



INSTITUTE FOR

Oral Health

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whitepaper

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Oral Health in Healthcare Reform

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:: excerpt ::

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Introduction

“We can’t continue to provide more expensive medical and dental care. We have to be able to provide less expensive and more effective dental care. Really that’s about delivery system reform; it’s not about payment or insurance reform.”

–Dr. Michael Helgeson

This year’s landmark healthcare reform signals positive change, but it also spotlights glaring weaknesses in our nation’s healthcare system. Millions of Americans have no access to affordable quality dental care, and the dental profession lacks the workforce, training, and technology to effectively support the rapid growth in high-risk populations such as children, aging adults, and people with diabetes. So what happens next?

For the past four years, Institute for Oral Health (IOH) has focused on raising awareness about oral health concerns for these key populations, exploring progressive solutions to help advance dental care access, treatment, and delivery. In 2010, IOH addressed the theme of **“Oral Health in Healthcare Reform,”** with an in-depth look at what’s needed in healthcare reform and everyday dental practice to better support underserved populations. Additionally, we explored strategies for integration between dental and medical through collaborative practice models and information technology advancements that help drive evidence-based standards and treatment protocols to support more successful outcomes in both oral health and overall patient health.

The October 2010 Institute for Oral Health Conference in Scottsdale, Arizona provided many valuable insights and promising solutions to advance oral health. With nationally recognized leaders in healthcare reform and top authorities in clinical practice, dental education, health benefits and health record technologies, this year’s event highlighted a number of critical considerations, such as:

- **Expanding the role of dentistry** – From the economic challenges of supporting the expansion of Medicaid programs to provide care for 32 million more people, to the exciting new provisions that will promote prevention and early caries detection in millions of children, the Affordable Care Act provides many opportunities for dentistry to play a bigger role in the healthcare system.
- **Addressing workforce challenges** – As reform introduces new levels of need in the dental workforce, our system continues to battle with a lack of providers well trained to meet the unique needs of underserved populations such as aging adults and people with disabilities. In particular, with the wave of “boomers” reaching retirement age, our nation is facing an urgent need for more geriatric dentists. On a positive note, the reform bill includes provisions for numerous educational grants that could support better training for new and existing dental providers on special needs care.
- **Increasing effectiveness with collaborative care models** – The overwhelming consensus on healthcare reform is that both medical and dental will need to develop ways to deliver quality care at a lower cost. Several progressive delivery models were highlighted that focus on team-based care that brings together medical, dental and other caregivers with community partners to make access easier, reduce costs, increase efficiencies, and improve health outcomes for people who need care the most.
- **Advancing quality using electronic health records** – While electronic medical records have been in place for decades, emerging technology advancements are creating a place for dental to support

better integration with medicine. These tools provide opportunities for the critical data collection that drives quality measurements, performance analysis, and the development of evidence-based best practices.

- **Improving health outcomes for diabetics** – As increasing evidence supports the connection between periodontal disease and diabetes, dentists need to actively participate in helping diabetic patients control and manage both diseases. Calls to action include proactive risk assessments and dental provider education on diabetes, as well as close collaboration with physicians to partner on strategic treatment plans and early detection.

Looking Ahead to 2011

Oral Health and Prevention: Rebranding the Profession

October 27 & 28, 2011

Chicago, Illinois ~ Sofitel Hotel Water Tower

In 2011, the Institute for Oral Health will focus on prevention. We will collaborate with experts in focus groups and participate in national events to learn the latest in preventive strategies for improving health. 2011 will be an exciting year – stay tuned and please join us in Chicago!



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.

Join the Conversation

IOH encourages everyone to get involved and share their insights and feedback about important oral health topics and healthcare reform:

IOH Web: IOHWA.ORG



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To Head Off Disease Start at the Top: An Educator/Clinician/Researcher Perspective on the Need to Better Address Oral Health in People with Diabetes

Clinicians are faced with making treatment decisions for millions of people with diabetes every day, prevention is key and improved treatment strategies are essential to better manage this chronic disease. Successful medical management of people with diabetes requires optimal oral health. At the 2010 Institute for Oral Health conference, Dr. Maria Ryan highlighted the impact of poor oral health on people with pre-diabetes and diabetes, and discussed clinical, epidemiologic and scientific evidence, including periodontal intervention studies, that support a bi-directional relationship. Additionally, Dr. Ryan presented clinical strategies key to successful dental management for patients with diabetes.

With the growth of the Internet and widespread dissemination of media, the public has the opportunity to stay more informed than ever about health issues. Yet as long as medical and dental needs are addressed in separate silos in both patient experience and health benefits, there remains a common misconception that the mouth is separate from the body, that oral health concerns are disconnected from any other bodily concerns. Collectively, the dental profession –from providers and researchers to payers and patient advocates such as the Institute for Oral Health—needs to change that perception.

The Impact of Periodontal Disease

Toward that end, Dr Ryan introduced valuable perspectives to help *“raise the bar that currently exists for the management and diagnosis of periodontal infection and inflammation.”* She cited that periodontal disease, a chronic and progressive condition, is the most common inflammatory disease known to man. And while there is no cure, it is treatable and largely preventable.

“Periodontal disease is now considered the most common chronic inflammatory condition in the world. Because it is linked to systemic health, the treatment of this disease should never be considered an option.”

– Dr. Maria Ryan

Periodontal disease (or “periodontitis”) is often under treated because many people never recognize they have a problem as inflammation at the gum line may be barely noticeable and is often painless. However, if the disease goes untreated it raises the opportunity for the bacteria and associated pro-inflammatory mediators to enter the bloodstream, increasing the risk for a variety of serious diseases throughout the body.

Additionally, periodontal disease is often under diagnosed; the Center for Disease Control (CDC) estimates that earlier projections on the number of cases nationwide may be off by as much as 50%. This prevalence may be due largely to the nature of the disease itself: it is initiated by bacteria that on their own do not cause the disease, but react in concert with risk factors that make a person susceptible, such as genetics, diabetes, obesity, smoking, medications,

“It’s critical to assess risk factors because they determine the rate of progression, the severity of the disease, and the patient’s response to therapies.”

– Dr. Maria Ryan

immune disorders, stress, and more. While poor oral hygiene plays a part, dental clinicians need to invest more time in risk assessment to identify other factors that will undoubtedly influence treatment and management of the disease. The portal has now integrated secure messaging for confidential online communications between providers and patients.

Most specifically with diabetes, the body can be overburdened with bacteria and inflammation. High levels of glucose can be detected in oral fluids of poorly controlled patients, which makes these patients highly susceptible to periodontal disease and caries. As a result, the many risk factors that might influence the onset of periodontitis become more directly arenas of risk management to not only help to control periodontitis but can also help in the control of diabetes.

As a further concern, C-Reactive Protein (CRP) levels are generally higher in people with poorly controlled diabetes and untreated periodontal disease. This “acute-phase plasma protein” is produced by the liver in response to inflammatory conditions, and levels increase when bacteria and cytokines are elevated – a common response to both periodontal disease and diabetes. Studies show that high CRP levels increase the risk for cardiovascular disease and “*may be a stronger predictor for heart attacks than cholesterol.*” This is particularly important to address in people with diabetes who have an increased risk for mortality from cardiovascular disease and stroke.

Advancing Dental Practice for Better Management of Periodontitis

As an inflammatory condition, periodontal disease can increase the likelihood for the development of long term complications of diabetes such as cardiovascular disease and kidney disease. To more effectively manage overall health in these high-risk patients, dental providers may need to implement new strategies for identifying and treating periodontal disease, such as:

- **Perform risk assessments** and design treatment plans with dental interventions and preventive solutions geared to help improve overall health and minimize complications in systemic conditions.
- **Specialize therapies based on risk assessment** to determine when to treat aggressively vs. proceed with caution. Dentists might eliminate bacterial infection with strategies such as Triclosan toothpaste and antiseptic rinse, topical antimicrobials and systemic antimicrobials, or more aggressive therapies for mechanical removal of infectious agents and surgical reduction of periodontal pockets. Providers can also consider drugs that help modulate the “host response” such as the sub-antimicrobial dose of doxycycline known as Periostat® to drive down the cytokines that prompt the liver produce CRP. In fact, a 2004 study showed that after six months of Periostat administration, acute coronary syndrome patients exhibited a significant reduction in CRP levels.
- **Educate patients to reduce risk** through healthier behaviors such as daily brushing and flossing, smoking cessation, better diabetic control, improved nutrition and weight loss, stress reduction, and more.
- **Interact more with physicians** so that each provider fully understands the scope and severity of a patient’s oral and systemic conditions, and actively participate in helping minimize and control progression and complications.

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“There’s no magic bullet. You have to think about how to best manage each patient. It takes time and it takes knowing the patient’s risks to ensure you make the right decisions.”
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– Dr. Maria Ryan

Advancing Dental Practice for Better Management of Periodontitis

When we look at the meteoric rise of diabetes in the U.S., it becomes mission critical for dental providers to anticipate diabetic and pre-diabetic patients in their practice, and be prepared for how to help them better control the disease and reduce the risk of periodontal disease. Even in pre-diabetic individuals, *“acute infections may induce a temporary state of diabetes requiring short-term insulin therapy”* largely due to the fact that inflammation creates a greater degree of insulin resistance.

Well documented in medical literature are studies spotlighting the connection between inflammation and diabetes. Dr. Ryan cited one study that tracked 1,047 non-diabetic subjects over five years, noting that inflammation marked by high levels of CRP was associated with insulin sensitivity and the development of type 2 diabetes. Furthermore, substantial evidence exists linking periodontal disease and diabetes, especially in people with poorly-controlled diabetes who have an increased susceptibility to oral disease. Dr. Ryan participated in a study where she was able to directly *“correlate the level of periodontal disease with the level of insulin resistance. The more attachment loss patients had, the more insulin resistant they were.”* Additional studies including those highlighted by Endocrine Today have cited periodontal disease as a common cause of Type 2 diabetes, stating, *“the risk of developing diabetes is twice as likely in people with varying degrees of periodontitis.”*

A Look at the Epidemic

Diabetes is rapidly becoming *“the epidemic of our time”*, according to the CDC, with over 285 million people affected worldwide –projected to jump to nearly half a billion people by 2030. In America alone, we have 23.6 million children and adults with diabetes and 57 million more with pre-diabetes. In fact, compared with 10 years ago, the incidence of diabetes in children has increased *“10 fold”*, prompting a change from the term *“adult onset diabetes”* given the alarming trends.

One of the biggest culprits is poor nutrition and the rise in obesity, with over 60% of the U.S. population overweight or obese. The chronic inflammation in overweight individuals increases insulin resistance, which drives the onset of diabetes –similar to the impact of periodontal disease. While people rarely die of diabetes itself, they often die sooner due to related complications such as heart attacks, stroke, and kidney failure.

Primarily, diabetes is controlled by tracking glucose levels in the blood (HbA1c which is a measure of control over the past 2-3 months), and typically, *“the higher the A1c, the more rapid the progression of disease.”*

How Dentists Can Contribute to Better Health in Diabetics

Given the prevalence of diabetes, nearly all dental providers can expect to see a number of people with diabetes. Dental clinicians can play an important role in helping patients control the disease, and have the opportunity to help identify people with pre-diabetes and undiagnosed diabetes based on oral health symptoms and risk assessment by employing strategies such as:

- **Learn classic signs and symptoms** of diabetes such as increased infections, fatigue, numbness in extremities, blurred vision, urinating often, constant thirst, and more.
- **Perform risk assessments** with particular focus on adults over age 45 looking at factors such as family history of diabetes, hypertension, history of impaired glucose intolerance, and racial descent (as diabetes is most common in African American and Hispanic populations).

- **Track gestational diabetes**, which often occurs in the third trimester of pregnancy and typically disappears after delivery. However, 30-50% of women with gestational diabetes develop type 2 diabetes within 10 years.
- **Monitor oral symptoms** commonly associated with diabetes such as periodontitis, caries, xerostomia (dry mouth), candidiasis, burning of the mouth, and enlarged parotid glands.
- **Report concerns to physicians** to alert them about oral health risks and any incidence of periodontal disease in their patients with diabetes, and partner with them to develop strategies for better control and management of both diseases.
- **Recommend risk reduction strategies to patients** such as healthy diet and weight loss, avoiding tobacco and alcohol, reducing stress, and of course, maintaining daily oral health care and frequent checkups. For people with diabetes who may be taking insulin and may have hypoglycemic episodes that they address with gluco-tabs, recommend that they brush or rinse after each tablet to help wash away the infusion of sugar in the mouth that can cause caries.

An additional strategy recommended to Dr. Ryan by some physicians introduces a different perspective from the typical focus on evidence-based care. **“Judgment-based practice”** is a model frequently used in medicine in which practitioners combine clinical scientific principles with their own collective experience and uses *“procedures and therapies that have been shown to be effective, pose no risk, and may prove beneficial.”* While this approach relies less on data-driven protocols, it is often effective in leveraging best practices and provider expertise to improve the health of the patient. It is clear that infection and inflammation needs to be addressed promptly in people with diabetes. We need to utilize all of the tools available to us to ensure that oral infection and inflammation are controlled in this high risk patient population.

