

RESEARCH REPORT

Another Billion Reasons for a Medicare Dental Benefit

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Executive Summary



- Medicare does not currently include dental benefits, and dental coverage varies within Medicare Advantage plans.
- Periodontal disease is linked to several chronic health conditions, including diabetes and heart disease.
- Periodontal treatment is associated with decreases in diabetic-related health care costs.
- Older adults are more likely to be diagnosed with conditions like diabetes and heart disease.
- **Results of this study show that the estimated health care cost savings for older adults with diabetes enrolled in Medicare or Medicare Advantage range between \$3.6 billion and \$14.5 billion depending on utilization. Estimated cost savings for older adults with at least one heart condition enrolled in Medicare or Medicare Advantage range between \$6.9 billion and \$27.8 billion.**
- **Therefore, including a comprehensive dental coverage in Medicare has the potential to save the health care system billions of dollars per year in care for patients with diabetes and/or heart disease alone.**



Introduction

[Oral health is inextricably linked to overall health.](#) In 2000, the United States (US) Surgeon General noted, “[you cannot be healthy without oral health.](#)” A 2022 follow-up to this report released by the National Institutes of Health (“[Oral Health in America: Advances and Challenges](#)”) states, “Numerous studies have demonstrated associations between [periodontal disease and conditions such as diabetes, heart disease](#), pregnancy outcomes, and dementia” (page 1-24). It is estimated that approximately 80% of adults aged 65 and above [have at least one chronic health condition](#), and 70% live with two or more chronic diseases.

Within the same life stage in which chronic conditions become more common, older adults’ access to oral health care drastically decreases after the age of 65 [due to loss of employer-based dental insurance](#) after retirement and corresponding increases in [out-of-pocket costs for dental care](#). At the age of 65 (or earlier for [individuals with specific disabilities or other conditions](#)), US adults become eligible to enroll in Medicare. [Medicare](#) covers “medically necessary” health care delivered by medical providers and within hospitals, as well as many preventive services such as vaccinations. While Medicare beneficiaries may opt to join a separate plan to cover prescriptions (Medicare Part D), Medicare does not offer coverage for dental care. Those eligible for Medicare may

choose to enroll in [Medicare Advantage](#) (also referred to as Medicare Part C), which is a private plan offering that covers all of the services under Medicare Parts A (hospital insurance) and B (medical insurance). The designs of these plans can vary considerably. Many plans offer Medicare Part D-like coverage (i.e., drug/prescription coverage), and some offer additional benefits such as dental coverage and vision and hearing services.

Studies have shown that receiving periodontal treatment is associated with [decreases in diabetic-related and overall medical costs](#), as well as [improved glycemic management](#). Further, periodontal disease has been [linked with various types of heart disease](#), although evidence is mixed on whether periodontal treatment can improve heart disease. The [Centers for Medicare & Medicaid Services \(CMS\)](#) estimate that approximately 28% of Medicare beneficiaries have diabetes mellitus of some form — Type 1 diabetes mellitus (T1DM), Type 2 diabetes mellitus (T2DM), or prediabetes/borderline diabetes mellitus (DM) — and about 42% report having at least one heart condition. Given the association between periodontal disease and both diabetes and cardiovascular disease (CVD), the goal of this study was to examine the potential cost savings associated with periodontal treatment among Medicare beneficiaries with diabetes and those with cardiovascular disease.

Methodology

Data related to prevalence of heart conditions and diabetes among Medicare beneficiaries aged 65 years and over comes from the [Medicare Current Beneficiary Survey \(MCBS\)](#), which is conducted by the Office of Enterprise Data and Analytics (OEDA) of the CMS. CMS contracts with NORC at the University of Chicago to administer the survey with the goal of assessing expenditures and sources of payment for a nationally representative sample of Medicare beneficiaries. The heart conditions and diabetes data for this report comes from the 2013 survey published by CMS in 2017.

According to CMS, in October 2021 there were [63,964,675 adults enrolled in Medicare](#). Of those enrolled in Medicare, 27,919,354 were specifically enrolled in Medicare Advantage and 36,045,321 (63,964,675 - 27,919,354 = 36,045,321) are assumed enrolled in Medicare excluding Medicare Advantage.

The utilization rate assumption (or proportion of enrollees that will receive dental benefits) in this analysis for all Medicare recipients (enrolled in traditional or Advantage plans) is 49%,* for Medicare Advantage alone is 60%, and for traditional Medicare is 40%.

The annual medical savings per individual Medicare beneficiary with proper periodontal care, not adjusting for inflation, was estimated at \$1,687 for individuals with diabetes

and \$2,101 for heart disease, based on [estimates from Cigna](#).

We projected the medical cost savings by first estimating the number of 2021 Medicare enrollees with diabetes and heart conditions that will utilize the dental benefits (enrollment utilization). The utilization rate we used for all Medicare recipients (enrolled in traditional or Advantage plans) is 49%* (of 63,964,675 enrollees in 2021 = 31,169,741 enrollment utilization), Medicare Advantage alone at 60% (of 27,919,354 enrollees in 2021 = 16,751,612 enrollment utilization), and traditional Medicare at 40% (of 36,045,321 enrollees in 2021 = 14,418,128 enrollment utilization). Second, we determined the number of enrollees with diabetes and heart conditions by applying the percentage rate of Medicare beneficiaries with diabetes and heart conditions from the survey result to the number of enrollees that will utilize the dental benefits (enrollment utilization). Third, we established the number of enrollees with diabetes and heart conditions that receive periodontal care. In our analysis, we show a range of percentages that receive periodontal care: 25%, 50%, 75%, and 100%. Finally, we calculated the medical cost savings by multiplying the medical cost savings of \$1,687 by the population with diabetes that receive periodontal care and \$2,101 by the population with heart conditions that receive periodontal care.

Example of cost savings calculation for Type 2 Diabetes:

A. 2021 Total Medicare Enrollment	63,964,675
B. Utilization Rate (%)*	49%
C. Utilization Count (A × B)	31,169,741
D. Percentage with Type 2 Diabetes	18.9%
E. Enrollees with Type 2 Diabetes (C × D)	5,891,081
F. Percentage Enrollees with Type 2 Diabetes that will receive periodontal care (%)	25%
G. Count of Enrollees with Type 2 Diabetes that will receive periodontal care (E × F)	1,472,770
H. Type 2 Diabetes annual medical savings	\$1,687
I. Medical Cost Savings Estimate (G × F)	\$2,484,563,416

*Utilization rate for all Medicare recipients is estimated at 48.729% based on October 2021 enrollment rates for Medicare and Medicare Advantage from the [Centers for Medicare & Medicaid Services \(CMS\)](#). This figure was rounded to the nearest whole number (49%) for consistency.



Findings

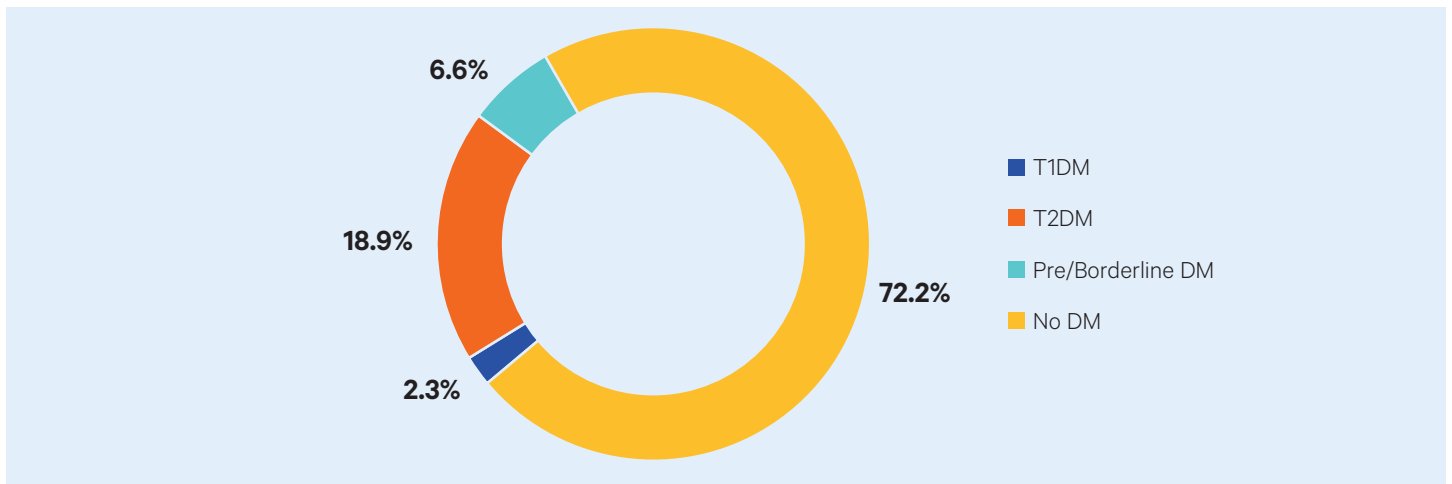
Diabetes

According to the 2013 MCBS, 2.3% of Medicare enrollees reported having Type 1 diabetes mellitus (T1DM) in 2013, followed by 6.6% who had prediabetes/borderline diabetes and nearly one in five (18.9%) with Type 2 diabetes mellitus (T2DM); 72.2% of Medicare enrollees reported not having diabetes of any type.

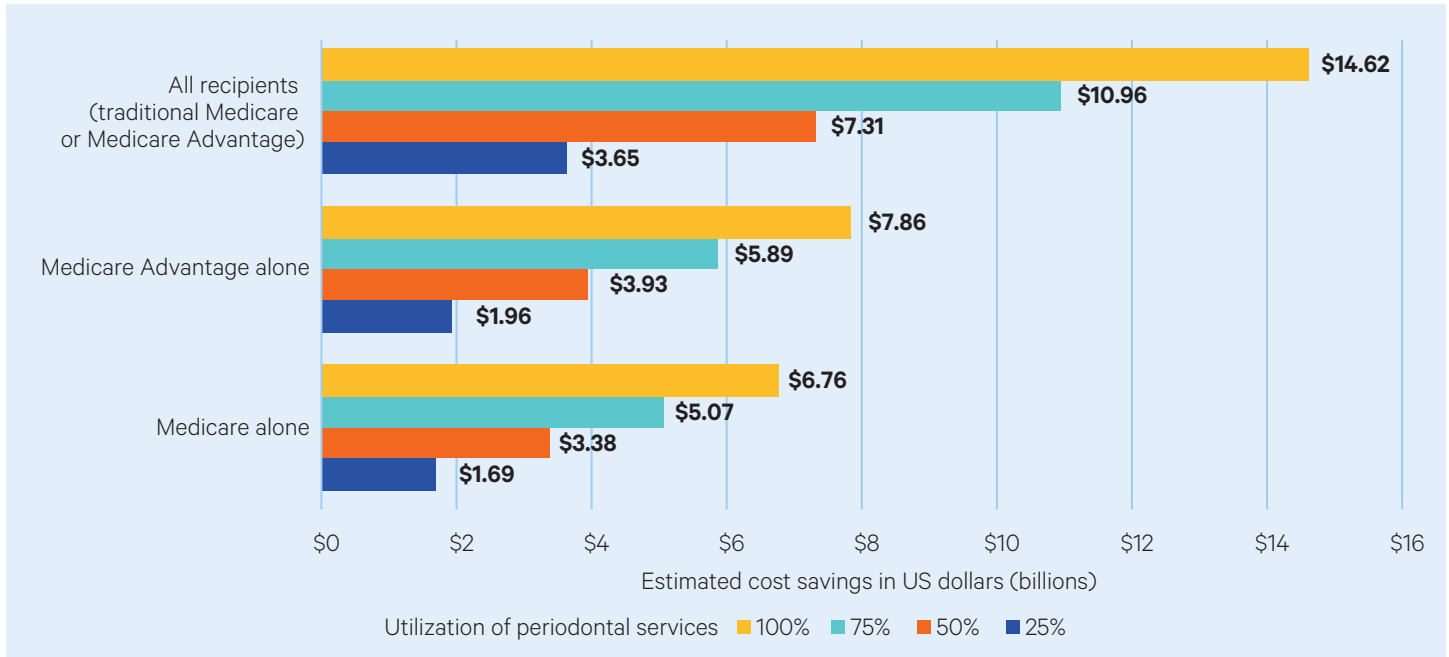
Across all types of diabetes (T1DM, T2DM, and pre/borderline DM), the largest amount of estimated cost savings was found for all Medicare recipients combined (enrolled in traditional or

Advantage plans). The cost savings for those enrollees ranged from \$3.65 billion when 25% of enrollees received periodontal care to \$14.62 billion when all (100%) enrollees received periodontal treatment. For enrollees with traditional Medicare alone, the cost savings ranged from \$1.69 billion to \$6.76 billion depending on utilization of periodontal care, while periodontal care for enrollees with Medicare Advantage alone would produce a range of estimated cost savings of \$1.96 billion to \$7.86 billion.

Self-Reported Diabetic Conditions among Medicare Enrollees in 2013



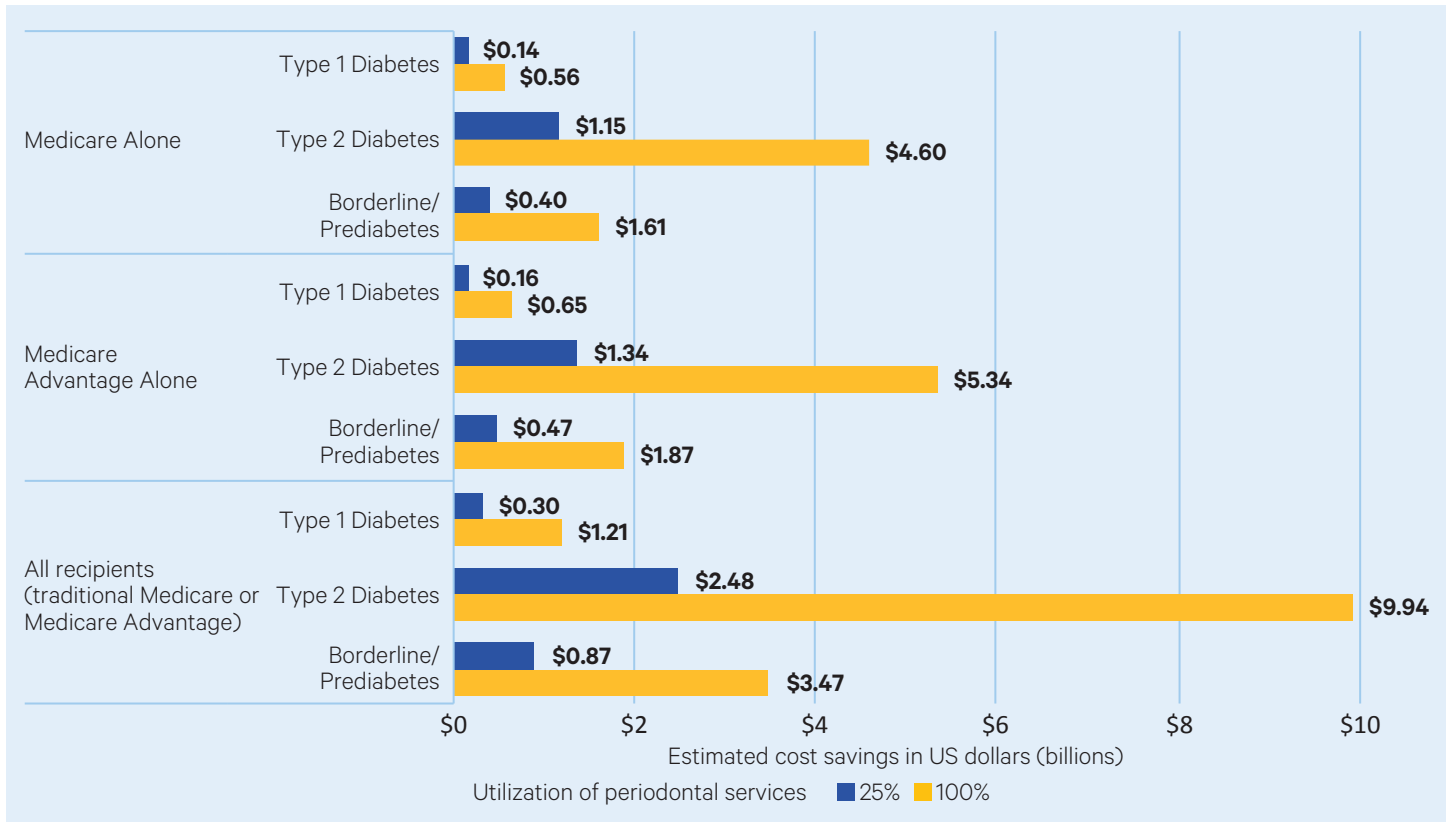
Estimated Combined Cost Savings for T1DM, T2DM, and Pre/Borderline Diabetes by Medicare Type



When examining diabetes types, the greatest amount of estimated cost savings was found for enrollees with T2DM across all types of Medicare plans. Including all diabetes types, cost savings were largest for all Medicare recipients combined (25% utilization of periodontal services = \$2.48 billion, 100% = \$9.94B), followed by Medicare Advantage

(25% = 1.34B, 100% = \$5.34B), then traditional Medicare alone (25% = \$1.15B, 100% = \$4.6B). The estimated cost savings for all Medicare recipients combined who had T2DM and received periodontal treatment were 46% greater than Medicare Advantage alone and 54% greater than Medicare alone.

Estimated Cost Savings for T1DM, T2DM, and Pre/Borderline Diabetes by Medicare Type



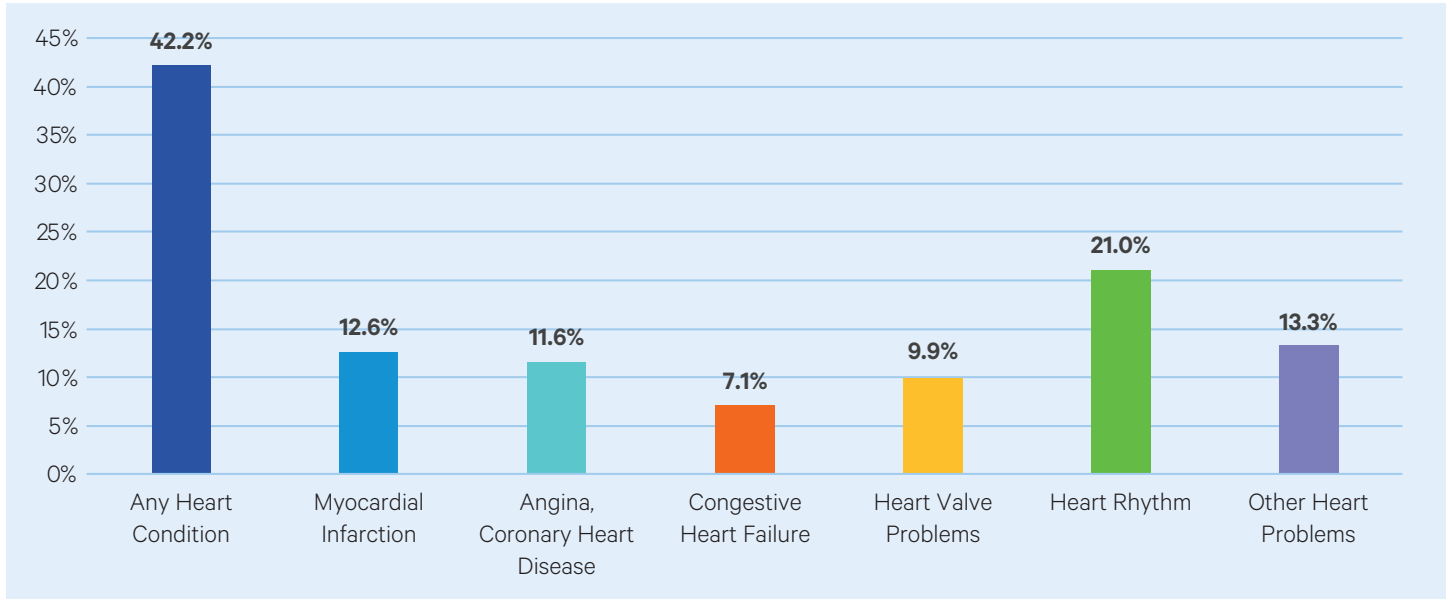
Cardiovascular Disease

According to the 2013 MCBS, 42.4% of Medicare enrollees reported having at least one heart condition. When asked which heart condition or conditions they had, 21% said they had heart rhythm problems, followed by “other” heart problems (13.3%), myocardial infarction (12.6%), angina or coronary heart disease (11.6%), heart valve problems (9.9%), and congestive heart failure (7.1%).

For enrollees with at least one heart condition, the largest

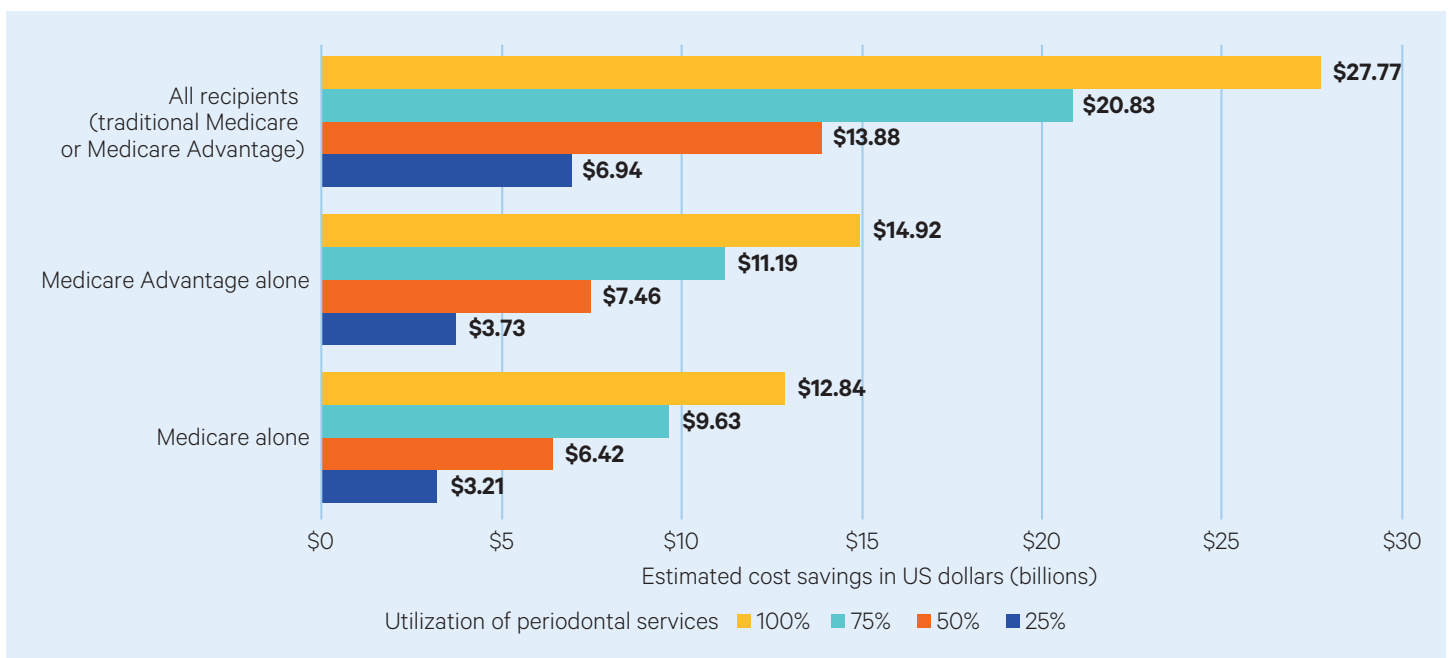
amount of estimated cost savings was found for all Medicare recipients combined (enrolled in traditional or Advantage plans). The cost savings for those enrollees ranged from \$6.94B when 25% of enrollees received periodontal care to \$27.77B when all (100%) enrollees received periodontal treatment. For enrollees with Medicare alone, the cost savings ranged from \$3.21B to \$12.84B depending on utilization of periodontal care, while periodontal care for enrollees with Medicare Advantage alone would produce a range of estimated cost savings of \$3.73B to \$14.92B.

Self-Reported Cardiovascular Disease (CVD) Conditions among Medicare Enrollees in 2013



From *Prevalence and Health Care Expenditures among Medicare Beneficiaries Aged 65 Years and Over with Heart Conditions* (cms.gov). With the exception of the question regarding “any heart condition,” survey respondents were able to select as many CVD conditions as applied to them, and thus could be counted in more than one category.

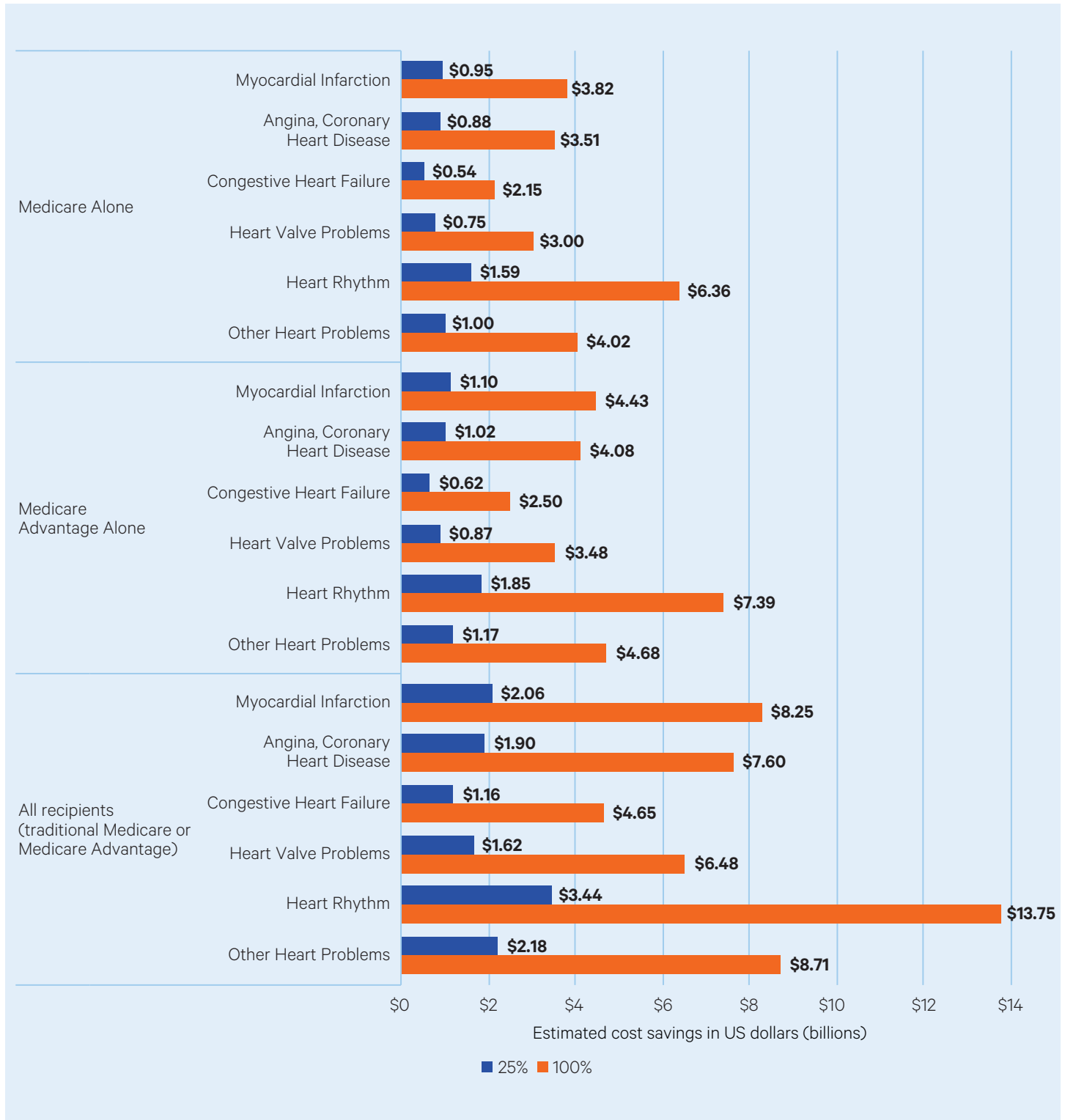
Estimated Cost Savings for At Least One Heart Condition by Medicare Type



When examining different heart conditions, the greatest amount of estimated cost savings was found for enrollees with heart rhythm problems across all types of Medicare plans. Cost savings for those with heart rhythm problems were largest for enrollees with both Medicare and Medicare Advantage (25% utilization of periodontal services = \$3.44B, 100% = \$13.75B), followed by Medicare Advantage (25% =

\$1.85B, 100% = \$7.39B) and then Medicare alone (25% = \$1.59B, 100% = \$6.36B). The estimated cost savings for enrollees with both Medicare and Medicare Advantage with heart rhythm problems who received periodontal treatment were 46% greater than for Medicare Advantage alone and 54% greater than for Medicare alone.

Estimated Cost Savings for Different Heart Conditions by Medicare Type





Conclusions

Results of this analysis demonstrate that periodontal treatment has the promise to save billions of health care dollars for the care of Medicare beneficiaries with diabetes and cardiovascular disease. The estimated cost savings was greatest for enrollees with Medicare Parts A through D (through traditional Medicare or Medicare Advantage), regardless of the health condition (diabetes or heart disease). The estimated health care cost savings for older adults with diabetes enrolled in Medicare or Medicare Advantage range between \$3.6 billion and \$14.5 billion depending on utilization. Estimated cost savings for older adults with at least one heart condition enrolled in Medicare or Medicare Advantage range between \$6.9 billion and \$27.8 billion. Periodontal treatment for enrollees with Medicare Advantage alone resulted in more estimated savings than for enrollees with traditional Medicare alone for both diabetes and heart disease. Estimated cost savings were greatest for enrollees with T2DM and heart rhythm problems, regardless of the type of Medicare plan. Greater use of periodontal treatment (e.g., 100% utilization versus 25%) results in greater estimated savings. In addition to

cost savings, improving periodontal status has the potential to have significant positive impacts on individuals' overall health as far as improved diabetic and heart disease outcomes. As Medicare does not currently include dental benefits, [including dental coverage in Medicare](#) has the potential to produce a “win-win” result by both saving the health care system billions of dollars per year and improving the overall health of individuals with chronic systemic diseases.

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CareQuest Institute for Oral Health

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