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# **Dental Care for Diabetics: Better Health, Cost Savings**

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1 *in every* 5

HEALTH CARE  
DOLLARS

was spent

ON DIABETES

in 2012.

THAT AMOUNTED TO:

\$ 245 \$  
BILLION

THE PHYSICAL  
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DIABETES AND  
GUM DISEASE  
IS WELL  
ESTABLISHED  
BY SCIENCE.  
EACH DISEASE  
WORSENS THE  
OTHER.

## The Economic Burden of Chronic Disease

**ONE OF EVERY \$6 DOLLAR S** in our economy is spent on health care.<sup>1</sup> While there are complex reasons for this, one of the biggest underlying factors is the economic burden of chronic disease.

Altogether, conditions such as hypertension, heart disease and diabetes makeup 75 percent of the total health care tab.<sup>2</sup> Among these conditions, diabetes is a major player—an epidemic in its own right.

The disease is prevalent, complicated and costly. More than 9 percent of the population suffered diabetes in 2012<sup>3</sup>, and about 1 in every 5 health care dollars was spent on diabetes that same year—\$245 billion total.<sup>4</sup>

People with diabetes are vulnerable to a host of serious conditions that are expensive to treat, including heart disease, kidney disease, and eye and foot damage.<sup>5</sup> Managing diabetes both physically and financially hinges upon reducing the risk of these secondary conditions.

## The Complication of Oral Disease

**ONE SUCH CONDITION** is periodontitis, or gum disease. Gum disease is highly prevalent among diabetes patients—affecting almost a third.<sup>6</sup>

The physical link between the two diseases is well established by science. Together, they create an environment in which infection, inflammation and poor immunity negatively interact, so that each disease worsens in the presence of the other.

A patient with poorly controlled diabetes not only is more susceptible to bacterial infection but also has a weaker ability to fight such infection.<sup>7</sup> As a result, these individuals can be three times more likely to develop gum disease.<sup>8</sup> Additionally, a patient's diabetic symptoms are prone to advance in the presence of gum disease, which releases certain white blood cells into the bloodstream that are said to increase insulin resistance.<sup>9</sup>

Financial implications follow, and a number of recent studies have focused on the economic impact of gum disease upon diabetes. The research reveals the potential for billions in population-wide savings when people with diabetes improve their oral health.

In one study on oral care and the cost of chronic disease,<sup>10</sup> researchers studied more than 90,000 cases of people with both type 2 diabetes and periodontal disease. A portion of the group received periodontal treatment, while the majority did not. The results revealed significant savings for the treatment group: an average of \$2,840 savings per patient per year (40.2 percent of total diabetes care costs), with drug costs decreasing \$1,477. A different sample within the same study also found 39.4 percent decreased hospitalizations for those who received periodontal care.

Another study captures these realities on a broader scale, revealing that the U.S. health care system could save more than \$29 billion if 60 percent of all diabetic adults received periodontal treatment.<sup>11</sup>

<sup>1</sup> "National Health Expenditure Data," Centers for Medicare & Medicaid Services, [www.cms.gov](http://www.cms.gov).

<sup>2</sup> Marjorie K. Jeffcoat, Robert L. Jeffcoat, Patricia A. Gladowski, James B. Bramson, Jerome J. Blum, "Impact of Periodontal Therapy on General Health: Evidence From Insurance Data for Five Systemic Conditions," *American Journal of Preventive Medicine*, Vol. 47, No. 2, August 2014, 166-174.

<sup>3</sup> "Statistics About Diabetes," American Diabetes Association, [www.diabetes.org](http://www.diabetes.org).

<sup>4</sup> Werya Yang, Timothy M. Dall, Pragna Halder, Paul Gallo, Stacey L. Kowal, Paul F. Hogan, "Economic Costs of Diabetes in the U.S. in 2012," *Diabetes Care*, Vol. 36, No. 4, April 2013, 1033-1046.

<sup>5</sup> "Diabetes Complications," Mayo Clinic, [www.mayoclinic.org](http://www.mayoclinic.org).

<sup>6</sup> Douglas B. Berkey and Frank A. Scannapieco, "Medical Considerations Relating to the Oral Health of Older Adults," *Special Care in Dentistry*, Vol. 33, No. 4, August 2013, 164-176.



These studies reveal that oral care is not only a key piece of diabetic care but also a cost-effective strategy for reducing diabetes costs.

## The Move Toward Solutions

**THE STARK REALITY** is that the national burden of diabetes grew from \$174 billion in 2007 to \$245 billion in 2012 (a 41-percent increase).<sup>12</sup> Projections show that these costs will continue to climb alongside other factors: obesity, the size of the aging population and the cost of health care.

The corresponding good news is that, against this backdrop of high costs, the strategy of providing oral care has the potential to drive great savings for the diabetic population.

This connection provides a foundation for decision makers to take action across the health care spectrum.

- Health care organizations** can better integrate oral care into medical care, offering it as part of their core services, and also design health-maintenance programs that target people with diabetes.
- Insurance providers** can make sure dental coverage is integrated into medical coverage.
- Policymakers** can mandate dental coverage, either as standalone insurance or as part of medical insurance, to encourage regular care. They can rethink government programs to extend broader care to diabetic patients.
- Businesses** can ensure their employees are covered for oral health and design wellness programs to encourage use of this coverage.
- Physicians** treating people with diabetes can more actively refer patients to dentists. They can focus on identifying people with undiagnosed diabetes early on.
- Dentists** can take measures to make their practices more accessible to the elderly and low-income populations, groups for which diabetes is especially pronounced. They can establish specific diabetes-care clinics and outreach.
- Dental hygienists** practicing in communities with high needs can learn to deliver more extensive care, also exploring alternative models such as virtual exams and community-based oral-health centers.

The body of medical research has shown that oral care is a vital part of the diabetic health regimen. The benefits are personal *and* public. The improved health of individuals with diabetes mitigates overall health care costs, saving money for the American economy.

*This report is based on research prepared for the Dental Trade Alliance by Uma Kelekar, Ph.D., Assistant Professor of Healthcare Management, Marymount University, Arlington, Virginia.*

**ORAL CARE IS NOT ONLY A KEY PIECE OF DIABETIC CARE BUT ALSO A COST-EFFECTIVE STRATEGY FOR REDUCING DIABETES COSTS.**

*In one study,*

**DIABETES PATIENTS**

*who received*

**PERIODONTAL TREATMENT**

**SAVED**

**\$ 2,840 \$**

*per year, which represents*

**% 40.2 %**

*of total*

**DIABETES COSTS**

<sup>7</sup> "Diabetes and Oral Health Problems," American Diabetes Association, [www.diabetes.org](http://www.diabetes.org)

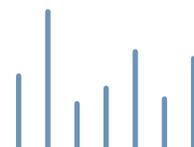
<sup>8</sup> Berkey and Scannapieco, "Medical Considerations," 164-176.

<sup>9</sup> Berkey and Scannapieco, "Medical Considerations," 164-176.

<sup>10</sup> Jeffcoat, et al., "Impact of Periodontal Therapy on General Health," 166-174.

<sup>11</sup> Uma Kelekar, PhD, "Economic Costs of Oral Care in the United States in 2014," 2015.

<sup>12</sup> Yang, et al., "Economic Costs of Diabetes," 1033-1046.



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**ORAL CARE HAS THE POTENTIAL TO DRIVE**  
**GREAT SAVINGS FOR THE DIABETIC POPULATION.**

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