

# THE MOUTH

## The Missing Piece to Overall Wellness and Lower Medical Costs

**Chronic medical conditions are a widespread issue, affecting an estimated one out of every two adults over 21.<sup>1</sup> And, periodontitis, also known as gum disease, is an epidemic of its own with 47% of Americans having the disease at any one time.<sup>2</sup>**

To understand if there's a connection between the two, United Concordia pursued original research conducted by Dr. Marjorie Jeffcoat, Professor of Periodontology and Dean Emeritus at the University of Pennsylvania School Of Dentistry. The study, published in a peer-reviewed medical journal, was conducted on a comprehensive, five-year data set in collaboration with Highmark Health, Inc. and evaluated the impact of gum disease treatment on medical costs and hospitalizations for members with certain chronic medical conditions and women who were pregnant.

Using medical claims data from Highmark and United Concordia dental plans, nearly 1.7 million insurance records from 2005–2009 were analyzed. Of that data set, 338,891 members were identified with both medical and dental insurance. Data subsets were created by including those with 1) a diagnosis of at least a specified medical condition and 2) evidence of periodontal disease. Chronic conditions included: cerebral vascular disease (stroke), coronary artery (heart) disease, and type 2 diabetes. Also, included in the study were women who were pregnant during this same time period.

Type 2 diabetes was a covariant in this study, meaning that its effect on the outcome, if any, was accounted for when inspecting the results of these other diseases. The study compared members who completed treatment and maintenance for gum disease and those who didn't. For each treatment group of each medical condition, two outcomes were analyzed: 1) total annual medical costs and 2) total annual number of hospitalizations.

The results of the study showed overall that annual medical costs and hospitalizations were considerably lower for members with chronic medical conditions and women who were pregnant who completed their periodontal treatment and maintenance. When people treated oral health as a key piece of wellness, their overall health care costs and hospital admissions went down across all the condition categories.

The right dental coverage makes it easy for members to get the care they need to improve their overall wellness. We can customize the right combination of plans and riders to make an opportunity for significant medical cost savings. We also have the resources to provide an integrated solution that delivers education and targeted outreach to engage members to take control of their oral health to improve their overall wellness. And, with access to health information, we can work with medical care providers to identify and track members with both chronic conditions and gum disease who can benefit most from better dental care. We can help close the gap between oral health and total body health.

### Annual Medical Costs Savings

**\$5,681** for members with cerebral vascular disease (stroke)

**\$1,090** for members with coronary artery disease (heart)

**\$2,840** for members with diabetes (\$1,477 for diabetes outpatient drug costs\*)

**\$2,433** for women who were pregnant

*\*Internal Jeffcoat data analysis on diabetes and drug costs. Average savings after seven or more periodontal visits.*

### Annual Hospitalization Reductions

**21.2%** for members with stroke

**28.6%** for members with heart disease

**39.4%** for members with diabetes

*Not applicable for women who were pregnant.*

1. CDC, National Center for Chronic Disease Prevention and Health Promotion. "The Power of Prevention: Chronic disease...the Public Health Challenge of the 21st Century." 2009.
2. CDC. "Prevalence of Periodontitis in Adults in the United States: 2009 and 2010." Sept 2012.
3. Jeffcoat MK, Jeffcoat RL, Gladkowski PA, Bramson JB, Blum JJ. *Impact of Periodontal Therapy on General Health: Evidence from Insurance Data for Five Systemic Conditions*, American Journal of Preventive Medicine, 47 (2014) pp. 174-182. DOI: 10.1016/j.amepre.2014.04.001

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