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Periodontal Disease: How Our Healthcare System is Failing Us

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You have an infected gash on your foot, and although it may not hurt so badly that you can't walk on it, you go to the ER. It's red and swollen, pus sometimes comes out, and it smells bad. Your shoe won't fit.

Does the doctor examine it and say "we should debride it, put you on antibiotics and check healing in a week to make sure it doesn't spread to the rest of your body and cause potentially life-threatening infection", or does s/he recommend this treatment and then say "or we could watch it and if it causes destruction of your soft tissues and eats away at your bones, possibly infecting other organs and cause heart attack, or kidney failure, or diabetes, then address the problem"?

Do you reply "I only want to do what my insurance covers", or do you comply with the doctor who has kept current on the latest research and explains the link between oral hygiene and diseases such as diabetes and stroke, called oral systemic health?

Do you want to take control and responsibility for your health, and live a long life? Or do you want to skate along, waiting for diseases to aggravate you or cause a crisis, then depend on doctors to try to mitigate your disease?

The above scenario also describes periodontal disease and illustrates how we do not address the potentially deadly direct effects it has on our whole body and overall health and longevity.

The American health care system is failing in that it is only reactive, and not practicing preventive medicine. An egregious example is periodontal disease. My discussion will focus on

the fact that although we know so much more about its causes, prevention and treatment, the medical and dental fields have made recommendations yet rarely updated treatment protocols. Insurance companies have done studies that document long term cost savings, yet have failed for the most part to change benefits. Everyone (especially patients and insurance companies) expects the dental profession to bear the responsibility of optimal health without adequate support.

You might ask, "Is a healthcare crisis around the corner?" to which I reply, "No. It's already here." It is estimated that in the next few years, one in three dental patients will have diabetes [1]. Diabetes care consumes a large portion of Medicare expenditures, and will only increase. One third of diabetics have periodontal disease; diabetics are 3-4 times more likely to develop periodontal disease. In a vicious cycle, active periodontal disease infects all the organs in the body and reduces one's ability to control the blood sugars, so both diseases progress. The medical field now recognizes that their efforts have not been sufficient, and the American Diabetes Association and others have formed the Therapeutic Inertia Board to find solutions.

Research during the last 30 years has proven a strong correlation between active gum disease and overall health-active oral infections increase one's risk of heart attack, stroke, premature childbirth, Alzheimer's disease, and diabetes. Current research has shown that if one contracts COVID, the complications are more severe than one without active periodontal disease [2].

Every day, in dental offices across the country, the opening scenario described above is playing out.....when dealing with patients with periodontal disease. I have been guilty of backing

off on recommending appropriate periodontal therapy when patients refuse treatment even after a description of the benefits of treatment and risks of non treatment. ("I just want a cleaning." "You're just trying to make money off me." "It doesn't hurt." "I'm afraid the scraping will hurt.") This may have been pardonable 30 years ago when less was known about gum disease, but the doctor and hygienist must stress the dire consequences of supervised neglect, and educate the patient about the ramifications of active periodontal disease with regards to the whole body.

The US healthcare system has always been of an indemnity mentality, waiting until significant damage has been done to qualify for treatment, which then costs more to treat. It has been said that 98% of US healthcare expenditures are for people who fell off a cliff, and 2% for those about to fall. When a "prediabetic" has crossed the diagnostic threshold to treatable diabetes, their insulin Beta cell function is already 70% gone! This isn't prevention. The healthcare system is due for a major overhaul to focus more on preventive medicine, not on reactive medicine. One might say "But who will pay for this?" the reality is that realigning with more prevention can save 30% of health care expenditures (in some models up to 40%).

So, where do we stand now, and where do we go from here? What is the latest research, how have we best used the knowledge, and how can we provide better health care? A perfect example is diabetes with regard to active periodontal disease. A patient with diabetes is very sensitive to any infection, and without early, aggressive intervention there can be significant hard and soft tissue damage, loss of teeth, and then poor nutrition. A poorly managed or uncontrolled oral infection can cause the blood sugar levels to demonstrate wild, uncontrolled swings...which will cause further damage to all the vital organs and accelerate visual degradation. Several studies have shown that periodontal treatment can result in 30% reduction in medical costs and 30% fewer ER visits for a diabetic.

The American Academy of Periodontology and European Federation of Periodontology in 2017 held a world workshop and created updated guidelines of describing and grading periodontal diseases [3]. In addition to the staging, which classifies the disease severity and complexity based on measurable tissue destruction; has been added grading which indicates the rate of progression, responsiveness to standard therapy, and potential impact on systemic health. Grade modifiers include smoking and diabetes.

Cutting edge dentistry uses salivary genetic testing. One available test recommended for patients who are not responding to therapy analyzes saliva for 14 of the most aggressive bacteria that when present cause extensive soft tissue and bone loss, and for a host factor that can affect a person's resistance to bacterial infection. This can lead to the appropriate antibiotic needed.

All these studies, more knowledge, cost savings, healthier patients living better lives! What have we done to improve health care? Almost nothing! The venerated progressive American Dental

Association has not changed the requirements to qualify for reimbursement for scaling and root planing: radiographic bone loss, subgingival radiographic calculus, bleeding on probing, and severe pocket depths (all indicative of advanced soft tissue and bone loss). Possibly in response to pleas from dentists to provide some benefits for patients who haven't yet fallen off the periodontal cliff, the ADA resurrected in 2018 ("after a long period of stability") the frustrating D4355 CDT code introduced in 1995 called Full Mouth Debridement [4]. The novel twist in the ADA Guide For Reporting (official advertising) is that now there can be no diagnosis exam or X-rays on the same day because the sole purpose of the code is to document removal of excessive calculus such that one can accurately measure the pockets; that MUST be done at a later appointment. So, would you let a surgeon cut on you without first diagnosing your disease? Might that not be malpractice? Also, it has been noted that not measuring the pockets at that visit could allow the gums to shrink tighter against the teeth and make more definitive scaling more difficult and uncomfortable [5]. The ultimate insult is that insurance companies encourage documentation, yet in 2011 Charles Blair in his "Coding with Confidence" manual stated that D4355 is reimbursed about 25-33% of the time [6].

What have the insurance companies done in response to this extensive and well-documented research? They have done their own studies: United Concordia reported annual savings of \$2800, almost 40% reduction of diabetes medicines cost when periodontal treatment is used; and 40% reduction in hospital admissions. CIGNA reported \$1200 savings per year, and AETNA reported reduced medical costs of 45% when periodontal treatment was needed and provided [7]. My direct experience in this area is the coverage of 3 cleanings per year instead of 2 for pregnancy (controlled periodontal disease reduces premature childbirth).

The US Healthcare spending in 2019 was \$3.8 trillion, or \$11,582 per person. This is 17.7 % of the Gross Domestic Product. Compared to other countries, it is 42% higher than Switzerland, the next highest in healthcare spending [8]. The US Healthcare system ranks last among the 11 high income countries, even though it spends the highest proportion of its gross domestic product on health care [9].

Where do we go from here? Integrative/collaborative medicine, with timely communications between dentists and physicians about HbA1C tests and comorbid conditions [10]. Keeping the patient involved/engaged and taking responsibility for their wellness [11]. Aligning the medical and dental models with the business model [11]. Educating patients, physicians, dentists, insurance companies, politicians, and the ADA about the health benefits and cost savings when making changes that reflect the current research.

My dental practice is using EPIC software, which allows linkage of medical records with the dental records. The American Diabetes Association has created the Therapeutic Inertia Board, to include practitioners across multiple professions. The US Congress may be adding dental coverage to Medicare. The Santa Fe Group think tank

has estimated that if periodontal coverage was added for Medicare patients with stroke or diabetes, \$ 6 billion per year could be saved [12].

Are you looking forward to having one in three of your patients having diabetes and the associated periodontal complications? Now is the time to become an advocate for better medicine/dentistry for all.

Acknowledgment

None.

Conflict of Interest

No conflict of interest.

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