



## Integrated Provider Partnerships

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Chief Dental Officer  
AmeriChoice/UHG



## Goals of the Integrated Provider Partnership

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- To create an integrated medical dental program.
- To communicate to the member through the medical and dental providers the importance of comprehensive integrated care.
- To create a provider reimbursement (incentive) methodology that will support this program.
- To identify medical dental opportunities for the convergence of these services in a cost effective manner.



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"The needs of children should not be made to wait...we can say that although children may be victims of fate, they will not be victims of our neglect..."

John F Kennedy  
Message to Congress  
February 14, 1963



## Role of the Primary Care Physician

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By age 2, children have seen a Primary Care Physician on the average of 7 times but few have had a well child dental visit.



## Role of the PCP - The Facts

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- Tooth decay is the most common chronic disease-five times more than asthma.
- Over 51 million hours are missed annually from preschool through high school due to dental illness.
- Oral health issues affect children in poverty and racial minorities far more than other groups.
- 40 to 50% of children are affected with caries by age 5



## A Role In Dentistry For The PCP

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- Anticipatory Guidance/ Counseling
- Risk Assessment
- Manage Simple Dental Trauma
- Maternal Oral Health Counseling
- Screening
- Fluoride Varnish Application

### Barriers:

- o Oral health absent from the radar screen of the PCP.
- o PCPs are busy so oral health is not a priority.
- o Confusion about PCP's role as related to dentistry because of a lack of oral health training.
- o Reimbursement absent

### American Academy of Pediatrics Statement

All pediatricians should perform the oral health risk assessment and establish a dental home by the age of 12 months.



### AAP Oral Health Guidelines

"Pediatricians, family practitioners, pediatric nurse practitioners and physician assistants should be trained to perform an oral health risk assessment on all children beginning by age 6 months of age to identify known risk factors for early childhood caries."

### Early Childhood Caries



### Early Childhood Caries

ECC is more than a dental problem. Dimensions include socio-behavioral and environmental factors.

ECC is increasing because pharmacologic solutions and not just surgical solutions are needed to address the care causes.

Needed are long term interventions. Dentists and Physicians must start earlier if we are to effect prevention as well as suppression.

### Early Childhood Caries

Traditional dental treatment in young children is typically primarily surgical (reparative), often involving general anesthesia. It is costly and utilizes the highest trained professionals in the most intense settings.

## Early Childhood Caries

Parents or guardians must become specialized caregivers.

No preventive dental or medical care can be achieved without a change to shared responsibility between the health care professional and the parent/guardian.

## ECC Characteristics

INFECTIOUS

TRANSMISSIBLE

DIET DEPENDENT

FLOURIDE MEDIATED

REVERSIBLE



### Florida Hospital Admissions for Dental Infections Medicaid Eligible Children Aged 6 Years & Under

#### Data Analysis Criteria:

- Florida Medicaid Data (not including Medicaid HMOs) for 12 months (July 2006 through June 2007)
- Medicaid-eligible Children 6 years of age or under
- Hospital Admissions billed at discharge for any of the following codes (even if not primary diagnosis):
  - ICD 522.5 Dental Abscess without Sinusitis
  - ICD 522.7 Dental Abscess with Sinusitis
  - ICD 682.0 Facial Cellulitis

Source: Florida Agency for Health Care Administration; via Deepa Ranka, MS; Elizabeth Shenkman, PhD; & Frank Catalanotto, DMD; University of Florida & Sandy Halperin, DDS, Florida Department of Health

### Florida Hospital Admissions for Dental Infections Medicaid Eligible Children Aged 6 Years & Under

#### Results:\*

Number of Admissions = 196

- Average Stay = 3.7 days per admission
- Total Expenditures for All Admissions (n=196): \$1,076,229.28
- Mean Expenditure per Admission: \$5490.97
- Mean Expenditure per Day: \$1484.04

\*The inpatient costs were for Hospital Admissions billed at discharge for any of the 3 ICD Codes (even if not primary diagnosis).

Source: Florida Agency for Health Care Administration; via Deepa Ranka, MS; Elizabeth Shenkman, PhD; & Frank Catalanotto, DMD, University of Florida & Sandy Halperin, DDS, Florida Department of Health

## PCP Fluoride Varnish Program



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Welcome to the Oral Health for Primary Physicians CME Program.

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SECTION 1: CARIES OVERVIEW

**Early Childhood Caries (ECC)**

- Severe, rapidly progressing form of tooth decay in infants and young children

SECTION 2: PREVALENCE & PREVENTION

Oral Disease is a Health Threat

Prevalence

Promoting Oral Health

General Recommendations

elapsed time: 00:00:00 total time: 00:00:00

Volume: 100% 11

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**Oral Health for Primary Care Physicians Evaluation**

1. Saliva inhibits bacterial growth.

☐ True

☐ False

2. Fluoride varnish should be applied every:

☐ a. 2 months as necessary

☐ b. 4 months as necessary

☐ c. year as necessary

3. Dental decay is \_\_\_\_ times more likely than asthma.

☐ a. 3

☐ b. 5

☐ c. 7

4. Early Childhood Caries (ECC) are a:

☐ a. slowly progressing form of tooth decay in infants and young children

☐ b. severe, rapidly progressing form of tooth decay in infants and young children

☐ c. gentle but rapidly progressing form of tooth decay in infants and young children

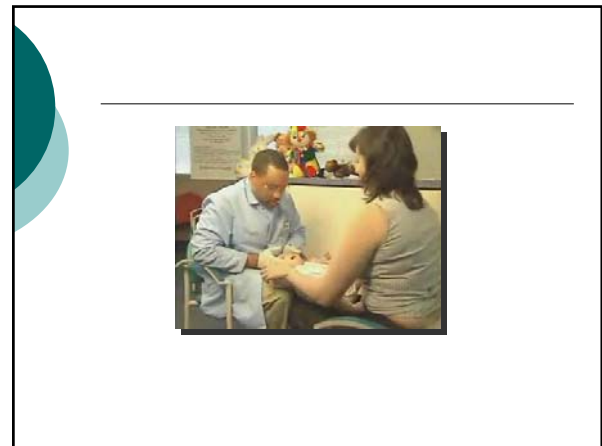
5. During an oral health screening, the professional should be looking for:

☐ a. dental trauma; tooth decay

☐ b. plaque and food debris; dental infection; developmental problems

☐ c. tooth eruption and loss

☐ d. all of the above



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Documents

Name	Provider	Date
<a href="#">Assessing the Effect of Fluoride Varnish</a>	ICEHealthSystems	Sep. 29, 08
<a href="#">Baby Teeth Matter!</a>	ICEHealthSystems	Sep. 29, 08
<a href="#">Early Preventive Dental Visits</a>	ICEHealthSystems	Sep. 29, 08
<a href="#">Fluoridation Facts</a>	ICEHealthSystems	Sep. 29, 08
<a href="#">Fluoride Varnish: an Evidence-Based Approach</a>	ICEHealthSystems	Sep. 29, 08
<a href="#">Update on Early Childhood Caries since the Surgeon General's Report</a>	ICEHealthSystems	Oct. 08, 08

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Claims Forms

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List of Templates:

- [Fluoride Varnish](#)
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**ADA Dental Claim Form**

1. Type of Transaction (Check all that apply):

☐ Statement of Actual Services - (S) ☒ Request for Predetermination/Precertification (P) (EPO/TPA Use Only)

2. Predetermination/Precertification Number

3. Name (Last, First, Middle Initial, Suffix), Address, City, State, Zip Code

4. Other Dental or Medical Coverage? ☒ No (Skip 5-11) ☐ Yes (Complete 5-11)

5. Subscriber Name (Last, First, Middle Initial, Suffix)

6. Date of Birth (MM/DD/YYYY)

7. Gender ☐ M ☐ F

8. Subscriber Identifier (SSN or EIN)

9. Plan/Group Number

10. Relationship to Primary Subscriber (Check applicable box): ☐ Self ☐ Spouse ☐ Dependent Child ☐ Other

11. Other Contact Name, Address, City, State, Zip Code

12. Date of Birth (MM/DD/YYYY)

13. Gender ☐ M ☐ F

14. Subscriber Identifier (SSN or EIN)

15. Plan/Group Number

16. Relationship to Primary Subscriber (Check applicable box): ☐ Self ☐ Spouse ☐ Dependent Child ☐ Other

17. Patient Status ☐ PTB ☐ PFS

18. Date of Birth (MM/DD/YYYY)

19. Gender ☐ M ☐ F

20. Patient ID/Account # (Assigned by Dentist)

21. Date of Birth (MM/DD/YYYY)

22. Gender ☐ M ☐ F

23. Patient ID/Account # (Assigned by Dentist)

24. Procedure Date (MM/DD/YYYY)

25. Procedure Code (ICD-9-CM)

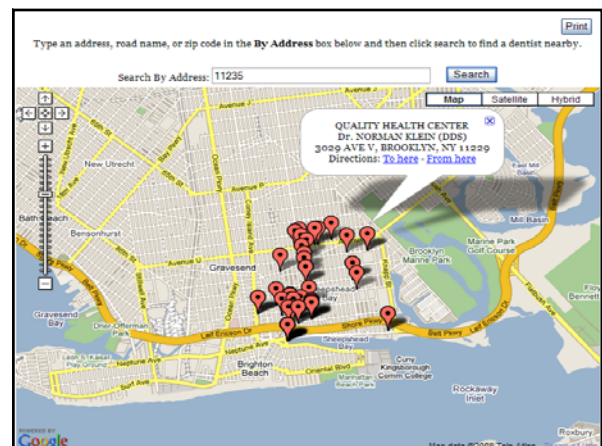
26. Tooth Number(s) (if left/right)

27. Tooth Surface

28. Procedure Code

29. Description

30. Fee



## PCP Flouride Varnish

- Increase in HEDIS Scores
- Lower average claim costs
- Reduction in operating room utilization
- Enhances integration of dental-medical care
- Preventive model vs Surgical model

**Earlier Interventions → Lower Costs**  
**Savage MF, et al. Early Preventive Dental Visits: Effects on Subsequent Utilization and Costs. Pediatrics October, 2004.**

Early Preventive Dental Visits Effects on Subsequent Utilization and Costs

“The age at the first preventive dental visit had a significant positive effect on dentally related expenditures.”

1 <sup>st</sup> dental visit	Total cost:
Before age 1	\$262
Age 1-2	\$339
Age 2-3	\$449
Age 3-4	\$492
Age 4-5	\$545

## Caries Risk Assessment Caries Susceptibility Test



Caries test is a quick, 1 minute chair-side test for ATP (adenosine tri-phosphate) levels on the teeth.

## XYLITOL

- also called **wood sugar** or **birch sugar**, is a five-carbon sugar alcohol that is used as a sugar substitute.
- Xylitol is a naturally occurring sweetener found in the fibers of many fruits and vegetables, including various berries, corn husks, oats, and mushrooms.
- Xylitol is roughly as sweet as sucrose but with two-thirds the food energy.  
 1 teas. Sugar = 15 calories/carbs. 4 grams per teas.  
 1 teas. Xylitol = 9.6 calories/carbs. 0 net effective carbs.

Wikipedia

## Dietary Counseling

High Risk Groups



Lower Risk Groups



## Oral/Systemic Link

- **History**
  - Bad Air
  - Evil Spirits
  - Bad Blood
  - Disease was considered a punishment
- **In 1876, Dr. Robert Koch**
  - Identified “germs” which caused blood poisoning and septicemia
  - Dispelled notion that “Supernatural”

## Total Health Solution

"A person is not healthy without good oral health"

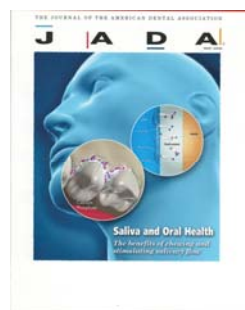
C. Everett Koop

## Medical Management of Oral Health In America

This review of oral health linkages with general health reveals implications for the clinical practice of both medicine and dentistry. The recognition of well-known and established signs and symptoms of oral diseases may assist in the early diagnosis and prompt treatment of some systemic disease and disorders.

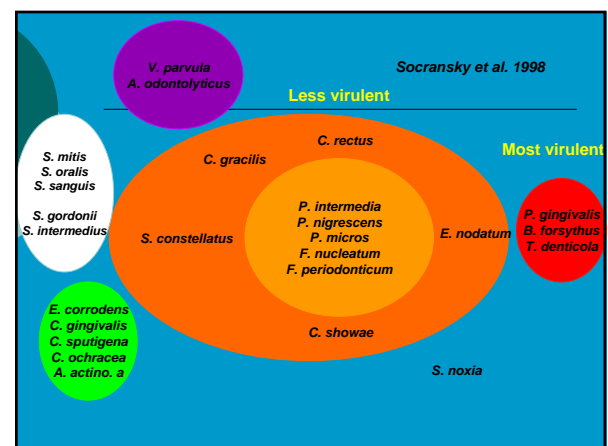
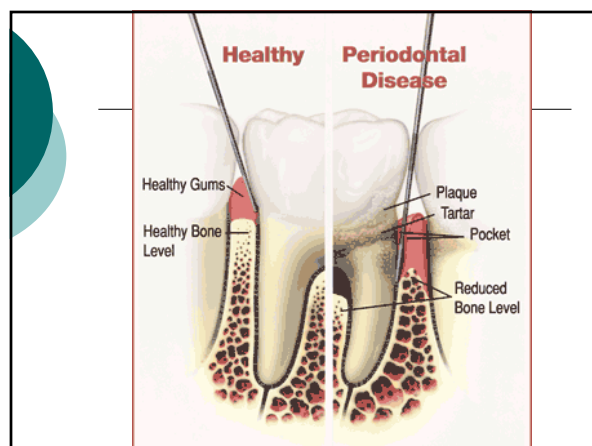
Source: Surgeon Generals Report 2000

## Biomarkers / Saliva



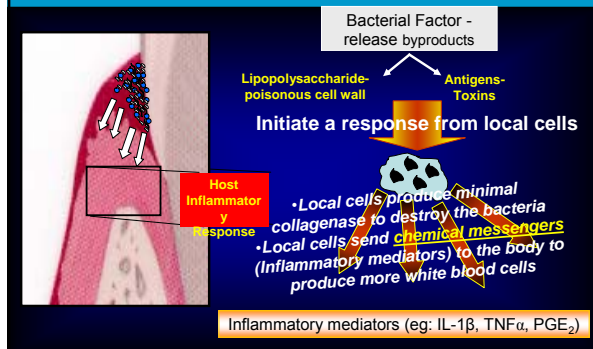
## Salivary Markers

The noninvasive nature of salivary testing has made an attractive alternative to blood and urine testing. Oral-based diagnostics can lead to early detection of drug abuse, infectious diseases or environmental toxins.

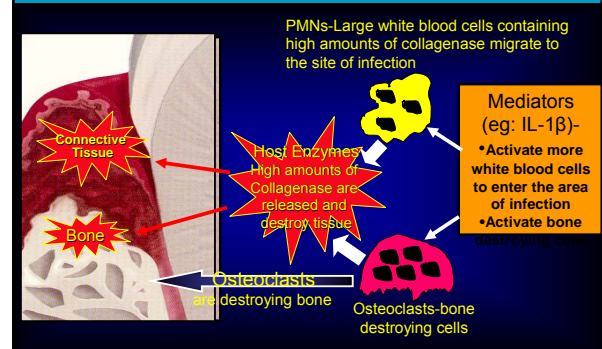




## Pathogenesis of Periodontal Disease: A Bacterial-Host Interaction



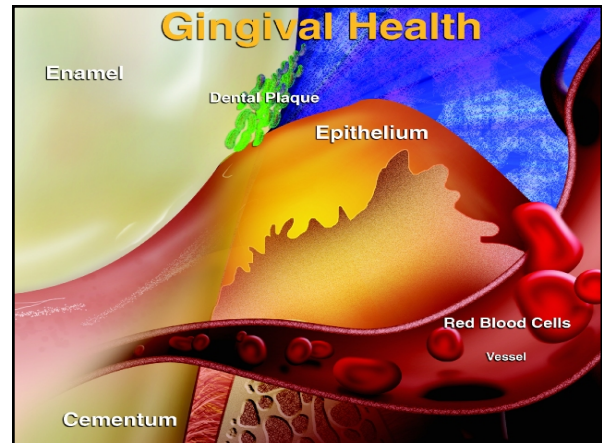
## Pathogenesis of Periodontal Disease: A Bacterial-Host Interaction



## Healthy Gingiva



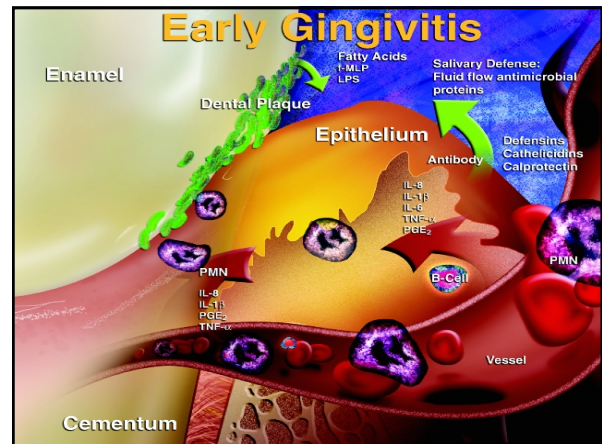
## Gingival Health



## Gingivitis

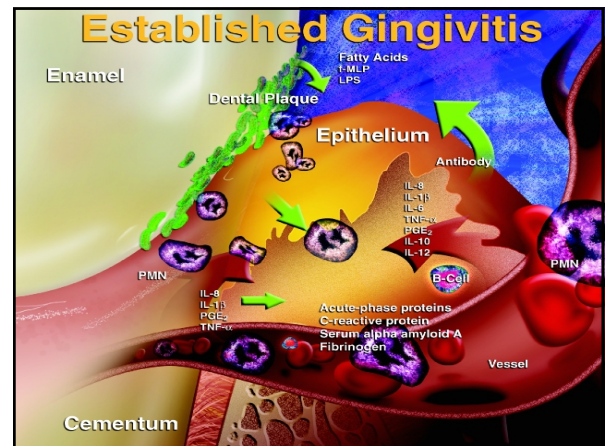


## Early Gingivitis

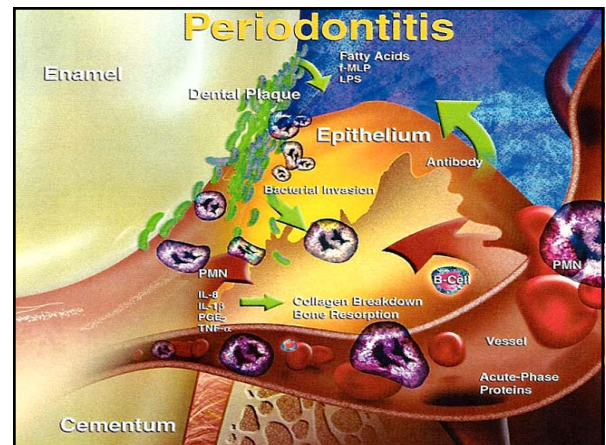




## Established Gingivitis



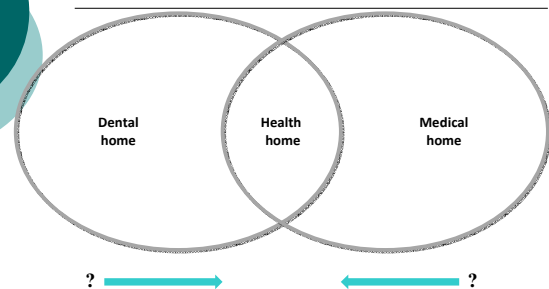
## Moderate Periodontitis

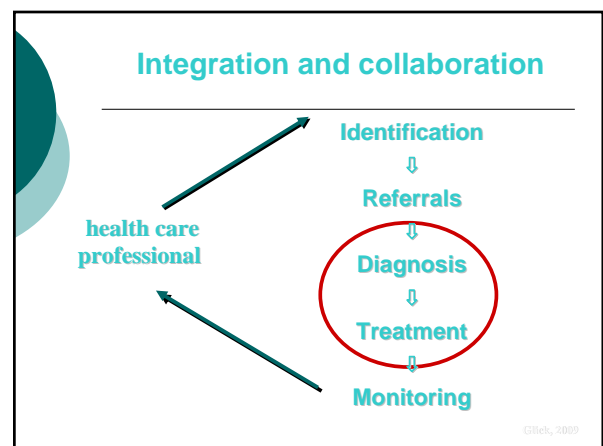
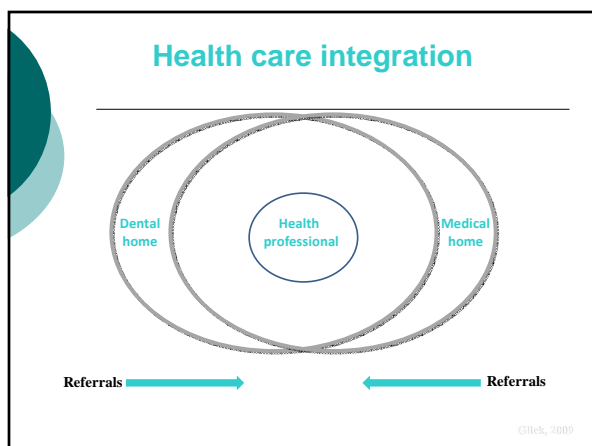
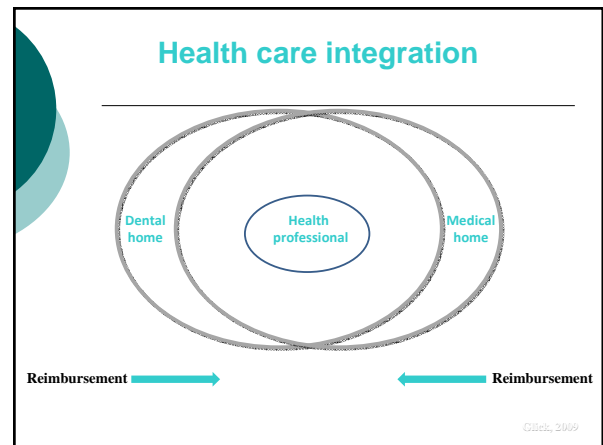
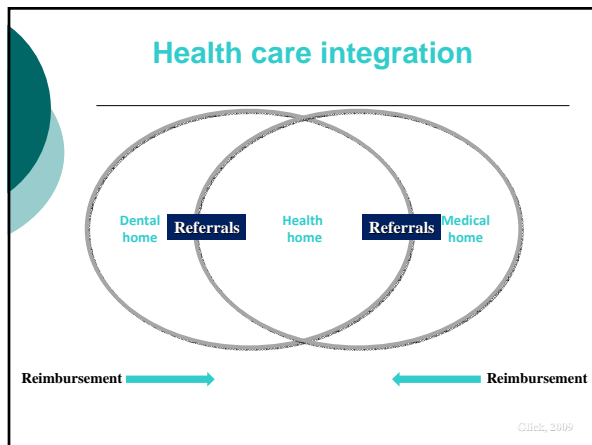
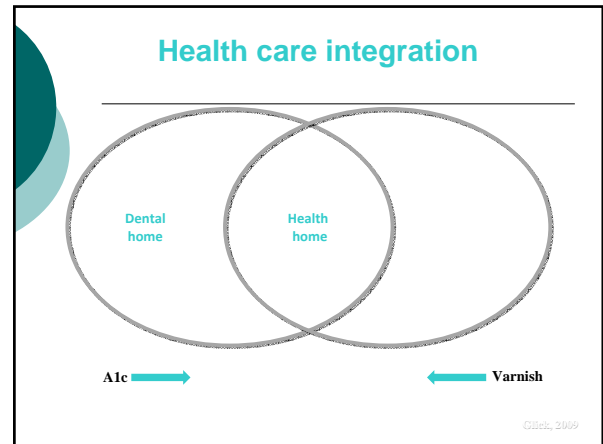
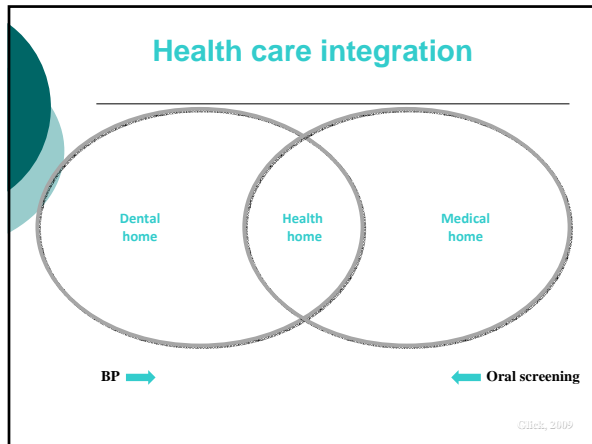


## Advanced Periodontitis



## Health care integration

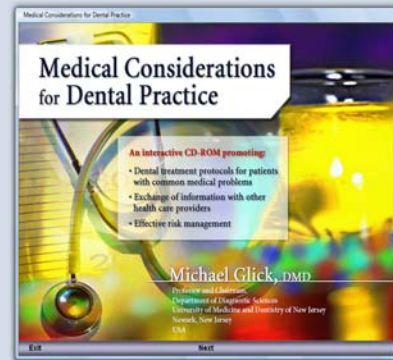




## Health care integration

- Patient-centered
- Comprehensive
- Coordinated

Glick, 2009



The 'Medical health questionnaire' screen displays a grid of medical conditions for assessment. Each condition is listed with a 'Q' and 'I' column for 'Yes' and 'No' responses.

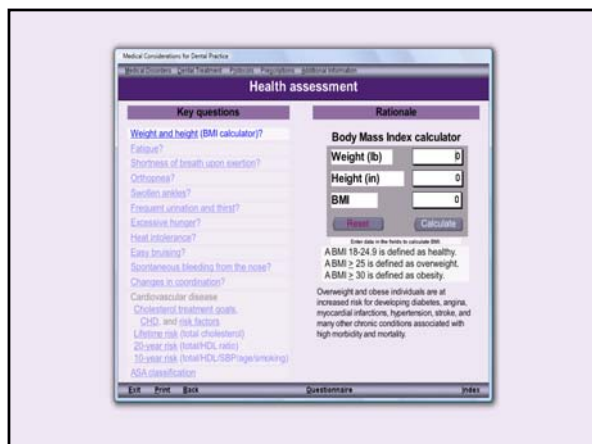
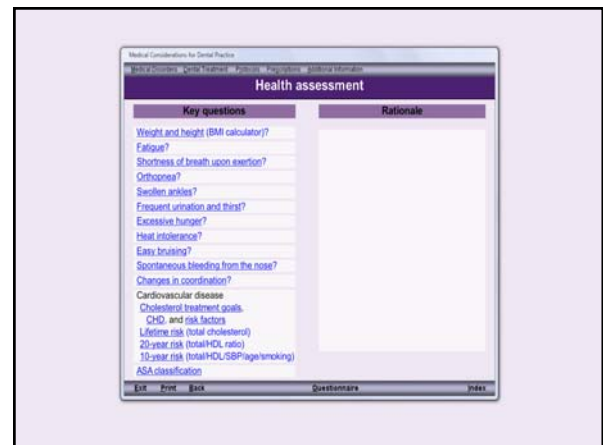
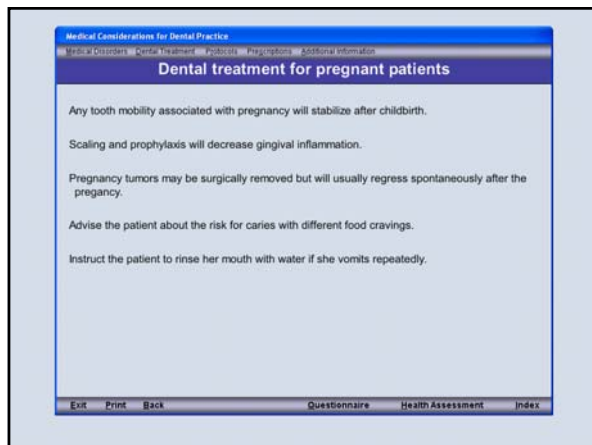
Condition	Q	I	Condition	Q	I
High blood pressure/hypertension			Anemia		
Heart murmur			Bleeding disorder		
Rheumatic fever			Kidney disease		
Mitral valve prolapse			Renal dialysis		
Angina/chest pain			Organic transplant		
Heart attack (myocardial infarction)			Cancer		
Prosthetic heart valve			Radiation therapy		
Irregular heartbeat (arrhythmia)			Chemotherapy		
Pacemaker/defibrillator			Epilepsy/seizure		
Congestive heart failure			Gastrointestinal disorder		
Stroke/TIA			Arthritis		
Emphysema/bronchitis			Artificial joint		
Asthma			Sexually transmitted disease		
Diabetes mellitus			HIV/AIDS		
Thyroid disorder			Tuberculosis		
Autoimmune disorder			Psychiatric disorder		
Liver disease			Allergies		
Hepatitis			Pregnancy		

Navigation buttons: Exit, Print, Back, Health Assessment, Index.

The 'Pregnancy' screen is divided into two main sections: 'Key questions' and 'Rationale'. The 'Key questions' section contains three questions with input fields: 'What trimester are you in?', 'Have you had any signs or symptoms of a high-risk pregnancy?', and 'Have you noticed any intraoral changes?'. The 'Rationale' section is currently empty. A 'Dental Treatment' button is at the bottom. Navigation buttons: Exit, Print, Back, Questionnaire, Health Assessment, Index.

This screenshot shows the 'Pregnancy' screen with the 'Rationale' section populated. The rationale text states: 'During the 1st trimester, outside influences may affect the organogenesis of the fetus. The last half of the 3rd trimester is the most uncomfortable for the pregnant patient.' The 'Key questions' section remains the same. A 'Dental Treatment' button is at the bottom. Navigation buttons: Exit, Print, Back, Questionnaire, Health Assessment, Index.

This screenshot shows the 'Pregnancy' screen with the 'Rationale' section populated. The rationale text states: 'Previous miscarriages, cramping, and spotting warrant consultation with the patient's obstetrician.' The 'Key questions' section remains the same. A 'Dental Treatment' button is at the bottom. Navigation buttons: Exit, Print, Back, Questionnaire, Health Assessment, Index.



## Integrating Oral Health to the Care of Overweight Children: A Model of Care Whose Time Has Come

- Obese and overweight children are at greater risk for dental caries and periodontal disease compared with normal-weight children of comparable age.
- Obesity triggers immune response to a state of chronic inflammation.
- Oral health in the overweight child is a significant health problem; solutions are within reach that could translate in gains in overall health.

Gross, Collier & Perkin  
The Journal of Pediatrics  
April 1, 2008

## Healthy Weight Intervention

- Twice as many children are at risk to be overweight than 20 years prior
- Dental Care professionals have an opportunity to provide healthy weight intervention (HWI)
- Behavioral modifications, nutritional guidance and BMIs are key to these changes

Travis and Chomits, JADA  
Vol 140, March 2009

## Obesity

Torus Palatinus or benign bony growths in your oral cavity decreases the capacity of your mouth and requires you to take much smaller bites than "normal" people.



Having to take smaller bites results in eating slowly which has three weight control benefits:

1. The oral structure precludes your ability to gulp food
2. Having less food in your mouth for longer periods of time allows you to "savor" your food more than average
3. Being forced by a small oral cavity to consume your food slowly triggers your "satiety response"

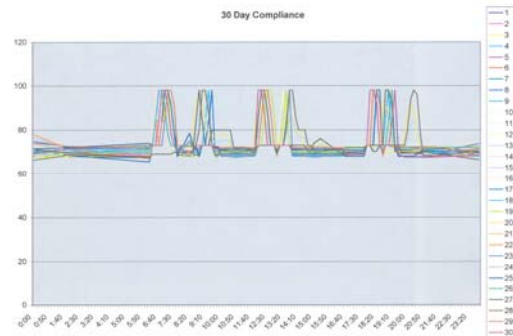
## Appliance

The device is an acrylic insert simulating the tori with two nearly invisible ball clasps to position it.



The result – eating speed is decreased, food is chewed thoroughly and gulping stops.

Desire for more food decreases resulting in consuming fewer calories and losing weight.



## Bariatric Surgery

- Surgery for morbid obesity is an alternative to traditional weight loss methods when such methods have failed to yield sufficient weight loss in patients who are at great risk of complications due to their obesity.
- BMI > 35 with two or more co-morbid conditions poorly controlled.

## Case Study Video



## A1c Monitor

- A1c Monitor is a single-use test for hemoglobin A1c.
- The test is easy to use, needs only a drop of blood and takes just 8 minutes.

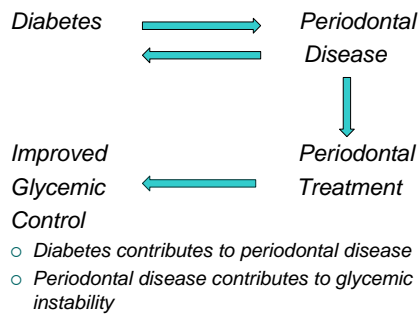


## UMDNJ SAMPLE TESTING

- Screening for Undiagnosed Diabetes in a Dental Setting
- Overwhelming evidence suggests that diabetes is the most important systemic risk factor for periodontitis. Moreover, data from the American Dental Association suggests that more than 60% of Americans see a dentist at least once per year. Many of these visits are for routine, non-emergent, care. These findings suggest that the dental practice setting could provide an important opportunity to identify individuals unaware of their diabetic status.

*Approximately 3% to 4% of the adult population has undiagnosed diabetes and the prevalence is likely to be substantially higher among people with diabetes risk factors. Of note, many patients at the time of diagnosis of diabetes already have diabetic complications.*

## DIABETES



## Diabetes and Periodontal Disease

Severe periodontal disease can increase blood sugar levels. This puts diabetics at increased risk for diabetic complications.

The Journal of Periodontics reported in a classic study in 1977 that 113 Pima Indians with diabetes and periodontal disease when treated for the periodontal disease, improved the management of their diabetic condition.

## Diabetes and Periodontal Disease

Individuals with varying degree of periodontal disease are nearly twice as likely to become diabetic. Adjustments were made for potential confounders including age, smoking, obesity, hypertension and dietary patterns.

Diabetes Care  
July 2008  
Mailman School of Public Health  
Columbia University

## Periodontal Disease: Associations with Heart, Stroke and Premature Births

The scientific search for additional risk factors has produced a growing body of evidence that strongly suggests periodontal disease is a contributing risk factor in their development. In study after study, a positive connection has been found between oral disease and heart disease, stroke, and preterm low birth weight infants.

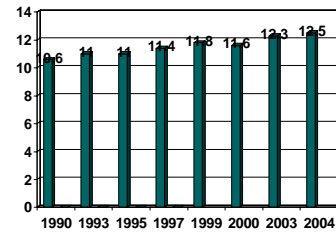


## Periodontal Disease and Premature Births

- One out of ten newborns in the United States is classified as a premature low birth baby.
- 12.5% below 37 weeks gestation
- Costs of \$26 billion dollars or \$51,600 per infant born preterm, 2005

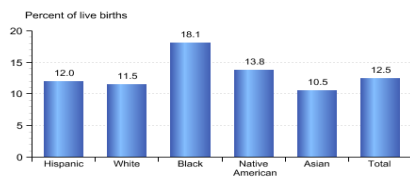
Institute of Medicine  
July 2006

## Preterm Births as a Percentage of Live Births in the United States



Institute of Medicine of the National Academies  
Advising the Nation. Improving Health.  
Report Brief, July 2006

## Preterm by race/ethnicity: US, 2003-2005 Average



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## Association between Dental Caries and PTB and LBW

High levels of oral bacterium associated with dental caries have also been associated with 60 grams reduction in birth weight and shorter gestation.

Dansanayake et al. J of Periodontal 2005; 171-7

## Changes in CRP Post Scaling

N = 85 women with pre and post scaling  
CRP values

CRP values pre scaling median = 1.65

CRP values post scaling median = 2.85

Are we making inflammation worse???

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EDITORIAL

Volume 355:1925-1927 November 2, 2006 Number 18

**Preterm Birth and Periodontal Disease**  
Robert L. O'Leary, M.D., and Jennifer P. Sullivan, Ph.D.

Preterm births (those occurring before 37 weeks of gestation) make up 12.5% of births in the United States. They account for 70% of perinatal deaths and nearly half of all long-term neurologic complications — the most important adverse outcomes of pregnancy. The highest preterm birth rates occur for a disproportionate number of each adverse outcome. Over the past several decades, despite extensive research and intensive medical and public health efforts, the rate of preterm birth has risen. Preterm birth may follow spontaneous preterm labor (in 30% of cases), membrane rupture (in 25% of cases), or the induction of labor or cesarean section triggered by maternal or fetal indications (in another 20% of cases). The increase in the rate of preterm birth is mostly attributable to an increase in the number of preterm births attributable to maternal or fetal indications and to the occurrence of multiple births associated with assisted reproductive therapies; 30% of twin births and nearly all higher-order multiple births are preterm.

Important risk factors for spontaneous preterm birth include multiple gestation, black race, low socioeconomic status, low maternal body-mass index (under 19.5, calculated as the weight in kilograms divided by the square of the height in meters), and short cervical length (under 25 mm, as measured via ultrasonography). Urogenital infection (e.g., chlamydia, mycoplasma, bacterial vaginosis, and bacterial vaginosis) and infection at other sites (e.g., appendicitis,

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## New England Journal Study

- Pregnant women with periodontal disease were randomly assigned to be treated either before or after delivery
- No significant difference in the rate of pre-term birth or birth weight regardless of whether mother in treatment or control group
- Increase in spontaneous abortions and / or still-births in the non treatment group
- Treatment of periodontitis in pregnant women improves periodontal disease and is safe but does not effect rate of pre-term or low birth weight

## Are We Treating These Women Too Late?



Drexel University  
College of Medicine  
Study

## Proposed Study

- Again focuses on the inter-pregnancy period
  - Avoid increases in systemic inflammation in pregnancy
- Improves intervention by expanding treatment to all oral health problems
  - Further reduction in inflammatory markers.
  - Potential to improve pediatric dental caries

## University of Chile Study

- 30% of 26 pregnant women at risk for preterm birth were found to have P. Gingivalis in both the oral cavity and amniotic fluid.
- **Conclusion:** The presence of microbial invasion of the amniotic cavity by P. Gingivalis could indicate a role for periodontal pathogenic bacteria in pregnant women with a diagnosis or threatened premature labor

## Minnesota Administrative Data Study

- Cohort of 3,462 pregnant women with commercial dental insurance
- There was a significant decrease in dental services during pregnancy and a significant increase after pregnancy
- Type of care varied during and after pregnancy

Jiang et al, JADA September 2008  
vol 139

## Periodontal Disease and Heart Disease/Stroke

- Periodontal disease has been identified as a **risk factor** in the development and build-up of plaque on artery walls.
- Oral infections cause the release of high levels of inflammatory mediators into the blood causing platelet coagulation and fatty deposits on artery walls.
- Studies have **consistently reported** 1.5 to 2.0 times greater risk of fatal stroke and heart disease with patients with periodontal disease.

## Periodontal Disease, C-Reactive Protein and Overall Health

*Published report in the New England Journal of Medicine, 2002 identified elevated C-Reactive Protein levels as a stronger predictor of heart attacks than elevated cholesterol levels.*

*Dr. Steven Offenbacher stated, "Periodontal disease needs to be considered as a major contributor to increased CRP levels. Periodontal disease and increased body mass are jointly associated with increased levels of CRP in healthy adults."*

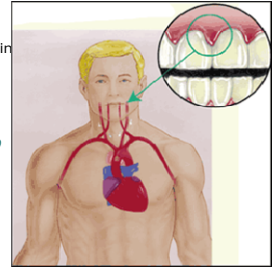
## Periodontal Disease as a Risk Factor for CVD

### ○ Bacterial Damage

- Oral bacteria enters bloodstream embeds in blood vessel.
- Endotoxins stimulate host cells to produce inflammatory mediators.
  - (IL-1, IL-6, TNF, CRP)
- Fibrinogen production results in "fibrous cap"...ruptures can cause embolism - resulting in CV event.

### ○ Inflammation

- C Reactive Protein



## Epidemiology of CV Disease

- Affects 70.1 million Americans
- **# 1 cause of DEATH for men and women**
- Causes more than 40% of all deaths in the US (950,000)
- Costs \$260 billion annually

## Pancreatic Cancer

- Fourth leading cause of death in the US
- Sixteen year study/50,000 subjects
- Risk factor for pancreatic cancer includes cigarette smoking, alcohol abuse and chronic pancreatitis
- Individuals with periodontal disease had a 64% increased likelihood of developing pancreatic cancer

E Michaud, et al (Harvard University)  
Journal National Cancer Institute: 2007; 99 1-5

## Respiratory Disease

- Bacteria that are found in periodontal diseases can be aspirated into the lungs to cause respiratory diseases such as pneumonia.
- Studies have shown that periodontal disease may be associated with more frequent bouts of respiratory disease in COPD patients.

## Barriers

- A lack of knowledge or perceived need for dental care by caregivers.
- A lack of staff time for preventive oral hygiene care.
- Costs have been believed as a key factor.

## Pneumonia and COPD

- A number of studies have shown that the mouth can be colonized by respiratory pathogens.
- Oral interventions aimed at controlling or reducing biofilms can reduce the risk of pneumonia in high risk populations, the hospitalized patients and long term residents.



Frank A. Scannapieco, DMD, PhD  
JADA, Vol. 137

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## Senior Patients

- 12 % of population
- 1900 - life expectancy 47 years
- 2000 - life expectancy 74 years
- 50% over 50 years old have root caries
- Exposed cemento-enamel junction
- In ages 65-85, root surface lesions found on 67% men & 61% women
- Increased caries risk in this group due to 20-40% reduction in salivary flow from xerostomia



## Nursing Homes are NOT satisfying dental needs

- US Surgeon General: 70% of nursing home residents are provided unacceptable dental care.
- TRECS Institute Study in Florida confirmed 96% residents do not receive needed oral hygiene / dental care  
[www.TRECSInstitute.org](http://www.TRECSInstitute.org)

## Pulmonary Disease

- 417 patients in nursing homes in Japan studied
- One half received oral care/ one half did not
- The group that did not have their teeth cleaned daily had a 67% increase risk of pneumonia and/ or death

Yoneyama, T et al J Am Geriatrics, 2002

## Evercare Dental Program

- Dental Risk Assessment
- Triage Member Care
- PREVENTIVE PROGRAM
  - Oral Hygiene
    - Mechanical toothbrush
    - Assisted interproximal brushing
    - Rinses- Chlorhexidine rinse or gel
    - Xylitol Substitutes
  - Nutritional/ Diet
    - Vitamin C
    - Vitamin D
  - Dry Mouth – Root Decay
    - Xylitol/Chlorhexidine
    - Fluoride Varnish

## Low Dosage Doxycycline

- Doxycycline reduce levels of cytokines (chemical messengers or mediators) and enzymes associated with inflammation and accelerated bone loss (i.e. TNF, IL-1, IL-6, Collagenase)
- Doxycycline stimulates osteoblast activity and new bone formation.
- Doxycycline acts as an enzyme suppressant .
- Not an antibiotic.
- Prescribed in low dosages (20 mg/bid)

## Women and Periodontal Disease

- **Contraception**
  - Current users of oral contraception have poorer periodontal health as measured in 21 out of 50 women ages 20 to 35 (Journal of Periodontics, June 2007)
- **Hormonal Imbalance**
  - Hormonal Gingivitis
  - Tissue Growth – Pregnancy
- **Osteoporosis**
  - Post menopausal osteoporosis may play a role in the pathogenesis of periodontal disease, especially on the mandible although etiology of periodontal disease is still multifactorial. (Journal of Periodontics, May 2004)



## The Periodontal – Medical Risk Relationship

*Compendium / Special Issue; Cohen et.al.*

- “The dwindling estrogen levels that follow menopause also are linked to a greater risk of tooth loss.”
- “The highly regarded Nurses Health Study, focusing on 42,000 women, showed that decreased estrogen levels in postmenopausal women who did not undergo hormone replacement therapy were associated with significantly greater tooth loss”

## Is the Dental Insurance Industry Prepared For The Future?

## The Integrated Dental-Medical Insurance Model

### Physician/ Dentist Linkages

- Health Risk Assessment
- HbA1c/ Diabetes
- Hypertension/BP (Cardiovascular)
- Thyroid Examination
- Oral Cancer Screening
- Pregnancy
- Organ Transplants
- Special Needs
- Obesity
- HIV/Salivary Testing
- Women's Diseases
- C- Reactive Protein
- Respiratory
- Fluoride Varnish/ ECC

## *A Change Is Necessary!*

## Return on INVESTMENT

- Periodontal care appears to have a positive effect on the cost of medical care; with earlier treatment resulting in lower costs for members with:
- Diabetes = 9%
- Coronary Artery Disease = 16%
- Stroke = 11%


AETNA Study  
Columbia University  
College of Dentistry  
Medical Healthcare Executive  
March 2008



## CHANGE IS STARTING

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United Healthcare has waived coinsurance and maximums for pregnant members to insure they receive necessary periodontal care.



*If you have knowledge,  
let others light their candles with  
it.*

*Winston Churchill*



“Together”

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Thank you

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