding utensils and cups
  - Pre-chewing food
  - Child’s fingers in the caregiver’s mouth
  - Orally cleaning pacifiers and nipples on bottles
Minor Transmission

- Minor transmission is horizontally:
  - From family members or peers
  - From siblings

Families and Caries

- Families tend to have similar caries experience
- Families share dietary practices, home health care practices, and display similar access patterns to professional health care.
- Food sharing and toothbrush sharing are not uncommon

Caries Progression

- Caries Progression is usually more rapid in primary - deciduous- teeth when compared to the permanent teeth.

Concern About Baby Teeth?

So why should we be concerned about the baby teeth anyway? They fall out and the child will get their permanent teeth eventually.

What is the big deal???

Retaining Baby Teeth?

- Which of the following are reasons for retaining the baby teeth?
  - Social effects of no teeth
  - Maintain space for the permanent teeth
  - Nutrition importance
  - Interference with speech development
  - Decreased quality of life for the child
  - Predictor of poor adult oral health

Answer to Retaining Baby Teeth

- I hope you checked all of the above!
- Yes - deciduous teeth are lost, but they are present for a reason!!!

They are important!
Causes of Cavities

- Remember...cavities are not caused by sugar alone...starchy foods, texture of food, and carbonated beverages are on the list also.

Implications for the Provider

**What does this mean to me...the primary care provider...the nurse...the midlevel provider....???

When Should Children See a Dentist?

- Most children do not see a dentist until after age 2 and sometimes only when the child has a tooth problem.
- We are trying to change that by advising parents to present their child to the dentist by their first birthday...but I say we should see the child once their first tooth erupts in the mouth.

Primary May Be Sole Provider

- Do you realize that you may be the only health care provider the child sees for the first 3 - 4 years of their life?
- You will see them for immunizations, routine well-baby check-ups, and for colds, ear infections, etc.

Missed Opportunities

- Since the primary health care provider sees the child right after birth...they have the best opportunity to provide the first line of defense in preventing the infectious disease of caries....

**Education....Education....Education!
Missed Opportunities continued

- Ideally the first place to start is with the mother while she is pregnant.
- Take time to examine the pregnant mother’s mouth...look for decay; look for bleeding gums; look for missing teeth.
- Refer the mother to an oral health care provider early in the pregnancy.

Oral Health Care Team

- The oral health care team can determine if the mother has caries and work to control the caries process. The team can decrease the presence of the strep mutans in the mother...which in turn will help prevent the vertical transmission to the child.

Well-Baby Checks

- During routine well-baby checks:
  - Encourage the mother to make wise choices with fluids used in the bottle
  - Encourage the mother to maintain good oral hygiene on herself
  - Encourage the mother to make an appointment for her child with the oral health care team as soon as her child develops the first tooth

What To Do in Well-Baby Check

- Now what do you do if the child has teeth during your routine well-baby check up?
  - Count the number of teeth
  - Brush the child’s teeth
  - Ask the care giver if they are brushing the child’s teeth
  - Ask the care giver if they have made an oral health appointment for the child

Baby With Teeth

- If the child has teeth – please conduct a visual exam.
- Best method is to use the knee-to-knee technique. Provider and care giver are knee-to-knee holding the child with the head in the provider’s lap.
- Best to use fingers to hold mouth open – keeping fingers away from the teeth.

Exam
**Action Steps if Caries Detected**

- If caries is seen:
  - Refer to the oral health care team
  - Place fluoride varnish if your practice has implemented this program
  - Follow up at the child’s next appointment

**Clinics with Fluoride Varnish?**

- How many of your clinics have implemented a Fluoride Varnish Program in the primary care clinic?
  - Yes
  - No

**Providing Fluoride Varnish?**

- Now...for those of you who stated yes to having a program implemented...how many are actually providing the fluoride varnish?
  - Yes
  - No

**Fluoride Varnish Program**

- The Fluoride Varnish program is essential in our practices...as discussed before...the primary care provider sees the child earlier than the oral health care team...so this preventive measure is quick, simple, and valuable to the child.
- It is also reimbursable in most areas.

**Fluoride Varnish Success Factors**

- Critical Success Factors for Implementing a Fluoride Varnish Program
  - Strong Physician Commitment
  - Essential component of a Health Professional’s practice
  - A clinic culture that values oral health
  - Integrating it into the existing patient care processes

**Fluoride Trivia**

- Let’s see if you know your fluoride trivia...
- Check those that are correct:
  - Fluoride varnish taste is delicious
  - Fluoride makes the plaque less sticky
  - Fluoride prevents the tooth from being demineralized by the acids in the mouth
  - Fluoride varnish stains the teeth permanently
  - Fluoride causes cancer
ECC Summary

- In summary with ECC:

Health care professionals should recognize the importance of good oral health and make certain that the need for dental care during pregnancy and early childhood are met.

Adolescents and Adults

**Adolescent/ Adult Caries**

Adolescent and Adult Issues

- Adolescent/Adult caries in on the rise
  - Primarily a choice in life style

Two issues that we need address today are:

- Soda pop caries
- Meth mouth

Soda Pop Caries

- First: Soda pop Caries - sugared soda pop

Soda Pop Effects

- Effects of soda pop:
  - Sugar in pop is utilized by the strep mutans to produce acid and drop pH of the mouth.
  - When the pH is less than 5.5 the subsurface enamel and dentin will demineralize.
  - The acid in soda pop has a pH of 2.7 or less which drops the pH even more causing more demineralization
Soda Pop Effects continued

- Effects of soda pop:
  - Did you realize the pH of the acid in the battery of your car or pickup is 1.0?
  - And where was the pH of soda pop?
  - Have you ever placed a nickel in a can of coke overnight? What happened?
  - Just think if it can do this to metal...what it can do to the teeth!

Sugar in Soda Pop?

- How many teaspoons of sugar are found in a 12 oz can of soda pop?
  - 6 tsp
  - 10 tsp
  - 12 tsp
  - 16 tsp

Sugar in Soda Pop Answer

- Answer:
  - 10 tsp in a 12 oz can of soda
  - That is equal to over ¼ cup of sugar

Soda Pop Cravings

- Soda pop effects:
  - Most folks bathe the teeth constantly during the day with a soda pop. Keeping the pH low all day.
  - Easily crave the caffeine in the soda and the sugar rush needs to be renewed.

Meth Mouth

- Second: Meth mouth

Meth Mouth Photos
Meth Effects

- Methamphetamine use effects:
  - Xerostomia
  - Caries pattern is different from soda pop use
  - Meth users who smoke or snort the drug display the most oral effects
  - Decay found along facial gum lines, root surfaces and interproximals of the upper anterior teeth

Meth Effects continued

- Meth use effects:
  - Poor oral hygiene
  - Burns on lips, hard palate, and oral mucosa
  - Cracked teeth – secondary to grinding teeth while on the drug
  - Periodontal disease – secondary to poor oral hygiene

New Demands

- Both soda pop caries and Meth Mouth have placed heavy demands/challenges on the oral health care team.

Restoration

- Restorative procedures are complex, time consuming, and are not cost effective
- Many teeth are not restorable and lead to removal of the teeth.
- Extractions can become difficult due to the extensiveness of the decay
- Many programs are not able to provide prosthetics for these patients.

Restoration continued

- Many patients do not have the financial means to obtain prosthetics.
- Medicaid may not cover the restorative procedures needed for the patient.
- Patient needs to change their habits if you plan to restore the teeth.

Action Steps for Soda Pop and Meth Mouth

- Primary care providers that see this type of decay process must:
  - Determine if soda pop use or meth use
  - Refer patient to detox program if meth use
  - Refer the patient to the oral health care team
  - Provide education to the patient on the importance of seeing an oral health care team member and the importance of correcting their behavior
Consequences

- Consequences of soda pop/meth caries:
  - Poor self esteem due to bad teeth
  - Speech problems due to decay and due to missing teeth
  - Depression secondary to the early loss of teeth
  - Not able to get work due to the loss of teeth and the shame of not having teeth

Consequences continued

- Consequences continued:
  - The possibility of infecting their spouse and their children with strep mutans
  - Lack of teeth not considered a disability and not able to get funding for replacement
  - Nutrition issues due to lack of teeth which could lead to more health issues down the road

Periodontal

**Periodontal Disease**

Define Periodontitis?

- Let's make sure everyone is still awake!
- Define periodontitis for me in 10 words or less...

Definition of Periodontitis

- Periodontitis
  - A chronic infectious disease process that affects gingival tissues and bone
  - Starts as gingivitis
  - Periodontitis is a destructive inflammatory process that extends into the deeper periodontal tissues around the tooth

Causes of Periodontitis

- Periodontitis:
  - Caused by predominantly gram-negative anaerobic bacteria
  - Porphyromonas gingivalis is the primary bacteria
  - The pathogenic bacteria cause a destructive inflammation process that destroys the attachment of gingival tissues to the tooth
Diagnosed with Periodontitis?

- How many of you have been diagnosed with periodontal disease or periodontitis?
  - Yes
  - No

Symptoms of Periodontitis?

- Which are signs and symptoms of periodontitis?
  - Gums that bleed
  - Radiographic bone loss
  - Loose teeth
  - Receding gums
  - Teeth look long all of a sudden
  - All of the above

Answer to Symptoms of Periodontitis

- Answer:
  - All of the above...depending on the progression of the disease.
Gum Disease Only in the Mouth?

- Most individuals see gum disease (periodontitis) as being in the mouth, but most likely it is located in the entire body.

Gum Disease May Be Systemic

- A growing body of evidence is suggesting that periodontal disease (periodontitis) not only destroys the tissue and bone around teeth, but it also enhances the risk for several potentially serious systemic diseases and conditions.

Theory of Gum Disease

- Theory is:
  - The porphyromonas gingivalis and other bacteria in plaque cause the gums/gingivae to become inflamed. The bacteria can then invade other parts of the body, including cells in the coronary arteries.

Co-Morbidities of Gum Disease

- We will look at the links of periodontal disease with:
  1) Diabetes
  2) Cardiovascular disease
  3) Respiratory disease
  4) Pancreatic cancer
  5) Reproductive outcomes

Gum Disease and Diabetes

- Periodontal Disease
- And its link with Diabetes

Diabetes Program?

- Does your clinic have a Diabetes Collaborative program?
  - Yes
  - No
Oral Health and Diabetes Program

- If you answered yes... do you have an active referral system to the oral health care team?
  - Yes
  - No

Compliance with Oral Health Visits?

- How compliant would you say your diabetic patients are in visiting the oral health team at least once a year?
  - Not compliant
  - Somewhat compliant
  - Compliant

Diabetics and Routine Care

- If you are a provider... do you ask your diabetic patients at routine follow-up appointments if they have visited their oral health care team within the last year?
  - Yes
  - No

Periodontitis and Diabetes

- CDC provides a concept that individuals with both diabetes and periodontal disease suffer from more severe diabetes over time as a result of the systemic effects of the periodontal disease. They state there is a worsened glycated hemoglobin over time.

Diabetes an Indicator of Periodontitis

- Epidemiologic studies have shown both type 1 and type 2 diabetes are predictors and contributing factors of periodontal disease when the systemic condition is poorly controlled.

Chronic Infection and Insulin

- The presence of chronic inflammation and infection in the oral cavity leads to the development of insulin resistance which complicates the medical management of the diabetic patient.
  - We know hyperglycemia and insulin resistance are related to CV complications of diabetes.

Dr. Maria Ryan – State University of New York, Stony Brook School of Dental Medicine

Dr. Karen Ryan – State University of New York, Stony Brook School of Dental Medicine
Ask About Signs of Periodontitis?

- Do you as a provider ask the diabetic patient if they have any of the signs of periodontal disease?
  - Yes
  - No

Advise Patients of Gum Disease

- Providers should ask patients if they have signs of periodontal disease. They can advise patients regarding the impact of chronic inflammation and infection on systemic health and then please refer them to the oral health care team.

Photo - Tooth Loss

2007 Symposium

On October 25, 2007, a symposium on Oral Health and Diabetes was presented by the FDI World Dental Federation and the Diabetes Federation.

Integrated Diabetes Care

- A call to action for integrated case management of the diabetic patient.
- The KEY for health promotion and prevention of disease for people with diabetes lies in close collaboration between dentists, physicians, and policy makers.

Diabetes Call to Action Items

- Six items to be addressed by the call to action:
  1) To include prevention of oral disease and promotion of oral health as an essential component of diabetes management.
Diabetes Call to Action 2

2) To establish periodontal disease formally as a routine complication of diabetes in order to increase the awareness amongst health professionals, patients, and policy makers.

Diabetes Call to Action 3

3) To initiate and support research leading to evidence-based treatment strategies to improve health and oral health of people with diabetes.

Diabetes Call to Action 4 & 5

4) To include routine oral screening of people with diabetes.

5) To introduce screening for diabetes in the dental office among high risk populations.

Diabetes Call to Action 6

6) To improve knowledge about the reciprocal link between diabetes and oral health among stakeholders, health professionals, people with diabetes, the public, and policy makers.

Link to Cardiovascular Disease

Periodontal Disease
And its link with Cardiovascular Disease

Evidence of Link

- Various studies have been done and are currently being done on this link.
- Initial results show evidence of this link and more studies are being conducted to understand the cause-and-effect relationship of this link.
Risk Factor for CV Disease

- One study states that we will assume that periodontal disease will be shown to be a risk factor for Cardiovascular disease.

CDC - Beck and Offenbacher - University of North Carolina School of Dentistry

Inflammatory Link

- CDC states:
- The inflammatory link between periodontal disease and cardiovascular disease shows a relationship exist between periodontal disease and the initiation of atherosclerosis. Anti-inflammatory therapy was effective in preventing the onset of both diseases.

CDC – Dr. Van Dyke - School of Medicine, Boston, MA

Tooth Loss and CV Disease

- Studies support a relationship between tooth loss and CV disease.
- Tooth loss is an indicator of poor oral health.

Bacteria and Heart Disease

- Scientists speculate that the bacteria in the mouth that cause cavities and periodontal disease may enter the bloodstream and either damage the blood vessel lining directly or trigger inflammation in the body that then contributes to the heart disease.

Amy Norton – Reuters Health  September 06, 2007

Link with Pancreatic Cancer

- Periodontal Disease
- And its link with Pancreatic Cancer

Study of Pancreatic Cancer

- Poor oral health linked to pancreatic cancer.
- Study of more than 51,000 male doctors
- Those with history of periodontal disease had a 64% higher risk for pancreatic cancer.

Wall Street Journal  02-11-2007
Chemical Process of Bacteria

Link may be due to:
- Oral bacteria trigger a chemical process in the body that results in high level of nitrosamines.
- Or.. the chronic infection in the gums trigger inflammation throughout the body which fuel the growth of cancer cells.

Link to Respiratory Infections

Periodontal Disease
And its link with Respiratory Infections

Plaque and Respiratory Disease

- Studies show an association among dental plaque – poor oral health and respiratory disease.
- Found bacteria normally in the mouth to be associated with lung infections
- Oral health status may contribute to nosocomial pneumonia and chronic pulmonary disease.

Plaque and Respiratory continued

- Mouth can serve as a reservoir of infection for potential respiratory pathogens in high risk patients.
- Bacteria recognized as potential respiratory pathogens have been routinely cultured from the dental plaque of high risk patients...the organisms may be aspirated into the lower airway to cause infection.

Link to Reproductive Outcomes

Periodontal Disease
And its link with Reproductive Outcomes

Gum Disease and Pregnancy

- Periodontal disease during pregnancy is an identified obstetric risk factor for preterm delivery and fetal growth restriction.
- Risk is high at the earlier gestational ages rather than later in pregnancy.
Prenatal Periodontal Evaluation

- Periodontal disease is a modifiable risk factor.
- The American Academy of Periodontology recommends that a periodontal evaluation be included as a part of prenatal care.

Oral Medications

The Effects of Oral Medications on the oral tissues

Xerostomia

- Xerostomia - Dry Mouth - Not enough saliva flow
- Hard to chew, swallow, speak
- Taste of foods are decreased
- Increase in dental decay and other mouth infections - both bacterial and fungal

Symptoms of Xerostomia?

- Which of the following are symptoms of xerostomia?
  - Sticky feeling in mouth
  - Burning feeling in mouth
  - Cracked lips
  - Rough tongue
  - Dry throat
  - All the above

Xerostomia Photo

Xerostomia Decay - 1
Xerostomia Decay - 2

Medications & Less Saliva
- More than 400 medications can cause the salivary glands to produce less salivary fluids
- Hypertensive medications, medications for depression, medications for diabetes, and birth control pills are among those known to cause dry mouth.

Tobacco Products

Effects of tobacco products on oral tissues

Smoking
- Smoking
  - Tar stains on teeth
  - Accelerates bone loss – periodontal disease
  - Delays healing in the mouth
  - Mouth cancers

Smokeless Tobacco
- Smokeless Tobacco
  - Caries - root surface
  - Mouth cancers
  - Tissue irritation

Summary
In Summary:
1) We must change perceptions of oral health so that it is an accepted component of overall general health.
2) We must integrate oral health into the existing patient care processes that exist in our health care facilities.
Summary continued

3) We must improve the knowledge about the link between oral health and systemic disease among health care professionals, patients, the public, and policy makers.

4) In our search for better health for our patients...we must not neglect the mouth.

Oral Health (references)

- Dr. Gregory Whelan - pediatric dentist - Indian Health Service
- Indian Health Service – Caries Risk Assessment Module
- Centers of Disease Control
- US Department of Health and Human Services
ORAL HEALTH QUICK REFERENCE CARD

The Oral Health Quick Reference Card displayed below is a handy provider tool for addressing common oral health issues during a primary care visit. This tool includes normal tooth eruption dates, treatment for avulsed permanent teeth, oral and head/neck cancer examination, and common prescriptions for dental problems. Laminated versions of this card may be ordered from CHAMPS. Please contact shannon@champsonline.org for more information.

**NORMAL TOOTH ERUPTION DATES**

<table>
<thead>
<tr>
<th>Tooth Type</th>
<th>Deciduous</th>
<th>Permanent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maxillary Arch</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Incisor</td>
<td>8-12 Months</td>
<td>7-8 Years</td>
</tr>
<tr>
<td>Lateral Incisor</td>
<td>9-13 Months</td>
<td>8-9 Years</td>
</tr>
<tr>
<td>Cuspids</td>
<td>16-22 Months</td>
<td>11-12 Years</td>
</tr>
<tr>
<td>Bicuspsids</td>
<td>-----</td>
<td>10-12 Years</td>
</tr>
<tr>
<td>First Molar</td>
<td>13-19 Months</td>
<td>6-7 Years</td>
</tr>
<tr>
<td>Second Molar</td>
<td>25-33 Months</td>
<td>12-13 Years</td>
</tr>
<tr>
<td>Third Molar</td>
<td>-----</td>
<td>17-22 Years</td>
</tr>
<tr>
<td><strong>Mandibular Arch</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Incisor</td>
<td>6-10 Months</td>
<td>6-7 Years</td>
</tr>
<tr>
<td>Lateral Incisor</td>
<td>10-16 Months</td>
<td>7-8 Years</td>
</tr>
<tr>
<td>Cuspids</td>
<td>17-23 Months</td>
<td>9-11 Years</td>
</tr>
<tr>
<td>Bicuspsids</td>
<td>-----</td>
<td>10-12 Years</td>
</tr>
<tr>
<td>First Molar</td>
<td>14-18 Months</td>
<td>6-7 Years</td>
</tr>
<tr>
<td>Second Molar</td>
<td>23-31 Months</td>
<td>11-13 Years</td>
</tr>
<tr>
<td>Third Molar</td>
<td>-----</td>
<td>17-22 Years</td>
</tr>
</tbody>
</table>

**TREATMENT FOR AVULSED PERMANENT TEETH**

- Timing is critical – re-implant within 45 minutes.
- Tooth must be kept moist – use saliva, milk, water.
- Rinse off debris; do not touch root surface (will damage it).
- After re-implanted, immediate referral to dentist for splinting and critical follow-up.

**EARLY CHILDHOOD CARIES (Baby Bottle Tooth Decay)**

- Caused by frequency and duration of sugar intake.
- While sleeping, bottle should only contain water.
- Bottle should be replaced with a sippy cup at one year.
- First dental visit should be at age one.
- Parents should brush child’s teeth until ~ age six.
- Rx for supplemental fluoride? Be conservative!
- Give preventive advice to OB patients.

**ORAL AND HEAD/NECK CANCER EXAMINATION**

1. Have patient remove dentures or appliances.
3. Tilt head back: Inspect for masses or asymmetry.
5. Gingiva: Reflect tip and examine visually, buccal & lingual sides.
6. Buccal mucosa: With mouth half-closed, use tongue blade to reflect lips, and otoscope for better visibility.
7. Palate: Tip head back, have patient say “ahh”; note uvula and tonsils.
8. Lateral borders of tongue: Have patient extend tongue, wrap 2"x2" gauze around anterior third, move tongue to one side to visualize entire lateral border, then repeat for other side. Most oral cancer occurs here.
10. Palpate mandible and maxilla, then check the bite.

**COMMON Rx FOR DENTAL PROBLEMS**

**Abscessed Tooth, Acute Gingivitis, Periodontal Abscess:**
- Pen-VK 500mg, #28, 1 tab q6h x 7 days
- OR Clindamycin 300 mg, #28, 1 tab q6h x 7 days
- OR Cephalaxin 500mg, #28, 1 tab q6h x 7 days
- OR Erythromycin 500 mg, #28, 1 tab q6h x 7 days

**Necrotizing Ulcerative Gingivitis (“Trenchmouth”)**
- Any of the above antibiotic regimens,
- OR Metronidazole 500 mg, 1 tab q6h x 7 days
- OR Chlorhexidine Oral Rinse 0.12%, Disp. 16 oz bottle
  Sig: Rinse for 30 sec with ⅔ oz. BID

**For patients with severe decay, or xerostomia:**
- Neutral Sodium Fluoride Gel, 1.1%
- OR Stannous Fluoride Gel, 0.4%
  Sig: Use as regular toothpaste; do not swallow

**AMERICAN HEART ASSOCIATION S.B.E. PROPHYLAXIS**

**Antibiotics:**
- Amoxicillin: Adults, 2.0 g (children, 50 mg/kg) given orally one hour before dental procedure
  OR
- Clindamycin: Adults, 600 mg (children, 20mg/kg) given orally one hour before dental procedure
ADDITIONAL ONLINE RESOURCES

Please visit the websites listed below for a wealth of information related to this presentation.

Centers for Disease Control and Prevention (CDC)
Oral Health Resources
www.cdc.gov

- Click “O” in the A-Z Index in the upper right corner of the CDC home page.
- Scroll down and click on “Oral Health”
- Click on “Publications” on the left side of the screen.
- Click on “Fact Sheets and FAQs” (will show up below “Publications”)

American Dental Association (ADA)
Oral Health Topics A-Z
www.ada.org

- Click “A-Z Public Topics” under the “Your Oral Health” column