



COURSE OBJECTIVES

- Learn the benefits, both clinical and financial, of a caries management program
- Learn the A to Z's of risk assessment and risk management
- Learn how technology can can be used to benefit the practice and your patients

CARIES

Caries is the most prevalent disease in the world

Surgeon General: dental caries is the single most common chronic disease of childhood $\,$

Starting at age 60, tooth decay rates are equal to or greater than adolescent decay rates who grew up with no fluoride in the water

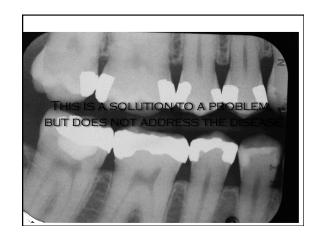
91% of adults are affected by caries in their lifetime

World Health Organization 2010

Ettinger R. Cnal health and the aging population. J Am Dent Assoc 2007; 138(9): SS-65
Beltran-Aguilar, ED, Barker LK, Canto MT, et al. Centers for Disease Control and Prevention. Surveillance for dental caries, dental sealants, tooth retention, edentalism an

COMMON CARIES MISCONCEPTIONS

- Children and adolescents are at the highest risk for developing caries and caries risk reduces with age.
 Just the opposite!
- If you brush and floss your teeth, you will not be as susceptible to caries. Not necessarily!
- High amounts of topical fluoride will minimize risk. Sometimes!
- If incipient caries are detected, the least invasive thing to do is to watch it.
 NEVER!

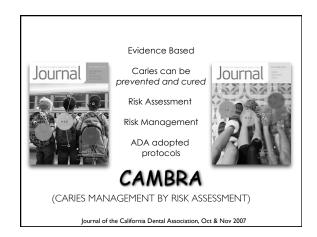


THE DISEASE: DENTAL CARIES

- Bacteria
- pH
- Inadequate exchange of minerals

So, we can't see the disease, but we need to know how to find it before it destroys teeth?!

Caries Mana GAMBRAk Assessment



Why would I consider a Caries Management Program for my Practice?

Clinical Benefits Financial Rewards Although we have reached a relatively high degree of excellence in restoring teeth, placing high-quality restorations in teeth that should not have been surgically cut and restored represents the lowest overall standard of care."

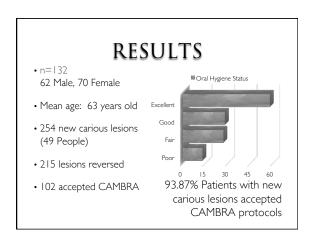
Ismail, S. Dental Caries in the Second Millennium. J Dent Ed. Oct 2011

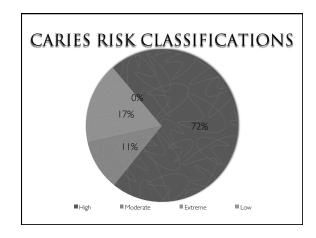
RECORD REVIEW

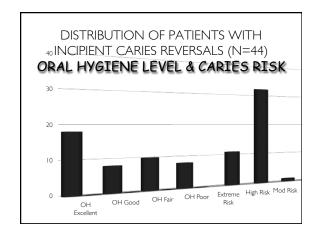


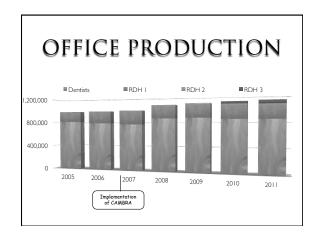
I 32 Patients
Demographic Information
of new carious lesions
of reversal of incipient lesions
Oral Hygiene Status
Risk Category

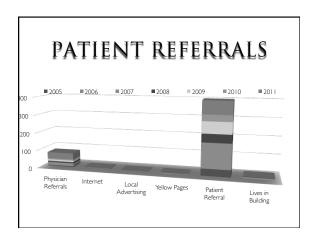
Maragliano-Muniz, PM., Roberts, DR., Chapman, RJ. Trends in Dental Hygiene: Clinical Results and Profitability of a Caries-Management Program in Private Practice. RDH Magazine, Dec. 2012.











ADDITIONAL FINDINGS

Improved Periodontal Condition



Less Bleeding Less Inflammation





ADDITIONAL FINDINGS

Decrease in Calculus & Stain

Improved patient satisfaction and comfort

Increased time for communication and clinical

Decrease in scaling time

Decrease in scaling-related fatigue

ADDITIONAL FINDINGS

Smooth, Shiny, Glass-like Root Surfaces







ADDITIONAL FINDINGS

Tooth & Root Sensitivity Minimized

A better alternative to sensitivity protection dental products?

Future research:

Comparison of products

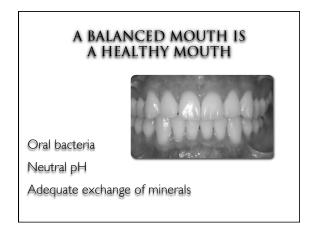
Caries prevention/sensitivity reduction after perio surgery

Effects of CAMBRA products on biofilm

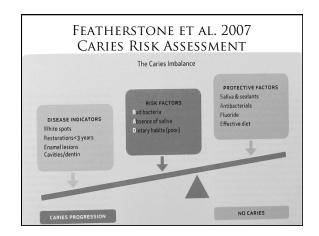
HOW DO I GET STARTED?

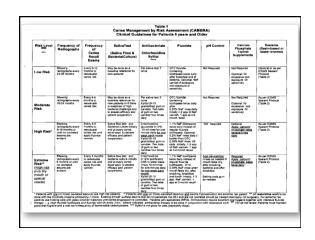


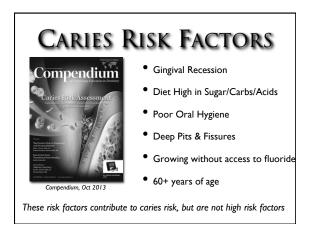
Assessing Caries Risk & Understanding Risk Factors

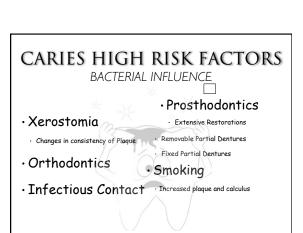


AN UNBALANCED MOUTH = DISEASE Presence of risk factors contribute to disease • Bacterial imbalance • Acidic oral environment • Reduced calcium & phosphate concentrations









CARIES HIGH RISK FACTORS

PH INFLUENCE

- ·Xerostomia
- · Longer rebound to neutral pH after eating
- · Recreational Drug Use
 - · Methamphetamines
- · Smoking

CARIES HIGH RISK FACTORS

REDUCED CONCENTRATION OF MINERALS

- · Xerostomia
- · Lack of Calcium, Phosphate and Fluoride
- · Caries within 3 years
- · High likelihood of recurrence
- · Incipient Caries/ Demineralization
 - · Tooth structure has loss of minerals

XEROSTOMIA OVER 400 MEDICATIONS Antihypertensive Meds Antidepressants Anxiety **Antihistamines** Decongestants Acid Reflux Sedatives Pain Meds ADHD Chemotherapy

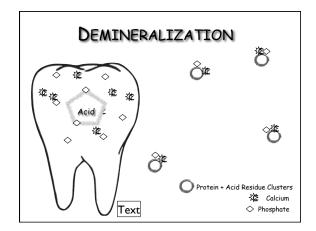
XEROSTOMIA

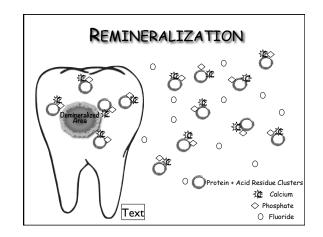
- SYSTEMIC LUPUS
- DIABETES
- RHEUMATOID **ARTHRITIS**
- •SCLERODERMA
- HYPERTENSION
- •HIV
- FNDOCRINE DISORDERS
- •SJOGREN'S SYNDROME
- •DEHYDRATION
- BELLS PALSY
- SARCOIDOSIS
- SMOKING
- ANXIETY

ROLE OF PH ³The Stephan Curve² Healthy Salivary Flow Reduced Salivary Flow

CHEMISTRY OF MINERAL UPTAKE

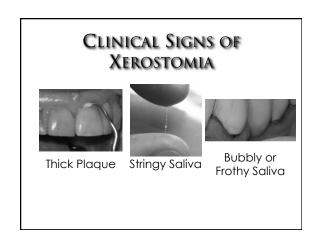
- Diffusion
- Teeth made of hydroxyapatite, fluorapatite, calcium, phosphate
- · Constant cycle of demin-remin
- If minerals out = minerals in: no net change to tooth
- Rate limiting factor is the available calcium & phosphate





EVALUATING XEROSTOMIA

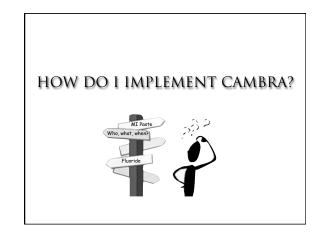
"De yourcmovet kudgor?"



XEROSTOMIA REDUCED CONCENTRATION OF MINERALS Calcium Phosphate Fluoride Buffering Agents Immunoglobulins Digestive Enzymes

CARIES WITHIN 3 YEARS & INCIPIENT CARIES CONTRIBUTING TO CARIES RISK "Are we watching or waiting?"





KEYS FOR SUCCESSFUL IMPLEMENTATION

- **√**Easy
- **√**Efficient
- **√**Economical
- **√**Effective

WHY THE HYGIENIST?

- Regularly scheduled appointments
 - Direct patient contact
 - 45-60 minute appointments
 - Establishes rapport & trust
 - Provides clinical assessments
 - Provides risk management instructions

* Health history/ medications * Bacterial levels * Salivary flow * Diet/ habit review * Condition of teeth/ restorations



CARIES RISK CATEGORIES

Low Moderate High Extreme High

CARIES RISK REDUCTION

- 3 Principles for Caries Risk Reduction
- Reduce bacterial levels/ disrupt bacterial colonies
- 2. Neutralize pH
- 3. Facilitate mineral exchange

LOW RISK PATIENT

Absence of all high risk factors

No to few restorations

Shallow occlusal anatomy

No gingival recession

Favorable diet







What is your patient doing at home?



"But I brush three times, floss twice AND use those little brushes you gave me..."

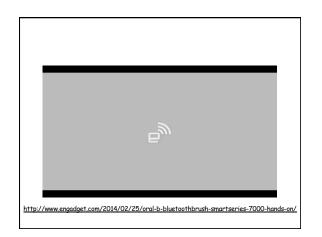
SMART TOOTHBRUSHES



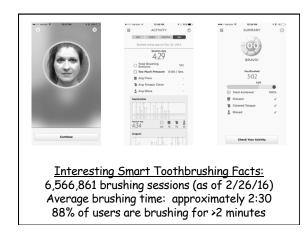
www.beamtoothbrush.com

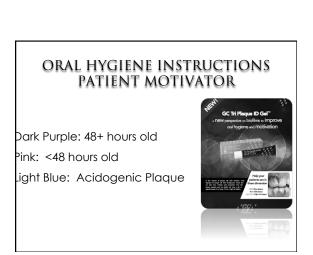


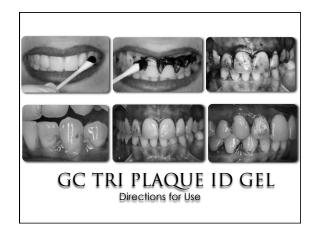


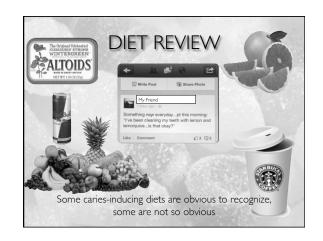


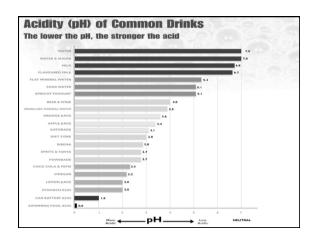




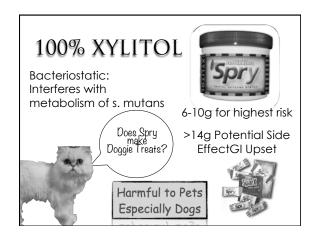














FLUORIDE VARNISH

WHAT IS FLUORIDE VARNISH?

- Highly concentrated form of fluoride which is applied to the tooth's surface by a dental professional as a form of topical fluoride therapy
- Due to its adherent nature, stays on the surface of the tooth for several hours
- Can be applied to the enamel, dentin or cementum.
- Its been used in Western Europe, Canada and the Scandinavian countries since the 1980's for tooth decay prevention
- Many studies report it's efficacy for the prevention of tooth decay or remineralization of early carious lesions
- In the USA, it is widely used as an anti-hypersensitivity agent

...but, I thought fluoride varnish was used for preventing caries?

FOOD AND DRUG ASSOCIATION

Fluoride varnish is considered an FDA-approved <u>device</u> to occlude tubules and therefore aid in anti-hypersensitivity

For a varnish to be considered to be listed as an anti-caries material, it would have to be approved by the FDA as a <u>drug</u>

FLUORIDE VARNISH VS. TRAYS

- · Delivers fluoride, calcium and phosphate
- · Varnishes up to 25-75% reduction in caries risk
- · Increased patient comfort & compliance

- According to the ADA Council of Scientific Affairs

- · Safer to patient than gels/foams
- Acidulated phosphate fluoride treatments potentially damaging to dental restorations/sealants

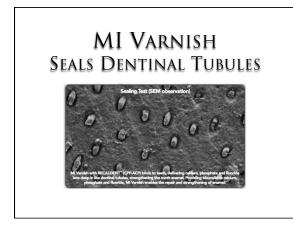
There are so many varnishes on the market... How do I pick one? PATIENT COMPLIANCE

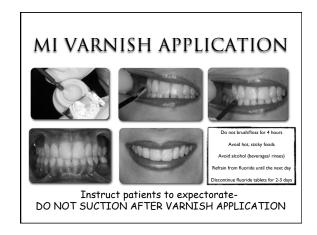
KEYS TO IMPROVING PATIENT COMPLIANCE QUICK APPLICATION EFFECTIVE MATERIALS AESTHETIC OUTCOME EXCELLENT TASTE



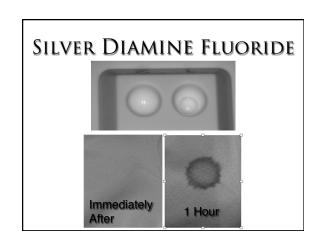


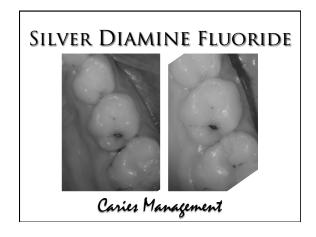
FLUORIDE + CALCIUM + PHOSPHATE + CASEIN PROTEIN (ACP-CPP) MI Varnish 50 pcs Pack Fresh Mrt Fresh

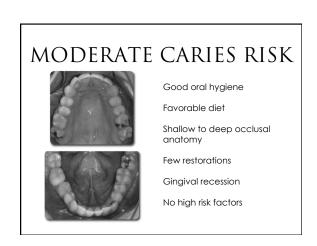












RISK REDUCTION MODERATE RISK

Patient handouts

Oral hygiene instructions

Diet assessment Fluoride varnish <u>Considerations</u> Anti-hypersensitivity Sealants

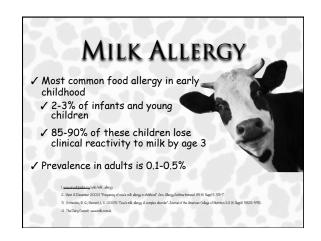
Xylitol

6 month recalls











SEALANTS

for the moderate to high risk patient

RESIN VS. GLASS IONOMER SEALANTS

monson RJ. Rotentien and effectiveness of dental scalant after 15 years. JADA. 1991; 122(10): 34-42.

Ing EM, Griffin So, Kohn Ground and BF Graffight PW. — effect of the property of the state of the control of the c

BI, CHIRLS IN, KAI GLASS - TONOMER (2) SEALANTS

- Similar retention rates as resin-based sealants

 Less carles and the sead of the sealants of t
- the North Mary State Note that the Comparison of retention and the effect of caries of fasters sealing with a glass-conomic WBetter marginal integrity
- Improved ability to reach the depth of fissure

Forss H, Saami UM, Seppä L. Comparison of glass-konomer and resin-based fissure sealants: a 2 year clinical trial. Community Dent Oral Epidemiol 1994;22(1):21-24

Barja-Fidalgo F, Marcum S, de Oliveira BH. Effectiveness of a glassiconner cement used as a pit and fissure sealant in recently erupted permanent first molars. J Danit Child 2009;76(1):34-

Beiruti N, Frencken JE, van't Hof MA, Taifour D, van Palenstein Helderman WH. Caries-preventive effect of a one-time application of composite resin and glass ionomer sealants after 5 year

uti N, Frencken JE, van't Hof MA, Taifeur D, van Palenstein Helderman WH. Caries-preventive effect of resin-based and glass ionomer sealants over time: a systematic review. Community Oral Epidemis 2006;34(6):403-409.

FUJI TRIAGE SEALANTS

- Glass ionomer
- · Works in a moist field
- No isolation required
- No bonding agent required
- Self bonding (chemical bond) with its high fluoride release
- Safe to seal over immature enamel or non-cavitated lesions

FUJI TRIAGE SEALANTS

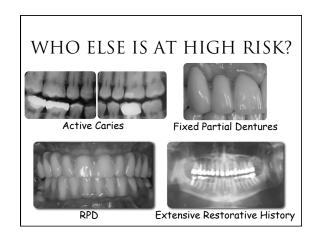
- Glass ionomer sealant allows Fluoride, Calcium and Phosphate to pass though the sealant to help mature the newly erupted tooth
- Resin sealants create a barrier and Fluoride, Calcium and Phosphate cannot penetrate through the sealant
- Contains 1400ppm Fluoride-releases over 400 days
- "rechargeable" with fluoride tx
- 1 capsule seals one arch

Cross Sectional View Glass Ionomer Reaching the Depth of the Fissure

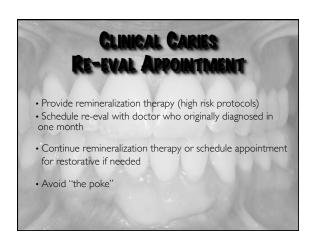


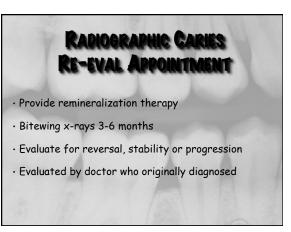
HIGH CARIES RISK

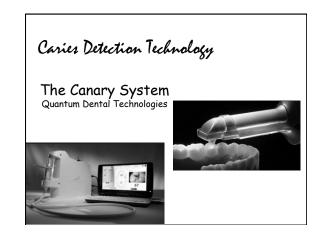
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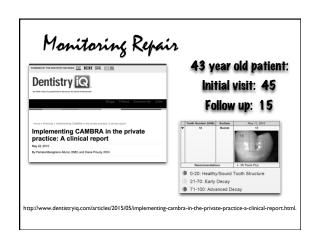






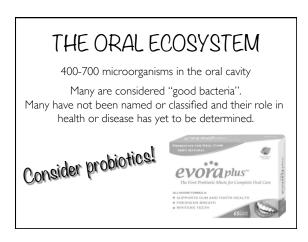


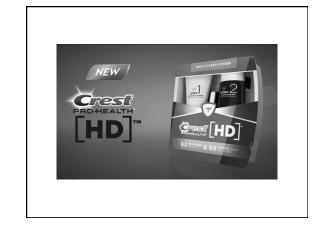




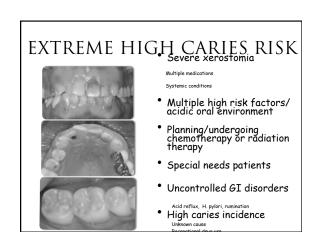












RISK MANAGEMENT EXTREME RISK

- Patient handouts
- Oral hygiene instructions
- Diet assessment

• Fluoride varnish

pH Increasing Strategies Xylitol (6-10g/day)

PaMI Paste Plus

3 month recalls

BAKING SODA TOOTHBRUSHING RAISES PH

Baking soda has an abrasion index of 7

The Relative Dentin Abrasion (RDA) Index adopted by the American Dental Association

RDA: ability to remove stain, NOT a measure of safety

No additional benefit over 250

<250: Safe for a lifetime of use

Stannous Fluoride Technology

- Introduced in the mid 1950s
- First toothpaste to get ADA Seal of Approval for the prevention of tooth decay
- Many positive benefits, some negatives
- New technology



Stannous Fluoride Technology

Benefits

Anti-cavity Plaque reduction

- Gingivitis
- Sensitivity
- Halitosis
- Challenges
 - Stability
- Extrinsic stain
- □ Taste

Crest Pro-Health Technology

Caries prevention Plaque & gingivitis Sensitivity protection Freshens breath

Calculus protection Extrinsic stain removal Extrinsic stain protection

Crest Pro-Health Technology

- Stabilize stannous fluoride
- Sodium hexametaphosphate
- Non-aqueous, hydrolysis stable toothpaste base
- Balanced delivery system to maximize benefits of both SnF2 and sodium hexametaphosphate

Crest Pro-Health Advanced



"The ADA Council on Scientific Affairs' Acceptance of Crest Pro-Health Toothpaste is based on its finding that the product is effective in helping to prevent and reduce tooth decay, gingivitis and plaque above the gemlike and bad breath, to relieve sensitivity in otherwise normal teeth, and to whiten teeth by removing surface stains, when used as directed."

POTENTIAL PROFITS

5 days a week/ 48 weeks a year

Before Implementing CAMBRA

After Implementing CAMBRA

RATimosts/dy 30% Increase!

\$140 x 8= \$1,120/ day

\$1120 + \$280 + \$175/day

=\$5.600/week

= \$1575/day

=\$268,800*/year

= \$7875/week

= \$378,000*/year
* Does not include radiographs, sealants, white spot removal, tooth whitening

MAINTENANCE What are the next steps?

HERE'S WHAT THEY SAY....

If a patient is caries free for 3 years, the practitioner may consider classifying the patient in a lower caries risk category.

l California Dental Assoc. Oct/Nov 200

CARIES

Caries is the most prevalent disease in the world

Surgeon General: dental caries is the single most common chronic disease of childhood

Starting at age 60, tooth decay rates are equal to or greater than adolescent decay rates who grew up with no fluoride in the water

91% of adults are affected by caries in their lifetime

"If the disease is controlled with medicaments and risk management AND the risk factors are still present, the patient will be treated at the existing risk category for life. I will consider reducing the caries risk classification only in cases where the disease is controlled AND the risk factors are eliminated"

- Pamela Maragliano-Muniz

IMMEDIATE REWARDS

- Enhanced production within your Hygiene Department
- Improved communication Patients

Office staff

- Practice at the highest standard of care
- Legal protection

LONG-TERM REWARDS

- Improved patient retention & new patient referrals
- Increased production for elective dental procedures
- Improved experience Patients Office

SUMMARY

- Caries management is beneficial to all patient populations/practice types
- Dental hygienists hold the key for successful implementation
- Understanding the role of risk factors facilitate risk management decisions
- Understanding the mechanism of action of some of our preventive products facilitate us to make individualized recommendation for our patients.

