From: Dr. Rainey
To: "nedelta@nedelta.com";
Subject: Eliminating future dentistry
Date: Saturday, August 23, 2008 7:34:00 PM

Sirs,

I have read the article from Delta Dental, "The True cost of a Cavity".

For the last two decades I have shared with the public we serve and other dentists, including Max Anderson who was quoted in your article, the key to eliminating the majority of chewing surface decay. In 2000, I also wrote a scathing letter to the editor of the American Dental Association regarding the ability of organized dentistry to ignore the fact that the tools for eliminating the majority of future dentistry already exist. As described in the article from Delta Dental a single "restoration" is predicted to cost over $2000 *per tooth* over the expected lifetime of a 10 year old receiving a traditional restoration. So, why are 10 year olds still receiving treatment that has been documented as a colossal failure?

Here we are eight years later in the closing months of 2008, and, once again, I'm stunned to see that this simple, straight forward, scientifically based method of preventing the most common disease in man, tooth decay, continues to be conveniently ignored by the insurance companies, media, dental universities, dental regulatory boards, dentists, and most importantly, PARENTS of these future dental victims. As a scientist, the only logical explanation that organized dentistry and the insurance companies serving dentistry are continuing to ignore this solution to the elimination of the future pain, suffering, and expense associated with the placement of traditional initial restoration in a child's tooth, is that it would upset the economic cycle that dentists and the dental insurance companies rely on to continue business as usual.

We now have parents who are approaching their forties who have benefited from the lifetime warranty on this dental technology who have brought their children through our program, and, as Dr. Anderson pointed out, it is possible to eliminate future dentistry. What was not covered in this brief article is that doing the same thing that has always been done, including shots, drills, and fillings, will result in insuring more future dentistry. Once again, why are 10 year olds still receiving treatment that has been documented as a colossal failure, and why are the dental insurance companies continuing to cover this travesty?

It's time to put a stop to this insanity. Delta Dental is in a unique position that would allow denial of coverage through dentists who do not have effective preventive programs in place, and ALL State Dental Regulatory boards have rules and regulations in place that REQUIRE dentists to provide information concerning alternative treatments, a requirement that is being conveniently ignored by the majority of practicing dentists and their regulatory boards. I'm more than willing to work with any group to promote sanity in the dental world.

The future is already here. What can I do to help Delta Dental in this joint endeavor to better the lot of humanity?

DELTA DENTAL

The True Cost of a Cavity

When a little hole becomes a $2,000 liability!

Cavities can be a bit painful and inconvenient, but new data shows that, over a person's lifetime, a single, initial cavity also has serious economic consequences.

That's the conclusion of a new report from the Data and Analysis Center (DAC), the nation's largest claims-based dental health data warehouse, which finds that the average cost to maintain a restored cavity in the molar of a 10-year old reaches $2,187 by age 79. If a patient has several cavities, the cost escalates accordingly.

"There are currently no permanent restorative materials available to treat cavities, so the lifetime cost of maintaining teeth that have been treated for decay far outpaces any out-of-pocket costs you might spend to prevent decay in the first place," said Max Anderson, DDS, a national oral health advisor for Delta Dental Plans Association.

For patients with dental benefits, there is often no out-of-pocket cost for preventive services such as regular examinations. Even if a patient has a co-payment for preventive services, the data clearly shows an investment in prevention is a bargain when compared with the ongoing cost of restoration.

The Data and Analysis Center analyzed more than 77 million claims submitted within the Delta Dental system. The results, in terms of 2003 dollars, showed that over a lifetime it costs $1,788 to maintain a restoration (filling) in an anterior tooth and $2,108 in a premolar.

On average, patients who develop cavities in their molars between ages 7 and 12 require more than $1,000 in services per initial cavity by age 40 and $2,187 by age 79.

This is because fillings wear out over time and have to be replaced with comparatively more expensive crowns. The lifetime cost of a cavity also increases when a tooth requires a root canal or extraction and replacement with a prosthetic tooth.

"The conclusion is, over a lifetime, just one cavity is expensive—two or more drive expenses well above the lifetime cost of preventive care," said Dr. Anderson. "When a patient works with his or her dentist, cavities are almost entirely preventable. We hope this illustration provides another incentive for people to maintain their oral health."

The Data Analysis Center is an investor-owned, for-profit company of dental science experts and business analysts who manage the country's most extensive claims-based dental health data warehouse. DAC evaluates treatment outcomes based on evidence from millions of dental insurance claims submitted from every state in the nation.

Northeast Delta Dental regularly submits data to the Data and Analysis Center. Through DAC affiliation, it benefits from analyses of the impact of treatment over a much larger population of patients than would be possible otherwise.

Northeast Delta Dental

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LETTERS

MICRO-AIR-ABRASION DENTISTRY

I read with interest Dr. XXXXXXX's article in July JADA, which raises several questions of concern. The article is an excellent review of the current understanding of the pathogenicity of caries, reflects on the proven fact that most caries originates on posterior occlusal surfaces, decries the current standards of care in dentistry for caries ("drilling, filling and placing restorations") and appears to wistfully long for futuristic treatments ("caries prevention by laser treatment").

Unfortunately, the article also documents not only his inability to understand and document the full scope of the current state of the art of early intervention and preventive treatment of caries, but also documents the latent inability of the JADA editorial review board and the North American academic community in general to recognize and understand microabrasion.

One concern is centered on the fact that the adjuncts to microdentistry were ignored in this article. Microabrasion is a currently existing effective treatment readily available not only for treatment of carious lesions, but also for permanent prevention of carious lesions in adult posterior dentition.

Rather than dissect the article line by line, I will point out that Dr. XXXXXXX recognized that the genesis of the caries process begins with a biologic foothold described as a "white-spot lesion." He goes on to describe the lesion as "a small area of subsurface demineralization beneath the dental plaque. The body of the subsurface lesion may have lost as much as 50 percent of its original mineral content and often is covered by an 'apparent intact surface layer.'" This description also accurately describes the organic plug and an associated hypocalcified occlusal

surface fissure.

Rather than dissecting the article further line by line, it is apparent that at this point in the article, Dr.XXXXXXXX already documented the origin of occlusal decay. In turn, this would allow the educated reader to conclude that there already exists a rather obvious solution to the problem of the early onset of decay. If white-spot lesions are the genesis of decay, then identify potentially damaging and untreatable white-spot lesions, and eliminate those white-spot lesions.

If Dr. XXXXXXXX and the rest of academia would merely spend some time in the laboratory dissecting extracted teeth and looking at the fissure system of those teeth with low-power magnification, they would easily recognize the early model of occlusal caries that Dr. XXXXXXXXX described.

They will find that fissures that developed with hypocalcified walls are associated with dentinal caries, while in the same tooth, fissures that have no hypocalcification of fissure walls will have no associated dentinal caries. These hypocalcified fissure walls and the associated organic cariogenic mass are the equivalent of white-spot lesions of smooth-surface caries.

The vast majority of dentists can easily duplicate the experiments that allowed me to arrive at this conclusion nearly two decades ago by taking extracted posterior teeth to their laboratories. By grinding these teeth along their vertical axis with a rock wheel or on a model trimmer, the carious and noncarious fissures in individual teeth can easily be observed with low-power magnification. In addition, the phenomena of hypocalcified fissures and associated dentin decay and the sound fissures with no associated dentin caries in the same teeth can be readily observed.

After recognizing the genesis of the decay process (hypomineralization), Dr. XXXXXXXXXX then launches into the usual review of the literature, which can easily be summarized as methods of altering the instability of white-spot lesions.

Rather than belaboring this already overworked, extensively researched and failure-prone approach to controlling the disease process of occlusal caries, logic and common sense should allow casual observers to arrive at the conclusion that elimination of the occlusal caries process can result from identification of unsound fissures, elimination of the associated hypocalcified structures and proper restoration of the defects.

This process is currently employed by thousands of dentists in private practice outside the constraints of academia, and is commonly referred to as micro-air-abrasion dentistry. The goal of micro-air-abrasion dentistry is to identify and eliminate unsound tooth structure on the microscopic level with minimal loss of sound tooth structure, in keeping with our oath to "do no harm."

As a pragmatic realist as well as a scientist, I realize that if academia were to inconveniently recognize this simple and easy solution to the problem of preventing occlusal caries that already exists, the incredible millions of dollars of ongoing research alluded to in just this one article would suddenly be in serious jeopardy. As a realist, it is also easy to predict that the usual

reaction to this simple and easy solution to the problem of adult caries will be to summarily dismiss it.

We worked out these principles of identification and restoration of early occlusal caries by a logical process of trial and elimination through the late 1970s and early 1980s. While Dr. XXXXXXXXXXXX 's dental utopia is still a mystical vision of unknown promise somewhere over the horizon of the future, I have helped develop (and document) a now 15-year-old process that is virtually bulletproof.

The resulting 15-year-old science of microabrasion is effective in preventing the occlusal caries that plagues the 94 percent of American adults referenced in his article. To emphasize the degree of effectiveness, since 1985 I have put a lifetime professional warranty on the restorations we place in normal occlusal surfaces that erupt under our care.

I challenge anyone to document a more effective system, now or later. The future is already here.

J Tim Rainey, D.D.S.
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