

# Integration of dental and medical care can improve member health outcomes

Integrated care: Improving oral health and overall member wellbeing



## Executive summary

There is a well-established link between periodontal disease and the health outcomes for individuals with numerous medical conditions, including diabetes, heart (cardiovascular) disease, and stroke, to name a few.<sup>1</sup> Is there a cost savings benefit? Are there improved outcomes for those who receive enhanced dental care? Can care alerts help increase adherence?

Research has shown that when individuals receive regular dental care, their overall health is generally better compared to those who do not receive routine dental care.

Anthem wanted to find out for ourselves. So we put our extensive member data to work and completed three studies. An increasing body of evidence points to there being an advantage to integrating benefits.

The findings show lower overall medical costs:

- Up to \$4,000 for cardiac members engaged in care management.
- \$8,280 for members who use their enhanced dental benefits
- \$2,045 for members who close their dental care gaps

## Introduction

Dental care is an important part in delivering holistic, patient-centered care.

Health care provider communication and coordination of care are enhanced with the integration of benefits and member claim data.



### **Empowers insurers**

to derive additional insights about best care for patients.



### **Increases communication**

and collaboration between medical and dental providers.



### **Helps patients**

improve their oral and overall health.

<sup>1</sup> National Library of Medicine, [ncbi.nlm.nih.gov/pubmed/24953519](https://pubmed.ncbi.nlm.nih.gov/24953519) (accessed October 2020).

## Study one: Value of integrated benefits for high-risk members working with care management

**Goal:** The first study evaluated health care utilization and costs among members with a number of conditions, including heart (cardiovascular) disease. The analyses were conducted using two groups of members to see if members covered by employers offering both Anthem dental and Anthem medical benefits had superior clinical and cost outcomes compared to members covered by employers not offering Anthem dental benefits, just Anthem medical benefits, though they likely offered dental coverage through a different insurer.

**Group 1:** Members participated in care management and enrolled in integrated medical, pharmacy, and dental benefits provided by Anthem.



**Group 2:** Members participated in care management with medical and pharmacy benefits provided by Anthem, but had dental benefits with another carrier.



**Details:** Medical and dental claims from January 1, 2014 to December 31, 2018 were utilized for this analysis, adjusting for baseline demographic and health factors. Members with integrated medical, pharmacy, and dental benefits through Anthem and participating in a care management program with a diagnosis of heart disease were compared to members without integrated benefits (medical, pharmacy, and dental coverage with Anthem).



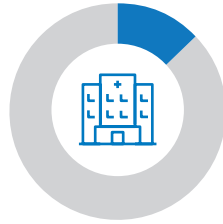
## Results

It was observed that the integrated group had:



20% fewer  
heart attacks

(15.6% versus 19.4%)



13% fewer  
inpatient hospital  
admissions

(30.7% versus 35.2%)



10% fewer  
emergency  
room visits

(30.3% versus 33.8%)

## Conclusions

These improved health results may be attributed to Anthem's:

- Active member engagement model.
- Early detection and communication due to integration of claims data.
- Intervention processes.
- Data sharing.

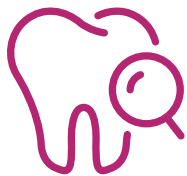


## Study two: Additional benefit of integrating Anthem medical and dental care – Enhanced Dental Care

**Goal:** Compare overall medical costs for members who were auto-enrolled in Anthem Enhanced Dental Benefits, who also participated in care management and received additional cleaning or periodontal maintenance benefits, versus members who did not utilize the additional benefit.

**Details:** Anthem automatically reaches out to members with integrated benefits who participate in an Anthem care management for diabetes, cancer with chemotherapy, head and neck cancer with radiation and/or chemotherapy, pregnancy, end-stage renal disease, transplant, HIV, stroke, and cardiac-valve disease. Those members are then provided a no-cost “enhanced” dental service. This includes, but is not limited to, additional preventive or maintenance dental services (third cleaning or periodontal maintenance service) per benefit period to optimize oral health and early intervention or detection of more serious dental diseases.

The care management process encourages those members actively working with a care management nurse for pregnancy, diabetes, cardiovascular disease, cancer, and transplants to address their oral health as part of their overall health. This holistic approach to care helps manage oral health and overall health with earlier:



**Detection**



**Diagnosis**



**Treatment and  
intervention**

Anthem is continuously evaluating the benefits of expanding enhanced dental benefits to members with other chronic health conditions that may have an oral health connection, as well to our members without chronic conditions.

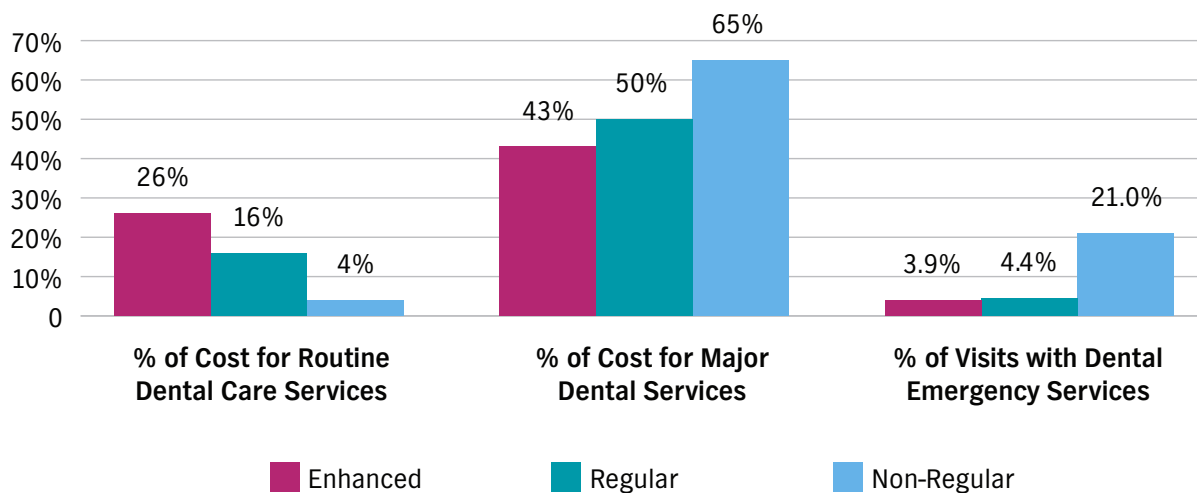
## Results

Early evidence has shown the association between better outcomes and lower costs among those who utilize two (Regular) or three (Enhanced) dental cleanings per year compared to those with Non-Regular use (fewer than two cleanings in at least one year).

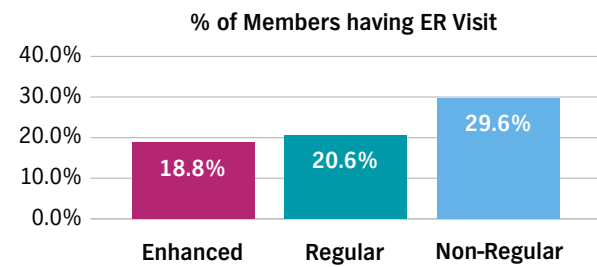
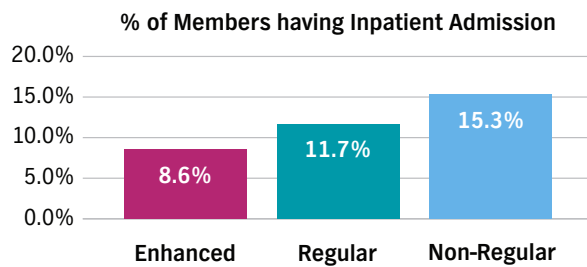
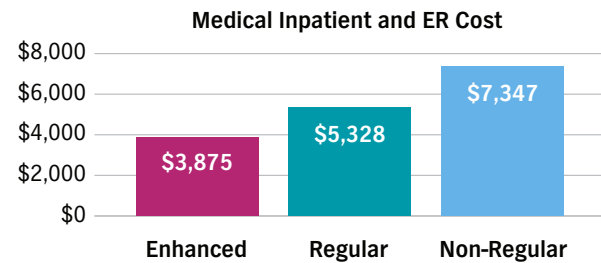
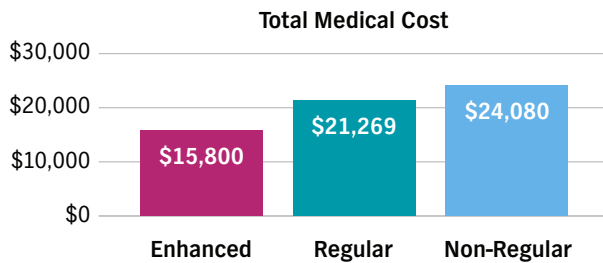
### Members with regular/enhanced preventive services

Members who receive the necessary diagnostic and preventive care are less likely to require major dental services (related to fractured, missing, or infected teeth such as crowns, bridges, tooth extractions, dentures, and root canal).

### Dental service utilization of routine care and major and emergency services in follow-up



## Follow-up and medical cost and utilization



## Conclusion

Though more evidence is needed on a larger population of patients, these initial findings support evidence that having positive health habits such as regular or enhanced dental preventive and maintenance care is associated with better overall health. Having data on both dental care and medical care through integrated health benefits can engage those members not receiving dental care earlier and in their whole health more effectively.



## Study three: Benefits of integrated data to identify and communicate care gaps

**Goal:** Determine whether those members who received a Dental Care Gap alert and who subsequently closed the gap (had dental services within the six-month observation period) experienced reduced medical cost and utilization the following year when compared to members who did not close the care gap. The overall study period was from 2017 through 2019, and uses three years of dental and medical enrollment in addition to claims data.

### What is a Dental Care Gap alert?

A Dental Care Gap alert is an outreach to members with chronic health conditions who have not received recommended preventive care or treatment for chronic inflammatory conditions of the gums and supporting bones.



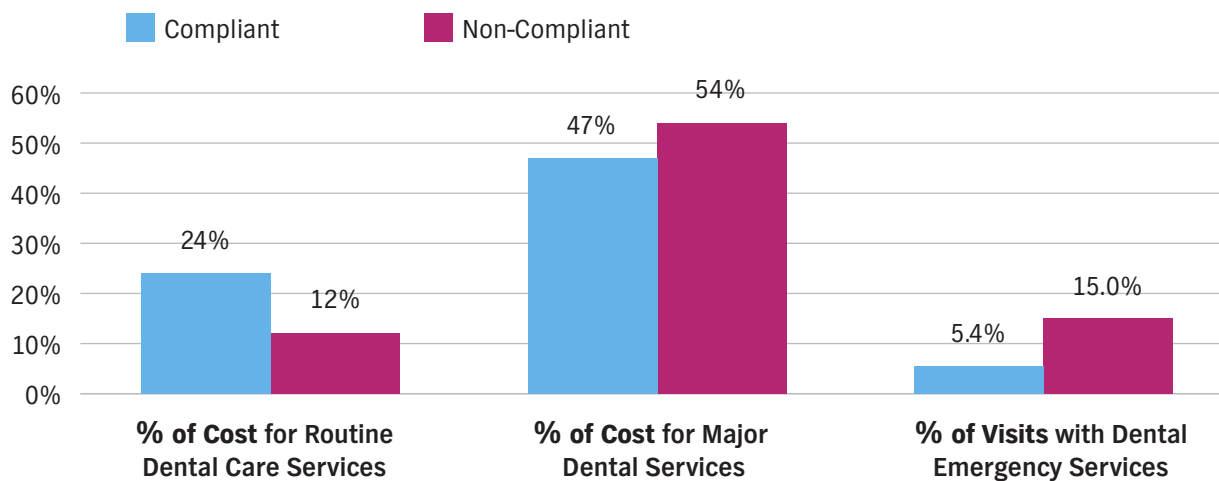
**Details:** We identified Anthem members with health conditions that have an oral health relationship (pregnancy, diabetes, coronary heart disease [CHD], cancer, cardiovascular disease [CVD], transplant). Members were categorized into two groups according to their dental care during the six-month observation period:

- 1. Compliant** - if they acted upon the care gap alert and received dental care services.
- 2. Non-compliant** - if they did NOT act upon the care gap alert and therefore did not receive dental care services.

Medical utilization and costs were compared and adjusted for differences in age, sex, and geography. Among the 51,169 members who received a Dental Care Gap alert, 11,556 (22.6%) were found to be compliant.



## Dental service utilization of routine care and major and emergency services in follow-up



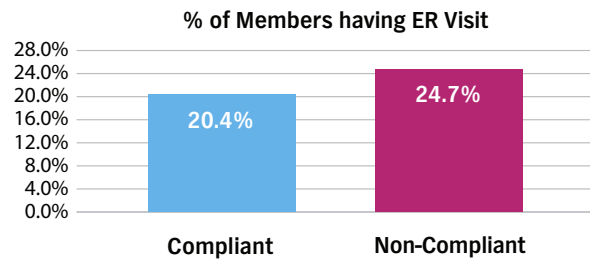
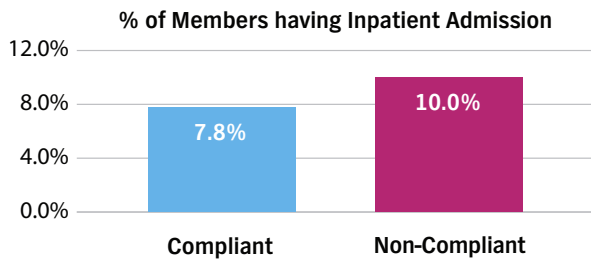
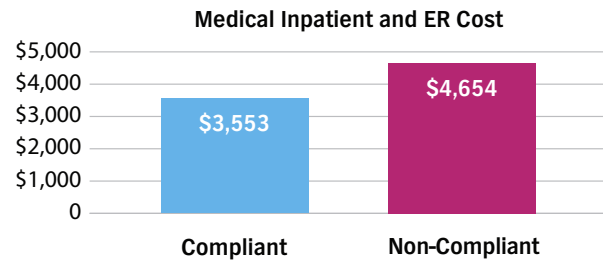
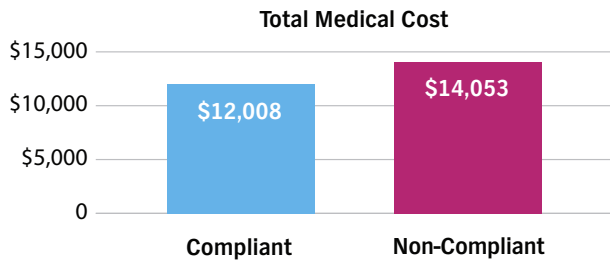
## Compliant members' costs



Non-compliant members, as compared to compliant members, were found to have:

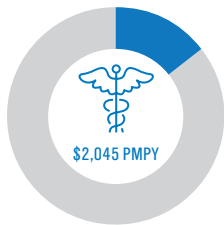
- A significantly higher percentage of visits for dental emergency services.
- More repeat visits to the dentist.
- Nearly three times more emergency visits.

## Follow-up and medical cost and utilization



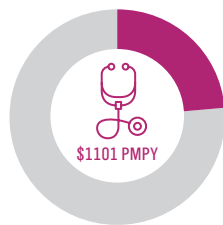
## Results

Compliant members had:



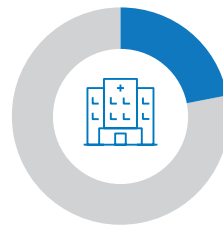
**14.6% lower overall medical costs**

(\$12,008 versus \$14,053)



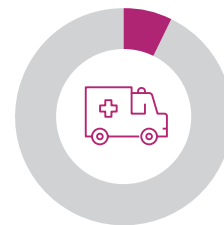
**23.65% lower medical inpatient and ER costs**

(\$3,553 versus \$4,654)



**22% fewer inpatient hospital admissions**

(7.8% versus 10.0%)



**7.4% fewer ER visits**

(20.4% versus 24.7%)

**Non-compliant members incurred higher costs across major dental services, emergency room number of visits, and overall visits to the dentist.**

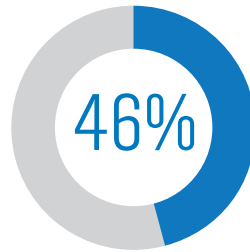
## Conclusion

The study reinforces the value of timely outreach to members with medical conditions. Serious conditions that remain undiagnosed for extended periods of time can result in the need for more complex and costly services. Integrating routine dental care into the ongoing maintenance of overall health and wellbeing may extend beyond a person achieving better oral health.



### Oral health care

is especially important for members with gum disease who are pregnant or have a chronic health condition like diabetes.<sup>2</sup>



**of adults in the U.S.** have gum disease despite the benefit of regular preventive care.<sup>3</sup>



### Studies have shown

that dental cleanings contribute to positive clinical outcomes.<sup>4</sup>

<sup>2</sup> National Library of Medicine, [ncbi.nlm.nih.gov/pubmed/24953519](https://ncbi.nlm.nih.gov/pubmed/24953519) (accessed October 2020).

<sup>3</sup> CDC 2020.

<sup>4</sup> Griffin 2009; Zhou 2014; Li 2015; Nazir 2017.



## How coordinated care is making a difference

By having access to integrated dental and medical care information, Anthem can optimize information sharing including care coordination and communication to members and their medical and dental providers. Anthem Whole Health Connection® plays a critical role in more efficiently identifying at-risk members, integrating care leading to improved overall health and lower costs for members and employers.

## Anthem Whole Health Connection

Anthem's integrated health care (IHC) program, Anthem Whole Health Connection, is an expansive care model powered by the latest in digital technology and artificial intelligence. It connects the administration and wellbeing programs of medical, pharmacy, and ancillary plans. This connection simplifies the benefits experience for members and their employers, and enhances the performance of the employers' clinical, health and wellness program.



### Better care

**5.8 million**

more gaps in care closed each year following a health reminder (care alert) from Anthem to members and their doctors<sup>1</sup>



### Lower costs

**34%**

(or \$8,280) lower total medical costs for Anthem members utilizing their additional dental cleaning benefit<sup>2</sup>



### Better experience

**4.7**

App Store rating<sup>3</sup> for Sydney Health, Anthem's most advanced digital consumer experience to date

By following the data, it is clear that with integrated benefits and care management, Anthem members enjoy better health outcomes and lower dental and medical costs.

Integrated medical and dental benefits can help increase communication and collaboration between medical and dental providers, in turn helping them improve care, helping improve their oral and overall health.

Further, the more benefits are integrated, the more information sharing can occur, leading to more savings. By combining medical and dental health care data with pharmacy, health care providers can better manage chronic health conditions, monitor prescription adherence, close care gaps, and reduce costs for both employers and members.<sup>1</sup>

<sup>1</sup> Anthem pharmacy, dental, and vision 2019 data.

<sup>2</sup> Anthem, Integrated medical and dental quantifying value study for diabetes, cardiovascular disease, cancer, and organ transplant conditions, 2020.

<sup>3</sup> <https://apps.apple.com/us/app/sydney-health/id1463423283>.

## References

CDC: Adult Oral Health 2020. <https://www.cdc.gov/oralhealth/basics/adult-oral-health/index.html>.

Gao L, Xu T, Huang G, Jiang S, Gu Y, Chen F. (2018). "Oral microbiomes: more and more importance in oral cavity and whole body." *Protein & Cell* 9(5): 488-500.

Griffin SO, Barker LK, Griffin PM, Cleveland JL, Kohn W. Oral health needs among adults in the United States with chronic diseases. *J Am Dent Assoc.* 2009 Oct;140(10):1266-74.

Kane SF. (2017). "The effects of oral health on systemic health." *Academy of General Dentistry*: 30-34.

Kim J, Amar S. (2006). "Periodontal disease and systemic conditions: a bidirectional relationship." *Odontology* 94(1): 10-21.

Li Q, Hao S, Fang J, Xie J, Kong XH, Yang JX. Effect of non-surgical periodontal treatment on glycemic control of patients with diabetes: a meta-analysis of randomized controlled trials. *Trials.* 2015 Jul 3;16:291. doi: 10.1186/s13063-015-0810-2.

Li X, Kolltveit K, Tronstad L, Olsen I. Systemic Diseases Caused by Oral Infection. *Clinical Microbiology Reviews.* 2000;13(4):547-558. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC88948/pdf/cm000547.pdf>.

Muhammad Ashraf Nazir. Prevalence of periodontal disease, its association with systemic diseases and prevention. *International Journal of Health Sciences.* 2017 Jun;1(2).

