

Oral health *is* health.



“Oral health care may only be four percent of overall health care, but... it probably represents 15 to 20 percent of health care value. That’s why oral health deserves attention.”¹

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Oral health is integral – and essential – to good general health

Oral health’s connection to overall health is undeniable. Research supports an association between periodontal (gum) disease and chronic medical conditions like diabetes, heart disease, stroke, rheumatoid arthritis and even Alzheimer’s disease.^{2,3,4} Bacteria and inflammation are the common denominators in the studies linking oral health and systemic diseases.

Although largely preventable, dental caries and periodontal disease are the two biggest threats to oral health, and are among the most common chronic diseases in the United States. More than 1 in 4 U.S. adults (27%) have untreated tooth decay.⁵ Nearly half (47%) of all adults aged 30 or older have some form of periodontal (gum) disease.⁶

Oral diseases also share common risk factors with other non-communicable chronic diseases, which include sugar consumption, tobacco use, and harmful alcohol consumption, as well as the wider social and commercial determinants of health.⁷ Further, a dentist can potentially detect signs of more than 120 diseases, including heart disease and diabetes.⁸

Addressing oral health issues has been shown to help lower the cost of care and the economic impact associated with several chronic medical conditions and pregnancy. In studies from 2005-2014, private insurers and policy experts used medical claims data to explore cost savings from plan members with select chronic diseases who also had periodontal treatment.⁹ The chart below outlines some of the annual medical cost reduction numbers by disease status.

Recent studies on periodontal treatment savings:

	United Concordia/Highmark	Cigna	Aetna	UnitedHealth	National Association Of Dental Plans
Condition	Type 2 Diabetes, CAD, CVD, Rheumatoid Arthritis, Pregnancy	Diabetes, Heart Disease, Stroke	Diabetes, Cardiovascular Disease, Pregnancy	Diabetes, Asthma, CHF, CAD, COPD, Chronic Kidney/ Renal Failure	Diabetes, High Blood Pressure, Heart Disease, Cancer, High Cholesterol
Data Source	Claims Data From 338,891 Individuals	Claims Data From 10,634 Patients	Dental Medical Integration Program	130,546 Members	15,483 Non-Elderly Adult Medicaid Patient Health Expenditures
Time Period	2005-2009	2009-2011	2010-2012	2008-2011	2014
Medical Cost Reduction With Periodontal Treatment	Diabetes: 40% CAD: 11% CVD: 41% Arthritis: 6%	Diabetes: 28% Heart Disease: 25% Stroke: 35%	Average: 17%	Diabetes: \$3,239 Asthma: \$963 CHF: \$11,663 CAD: \$5,743 COPD: \$2,171 Kidney: \$14,034 (Annual/Compliant)	Diabetes: 36% High Blood Pressure: 31% Heart Disease: 67% Cancer: 67% High Cholesterol: 43%

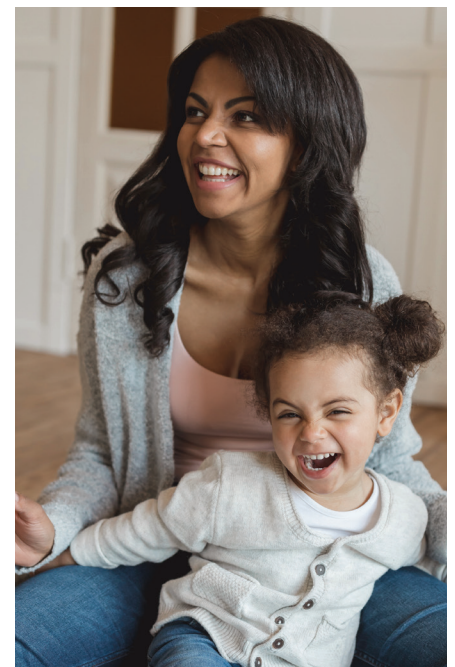
A 2016 paper by Avalere Health estimated that providing periodontal disease treatment benefits to Medicare beneficiaries with diabetes, heart disease or stroke would produce a savings of \$63.7 billion over ten years.¹⁰

Poor oral health impacts children's quality of life, educational achievement and ability to succeed

Despite dental caries being a largely preventable disease, it continues to affect a substantial number of children and adolescents.

Dental caries is the most common chronic disease in children: it is about five times as common as asthma and seven times as common as hay fever.¹¹ In the United States, untreated caries is present in approximately 15% of children and adolescents, rising to 20% in minority children and 25% among those from below 100% of the federal poverty threshold.^{12,13}

In addition to infection and pain, poor oral health can have long-lasting, detrimental effects on school attendance and a child's ability to learn.¹⁴ A national survey found that roughly 1 in 7 children ages 6-12 had suffered a toothache in the previous six months.¹⁵ Another study showed that children with poor oral health were nearly 3 times more likely to miss school due to dental pain.¹⁶ And teens with recent dental pain are 4 times more likely to have a lower grade point average.¹⁷





Oral diseases are costly to families, businesses and society

Tooth decay and other oral health problems can limit family success. Dental pain and aesthetics can impede a parent’s ability to seek or maintain the kind of job they need to support their family. In a recent study by the American Dental Association’s research arm, 28% of millennials say the appearance of their teeth and mouth undermines their ability to interview for a job.¹⁸

In addition to significant costs for families, there are also substantial economic costs for government and businesses. The Centers for Disease Control estimates that the U.S. loses \$45 billion in productivity each year due to oral health issues.¹⁹ On average, more than 92 million work or school hours are lost annually due to emergency (unplanned) dental care.²⁰

Emergency department visits for oral pain cost nearly \$2 billion a year in the United States.²¹ Because most hospitals don’t have staff to provide comprehensive dental care, patients receive only antibiotics or pain medication, but the underlying dental problem is not treated. States are paying a high price for the significant numbers of patients who turn to hospital emergency rooms for dental problems that should have been prevented or treated more effectively elsewhere.

Oral health problems also affect national security. Defense department officials have called oral health “essential to readiness” of our military forces. The Army reports that more than 1 in 5 National Guard and Reserve soldiers required dental treatments before they could be deployed overseas for Operation Desert Storm.²² And a 2008 report revealed that 52% of new military recruits had dental problems that delayed their deployment overseas.²³

Prevention pays

Healthy teeth and gums are essential at every stage in life. From primary or “baby” teeth to our senior years, we need teeth to eat, speak and smile.

Preventive dental care practices – including early and regular preventive treatments by dental professionals, and regular oral hygiene – can save money in the long run. Studies have shown that for every dollar spent on preventive dental care, \$8 to \$50 can be saved in restorative and emergency treatments and more in medical care.²⁴

Starting early is important. A child who doesn’t have a dental visit until age 5 has nearly 20 times the odds of having cavities at that visit than a child who has a first dental visit at age one.²⁵ Nearly 25 percent of women of childbearing age have active tooth decay.²⁶ Unless they are treated before or during pregnancy, the bacteria that cause tooth decay are very likely to colonize their baby’s mouth before the baby’s first tooth erupts.²⁷ For example, children of mothers who have high levels of untreated cavities or tooth loss are more than 3 times more likely to have cavities as a child.²⁸

Dental sealants are another important way to protect teeth from cavities, especially for children. Sealant application is a simple and painless procedure that reduces the risk of tooth decay in permanent molars by up to 80% and can last for years.²⁹ The average cost of applying a dental sealant to a child’s permanent teeth is roughly one-third the cost of filling a cavity.³⁰





Policy opportunities

Basic dental care is not a luxury. Those who might scoff at “just a cavity” or a “little bleeding of the gums,” would not underestimate the seriousness of an infection in an eye, or a sore on their arm that bleeds every day. The cause of cavities is acid from bacteria dissolving the tooth’s enamel, which is the hardest substance in the human body.³¹ That’s a powerful infection.

Individuals, health care providers, communities and governments all have a role in implementing measures to improve oral health and prevent disease.

We need to explore a wide range of strategies aimed at addressing the issues outlined in this paper and work to remove barriers that limit good oral health. Evidenced-based interventions should be integrated across disciplines, with dental practitioners, other health professionals, individuals and policymakers working together to achieve optimal oral (and general) health for all.

What can be done?

- Screen and include preventive treatments in primary care settings
- Expand preventive services, including school sealant programs
- Improve oral health education and access for pregnant women
- Explore new modalities, like teledentistry, that can expand access to care
- Raise awareness of healthy behaviors and work to improve oral health literacy
- Ensure an adequate oral health workforce
- Improve medical-dental integration
- Improve oral health data collection and analysis to better inform decisions and develop programs and policies

Endnotes

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