

whitepaper

2011 conference
Prevention
Rebranding the Profession



October 27 & 28, 2011
Chicago, Illinois

:: whitepaper excerpt ::
V. Kim Kutsch, DMD

“Building a future based on prevention would give us the win-win situation we are all looking for. It would decrease costs and increase quality of care. I believe that’s the only hope we have of moving forward.”

--Dr. John Luther

As caries rates reach epidemic proportions in children across America, and millions of people have unmet dental needs, the dental profession faces a greater challenge than ever before. To improve oral health nationwide, the goals are changing from finding better ways to manage disease to imperatives of preventing disease. Toward that end, the Institute for Oral Health (IOH) dedicated 2011 to the theme of prevention, exploring evidence-based best practices and innovative models of care that are advancing disease prevention and early intervention.

In October 2011, the IOH hosted our fifth national conference in Chicago, Illinois on **“Prevention: Rebranding the Profession.”** The event spotlighted impressive steps forward in risk assessment, reducing early childhood caries, integration with primary care, new dental roles and effective collaborations to advance prevention, as well as guiding principles for longevity from the world’s healthiest cultures. The conference welcomed guest speakers from across dentistry, medicine, dental benefits, health policy, and the American Dental Association (ADA).

Key prevention strategies discussed at the conference included:

- **Risk assessment and early disease detection** – Many experts agree that prevention in oral health needs to include a framework centered on caries risk assessment. One progressive approach is an assessment form that reduces the dental office burden by engaging patients to self-assess, and providing choices for treatment strategies that best fit patient needs and willingness to adopt healthier behaviors. Additionally, innovations in salivary diagnostics may soon make it possible for dental teams to conduct quick, scientifically accurate chairside tests to detect the presence of an array of diseases within minutes.
- **Preventive dental visits by age one** – Studies confirm that children who receive their first preventive dental services by age one have lower incidence of caries over time and require fewer hospital visits for restorative care. As a result, these early visits dramatically reduce the cost of care. Reaching parents early also helps them understand oral health milestones and increases continued usage of dental services to prevent early childhood caries.
- **Socially-relevant behavior modification** – An innovative model has been introduced that provides an interactive, visually appealing mobile application that community health workers can use to engage parents in childhood caries risk assessment and oral health education. Using simple, culturally relevant language and nutrition references, the system helps guide low-income, low-literacy minority families toward adopting healthier behaviors that help reduce and prevent caries.
- **New dental roles to increase access to preventive services** – New training programs are underway that establish a new dental team member, the Dental Therapist. Skilled in basic dental services, oral health counseling, and practice management, the Dental Therapist helps increase practice capacity for basic oral exams, risk assessments, and preventive

services, and works closely with families to help them understand ways to maintain good oral health and reduce tooth decay. Another program underway is the ADA-sponsored training for Community Dental Health Coordinators (CDHCs). Supporting the low-income communities in which they live, CDHCs serve as a trusted resource to provide culturally-sensitive oral health education, coordinate access to dental care, and perform basic dental services and risk assessments for families in public health settings.

- **Engaging primary care providers in oral health** – As family physicians and pediatricians have more frequent access to young children, these primary care providers are increasingly taking advantage of oral health training programs to help reduce early childhood caries. Providing basic oral screenings, fluoride varnish, and oral health education, they help families understand the connections between oral health and overall health, and the importance of starting dental prevention early to reduce caries risk over time.

Stay up to date on 2012 Institute for Oral Health events

Our 2012 theme is “The Evolution of Oral Health Care Delivery.” Throughout the year, the Institute for Oral Health will host focus groups with industry experts, participate in national oral health events, and convene our **6th annual national conference on October 4 & 5, 2012 in Boston, Massachusetts**. Keep up with the latest news and findings through our website (IOHWA.ORG), whitepapers, quarterly newsletter, and Facebook fan page. Additionally, check out the latest advances in oral health care on our site’s special section “Innovation Central.”

About the Institute for Oral Health

The Institute for Oral Health is dedicated to improving oral health in America by bridging the gap between research and everyday dental practice. Serving as a central resource for education and collaboration, IOH brings together nationally recognized experts to focus on important themes of concern in oral health care today, and works to promote innovation and adoption of progressive treatment guidelines, dental plans, and delivery methods.

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V. Kim Kutsch, DMD

General Dentist; Board Member, World Congress of Minimally Invasive Dentistry; CEO, Oral Biotech



Using Risk Assessments to Individualize Treatment Plans

As a general dentist and inventor and researcher in oral biotech, Dr. Kim Kutsch has focused much of his career on developing the caries risk assessments as a primary driver to improve oral health and ensure the most appropriate care based on individual patient needs. To address a lack of risk assessment tools available for his private practice, Dr. Kutsch started his own business to develop products to meet this need. At the 2011 Institute for Oral Health conference, he shared insights on a proven system for risk assessment that he has developed and uses in daily practice.

Treating the Cause Behind Dental Disease

Over a decade ago, after 20 years in practice, Dr. Kutsch recognized that despite all the high-tech restorative treatments he used in treating dental disease, his patients continued to get cavities. This realization prompted his paradigm shift toward treating the cause of disease, instead of only the symptoms –which launched him on the road of caries risk assessment that guides his practice today. This approach has never been more necessary; Dr. Kutsch now sees more serious dental disease than in any other time in over 30 years of dentistry.

The pH factor in caries

Dr. Kutsch stressed that an effective approach to managing caries is to consider this disease is pH-based, strongly influenced by sugars and changes in saliva that affect the re-mineralization of teeth. A healthy pH level is above 5.5 and close to or above neutral, and when we eat or drink throughout the day, our pH level drops and our tooth enamel dissolves. As our pH level rises again about 30 minutes after eating, our saliva helps remineralize our teeth. The longer pH remains low, the greater the opportunity for caries to develop.

“Dental caries is a bacteria caused by long periods of low pH that result in net mineral loss on the teeth. Caries is pH-specific.”

– Dr. Kim Kutsch

Three common risk factors that influence low pH include:

- **Sugar** – Too much sugar in the diet, or snacking too often during the day reduces pH. Long periods of low pH expose the teeth to greater mineral loss.
- **Bacteria** – Too much bacteria from lack of brushing and flossing.
- **Saliva** – Saliva helps drive pH levels back to normal for healthy remineralization of teeth. As many medications cause xerostomia (dry mouth), this lack of saliva keeps pH low and increases the likelihood of caries.

CAMBRA: CAries Management By Risk Assessment

His focus on risk assessment prompted Dr. Kutsch to become closely involved as part of the team who developed CAMBRA (CAries Management By Risk Assessment), a program now integrated as a standard part of dental school curriculum. It represents a “quantum leap forward” in how we treat this disease. For many years dentists have used restoration to fill cavities, but that only addresses the symptoms and outcome; those patients will continue to have the disease until dentists address what is causing it.

To illustrate this idea, Dr. Kutsch cited a six-year study to validate CAMBRA in which researchers tracked nearly 13,000 patients, including 63% who were at high risk of caries. After only one year, of those high-risk people who had not seen a dentist, 88% had new cavities. Clearly, identifying caries risk and reducing the overall cost of care is imperative in today’s economy. While many people consider dental care a low priority compared with feeding the family and paying the mortgage, poor oral health can introduce far greater expense in medical complications, missed work, and reduced quality of life from the pain and discomfort of dental disease.

“Risk assessment gives the dental professional the opportunity to make a more accurate diagnosis, to provide better health care and disease management, which leads to greater predictability of treatment outcomes, reduce the cost burdens, increased patient satisfaction, and greater practice profitability.”

– Dr. Kim Kutsch

Ironically, although risk assessments may bring improved health outcomes and reduced treatment costs, a challenge remains for dentists who see disease-free patients as a threat to the revenue of their practice. Our profession faces an uphill battle, especially during tough economic times, with a solution that asks dentists to invest unreimbursed time to conduct risk assessments, and be willing to accept less revenue when healthier patients require fewer restorative services.

Making Risk Assessment Simple

An important lesson learned on the road to CAMBRA was that, “A campaign is worthless without behavioral change; behavioral change is worthless without sustainability.” After training over 4,000 practices on conducting risk assessments, Dr. Kutsch found that only about 600 were still doing them, and many patients were not adopting the healthy behaviors required to reduce caries. Additionally, it was unrealistic to expect hygienists to spend time educating patients on caries risk when they little or no time available to do so, are not reimbursed for it if they do invest the time, and have never been trained to on this type of consultation with patients. As a result, the CAMBRA team focused on how to simplify risk assessment to make it easier for dental teams to adopt. The new process involves three steps: Assess, Diagnose, and Prescribe.

Step 1: Assess

The new Caries Risk Assessment (CRA) form includes two sections, one for patients and one for providers:

- **Patients** are asked to answer simple questions that explore common risk factors in their daily diet as well as their willingness to change unhealthy behaviors. This approach not only solves part of the dental team capacity problem, it also helps to involve patients in

understanding the bigger picture of their oral health risks. Getting patients to self-report their risk factors is a powerful motivator in behavior change: telling the dentist they recognize plaque or problems with their teeth often resonates stronger than hearing it from the dentist.

- **Providers** identify whether a patient has disease indicators such as white spot lesions and visible cavitations and track their biofilm levels to determine overall caries risk level.

When a surprising 25% of his patients refused the free caries risk screening, Dr. Kutsch used it as an opportunity to open a conversation on patient concerns and how to better help them.

Step 2: Diagnose

The next step in managing caries risk is to evaluate the risk factors, disease indicators, and biofilm level noted on the CRA form in inform the overall diagnosis of caries risk and guide the treatment strategy.

Step 3: Prescribe

The third step to CAMBRA is to prescribe therapy to treat the disease, based on the risk level. As expected, in all cases we will treat any lesions and apply fluoride varnish. Depending on risk level, additional preventive products and more frequent follow-up visits are recommended.

Patients are offered three levels of treatment plan, which allow them to choose the approach that most realistically fits their budget and personal motivation. The treatments include a proactive plan and a conservative plan, but also a “no change” plan that describes what to expect if they choose to do nothing to avoid caries risk. When given the option to do nothing to improve their health, the majority of patients typically opt to take some action.

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“Letting patients choose what they want to do is more likely to be successful in terms of sustainability of their behavioral change than dentists telling them they need to brush and floss.”
.....

– Dr. Kim Kutsch

The prescriptive treatment phase breaks into three categories:

- **Reparative** – Remineralization of tooth enamel through fluoride varnish and other elements found super-saturated in saliva, and restoration of any caries lesions.
- **Therapeutic** – Antimicrobial products, pH strategies, and probiotics. Metabolic aides such as chewing gum with Xylitol have proven effective in relieving dry mouth, and also in reducing caries transmission between mothers and young children as primary teeth emerge.
- **Behavioral** – This component is the real key, particularly in terms of modifiable behaviors such as nutritional habits that affect pH levels, and homecare habits, which influence caries risk. The frequency of sugar intake and snacking is more important than the actual foods: even healthy foods nibbled all day never give the mouth a chance to recover from low pH, which leads to an increase in the bacteria that cause mineral loss and caries. Additionally, many medications cause dry mouth, a problem common not only in seniors but children with asthma or ADHD.

Motivating behavioral change

Because behavioral changes are so important to reducing caries risk, dental professionals need to learn how to conduct motivational interviews with patients—to basically become health coaches. These discussions should get patients thinking about how their oral health is affecting their life, and then explore common concerns associated with change such as their understanding of the problem and ability to change, as well as the benefits of changing and consequences of doing nothing.

The Caries Risk Assessment form aids this process by targeting risk level based on various factors, and offering a menu of treatment plans for patients, so they can determine which approach they are ready to adopt. The CRA tool gives dentists and hygienists a roadmap for guiding patients in making their own decision, which ultimately leads to more sustainable behavior changes.

While the latest CRA form has only recently been implemented, early adopters report overwhelming enthusiasm from front desk staff, dental teams, and patients as well. One of the top challenges in motivating dental offices to perform risk assessments has been capacity; dental hygienists simply do not have the time or training. The new CRA form presents an exciting step forward as the patient engagement helps to offset the time burden, making it more feasible and cost-effective for dental practices to conduct risk assessments.

PROFESSIONAL TREATMENT GUIDE					
	1	2	3	5	
ASSESSMENT	No Risk Factors No Disease Indicators Low Biofilm Challenge	Risk Factors No Disease Indicators Low Biofilm Challenge	Risk Factors No Disease Indicators High Biofilm Challenge	Risk Factors No Disease Indicators High Biofilm Challenge	Risk Factors Disease Indicators High Biofilm Challenge
	LOW RISK	MODERATE RISK	HIGH RISK	HIGH/EXTREME RISK	
TREATMENT OPTIONS	Be proactive Maintenance Fluoride & pH-neutral F&N fluoride Varnish every 6-12 months* Radiographs every 24-36 months**	Be proactive Maintenance Fluoride & pH-neutral F&N fluoride Varnish every 3-4 months* Radiographs every 6-18 months**	Be proactive Treatment Fluoride & pH-neutral F&N every 2-4 months* Radiographs every 6-18 months**	Be proactive Treatment Kit fluoride Varnish every 3-6 months* Radiographs every 6-18 months**	Be proactive 3-6 months Treatment Fluoride & pH-neutral F&N, except incisors fluoride Varnish every 2 months* Radiographs every 6-18 months**
	Be conservative fluoride Varnish every 6-12 months* Radiographs every 24-36 months**	Be conservative pH-neutral F&N fluoride Varnish every 3-4 months* Radiographs every 6-18 months**	Be conservative Maintenance Fluoride & pH-neutral F&N fluoride Varnish every 3-6 months* Radiographs every 6-18 months**	Be conservative Maintenance Fluoride & pH-neutral F&N fluoride Varnish every 3-6 months* Radiographs every 6-18 months**	Be conservative Treatment Fluoride & pH-neutral F&N, except incisors fluoride Varnish every 2 months* Radiographs every 6-18 months**
	Decline treatment 23.6% risk of new cavities within 1 year*	Decline treatment 36.0% risk of new cavities within 1 year*	Decline treatment 58.6-69.3% risk of new cavities within 1 year*	Decline treatment 58.6-69.3% risk of new cavities within 1 year*	Decline treatment 89% risk of new cavities within 1 year*
NEXT STEPS	6-12 month measurement	Be proactive 2 month measurement Be conservative 6 month measurement	Be proactive 2 month measurement Be conservative 6 month measurement	Decline treatment 38.6-69.3% risk of new cavities within 1 year* Be proactive 2 month measurement Be conservative 6 month measurement	2 month measurement