

## Research Brief

# U.S. Dental Spending Continues to Be Flat

Authors: Thomas Wall, M.B.A.; Marko Vujicic, Ph.D.

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## Key Messages

- *National dental care expenditure was \$113.5 billion in 2014.*
  - *Taking into account both inflation and population growth, national dental expenditure remained flat between 2013 and 2014, continuing a multi-year trend.*
  - *The establishment of health care insurance marketplaces as well as Medicaid expansion under the Affordable Care Act could impact demand for dental care and dental expenditure. This is an important area of future research.*
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## Introduction

Dental spending in the United States began to slow in 2002, well before the Great Recession and has been flat since 2008. Previous analysis<sup>1</sup> shows that through 2013, there was no change in this trend. In this research brief, we use newly released data to update our findings on dental care expenditures. We analyze national dental expenditure patterns from 1990 to 2014, the most recent year for which data are available. We discuss the policy implications of our findings.

## Data & Methods

We analyzed national health expenditure data from the Centers for Medicare and Medicaid Services (CMS). We focused on the period 1990 to 2014, the most recent year for which data are available (data for 2014 were released December 3, 2015). We analyzed national expenditures in nominal dollars, inflation-adjusted dollars and per capita inflation-adjusted dollars. As recommended by the Agency for Healthcare Research and Quality (AHRQ), we used the gross domestic product (GDP) deflator to adjust for inflation.<sup>2,3</sup> We adjusted for population growth using population data from the U.S. Census Bureau. We also analyzed the breakdown of dental expenditures by source of financing and compared this to the breakdown of total health expenditures by source of financing.

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## Results

Results presented in Figures 1-5 are based on national dental expenditure data for 2000 to 2014 from CMS. Inflation-adjusted estimates are presented in 2014 dollars. Figure 1 summarizes national dental expenditure from 1990 to 2014 in nominal and inflation-adjusted dollars and can be interpreted as a measure of the size of the dental economy. In 2014, national dental expenditure was \$113.5 billion. This was up somewhat from \$112 billion in 2013 (in inflation-adjusted 2014 dollars). In 2014, dental expenditure accounted for 3.7 percent of overall national health expenditure, down from a peak of 4.5 percent in 2000 (within our period of study), but roughly the same level as in recent years.

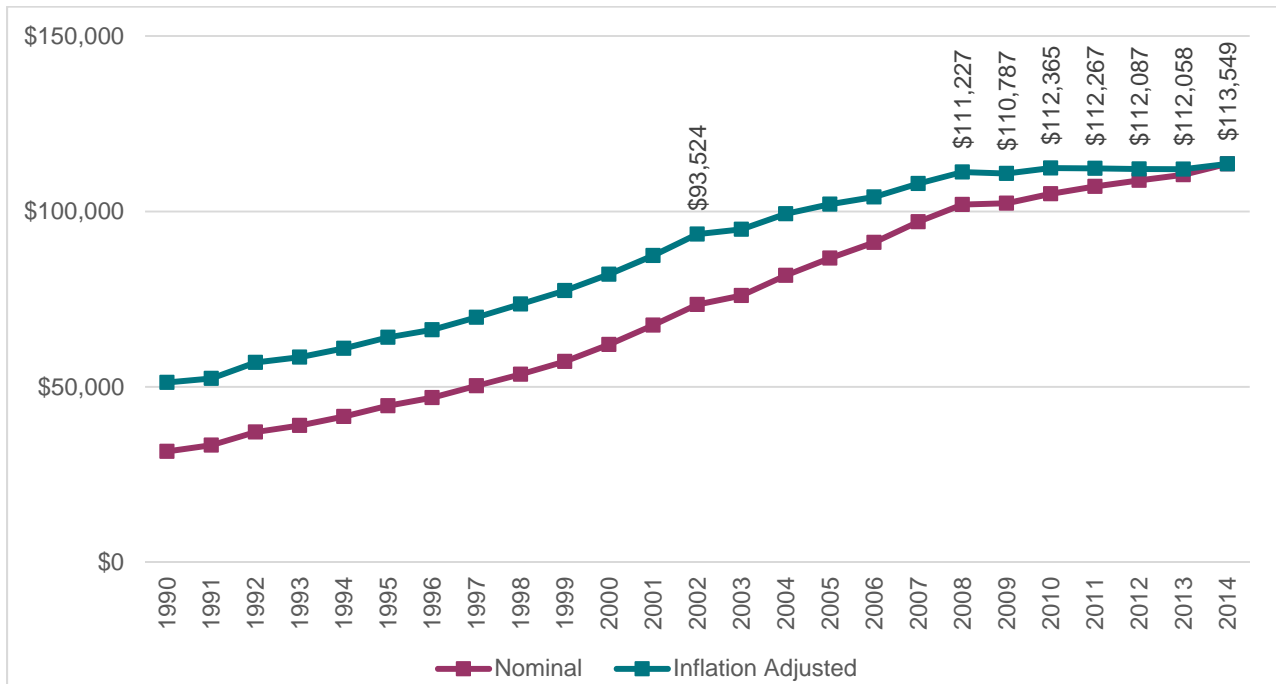
Figure 2 summarizes inflation-adjusted national dental expenditure per capita. This is a measure that takes account of both inflation and population growth. Inflation-adjusted dental expenditure per capita rose somewhat from \$349 in 2013 to \$351 in 2014, reversing a downward trend that began in 2010. It is also clear from Figure 2 that the growth rate of per-capita dental expenditure changed significantly in the early 2000s.

Figure 3 shows the growth rate of national dental expenditure compared to the growth rate of overall health expenditure in the United States. Between 1990 and 2002, inflation-adjusted per-capita dental expenditure was growing at 3.9 percent per year,

slightly faster than overall health expenditure. For the 2002-08 period, however, the inflation-adjusted per-capita dental expenditure growth rate declined dramatically to 2.0 percent per year, well below the growth rate for overall health expenditure. Since 2008, inflation-adjusted dental expenditure per capita has declined – albeit at a very slow rate of 0.4 percent per year – while overall health expenditure has continued to grow, but at lower than historical rates.

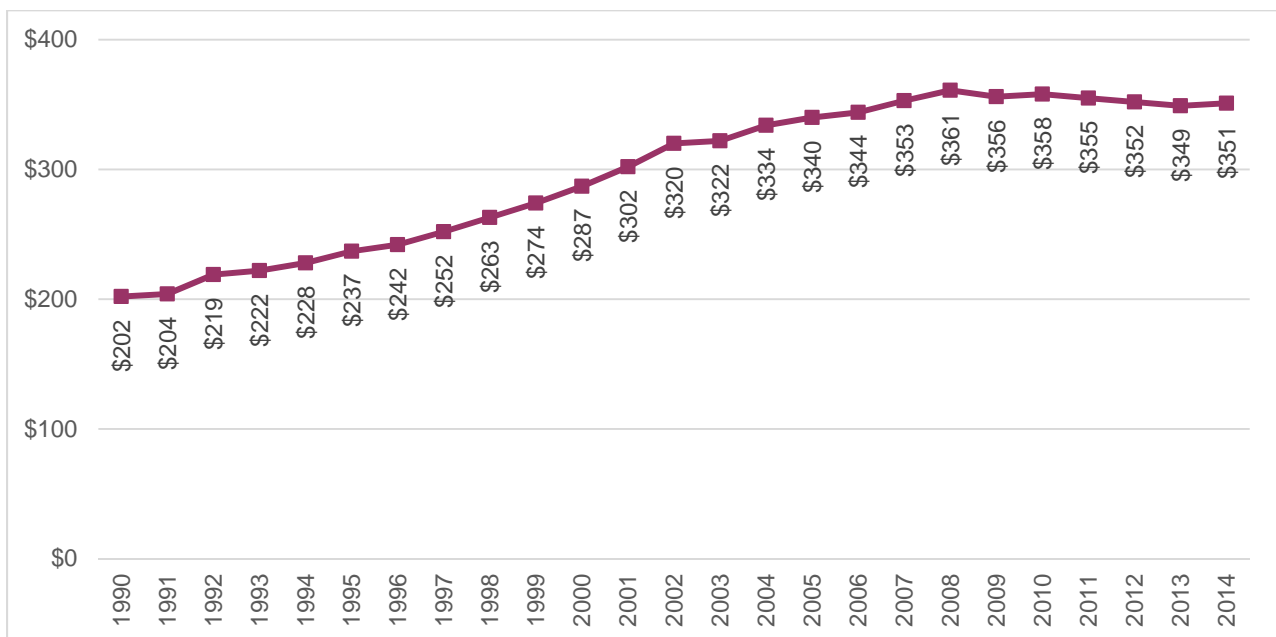
Figure 4 summarizes the breakdown of overall health expenditure by source of financing from 1990 to 2014. Figure 5 does the same for dental expenditures. As shown in Figure 4, from 2013 to 2014, there was a small increase in the percentage of overall health expenditures covered by CMS programs. As shown in Figure 5, from 2013 to 2014, there were small increases in the share of dental expenditure financed by public sources and private insurance, along with a corresponding decrease in the share of dental expenditure financed out of pocket. A key trend since 1990 is an increase in the share of dental expenditure financed by public sources (from 2 percent in 1990 to 11 percent in 2014) and a decrease in out-of-pocket spending. This same shift away from out-of-pocket financing toward public financing also occurred for overall health spending. However, dental expenditure remains overwhelmingly financed by private dental insurance and out-of-pocket spending, a very different mix than for overall health expenditure.

Figure 1: National Dental Expenditure (\$ millions)



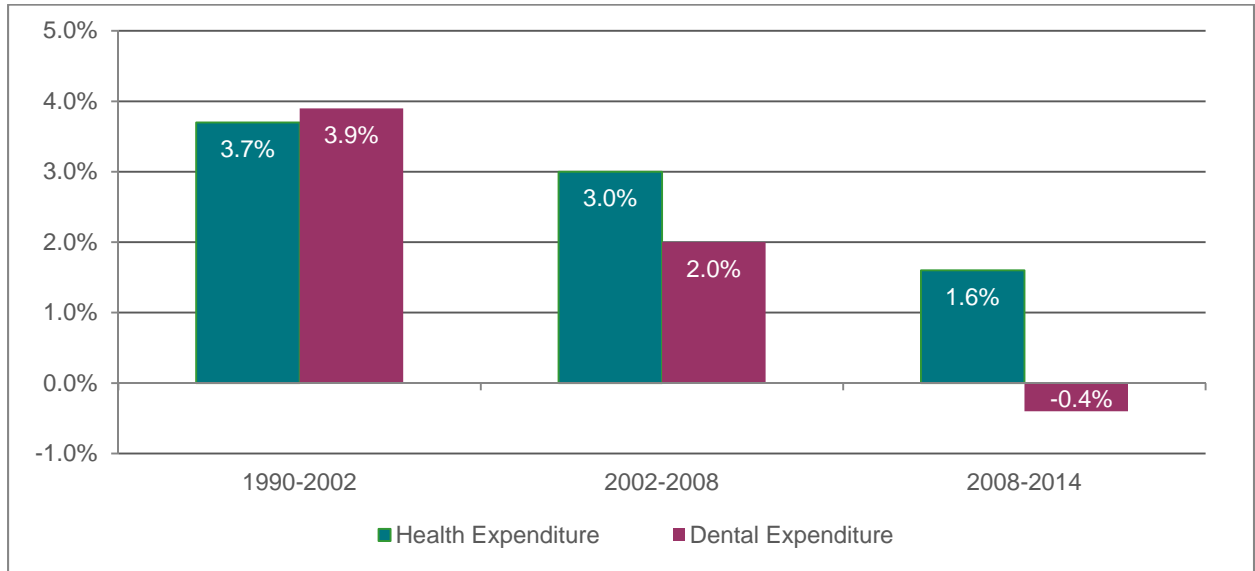
Source: Centers for Medicare and Medicaid Services; U.S. Bureau of Economic Analysis. Note: National dental expenditure adjusted for inflation using the GDP implicit price deflator. Inflation-adjusted figures in 2014 dollars.

Figure 2: National Dental Expenditure per Capita



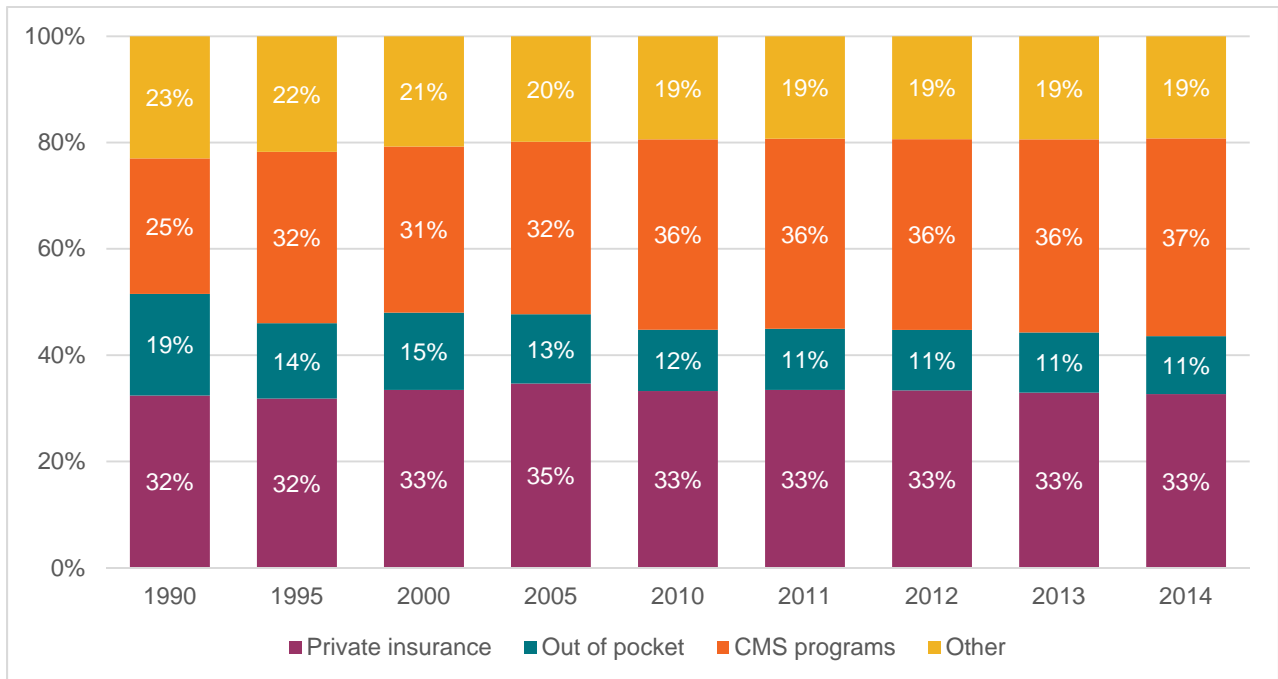
Source: Centers for Medicare and Medicaid Services; U.S. Bureau of Economic Analysis; U.S. Census Bureau. Note: Expenditure adjusted for inflation using the GDP implicit price deflator. Per capita dental expenditure in 2014 dollars.

**Figure 3:** Average Annual Growth Rate of Overall Health and Dental Expenditure



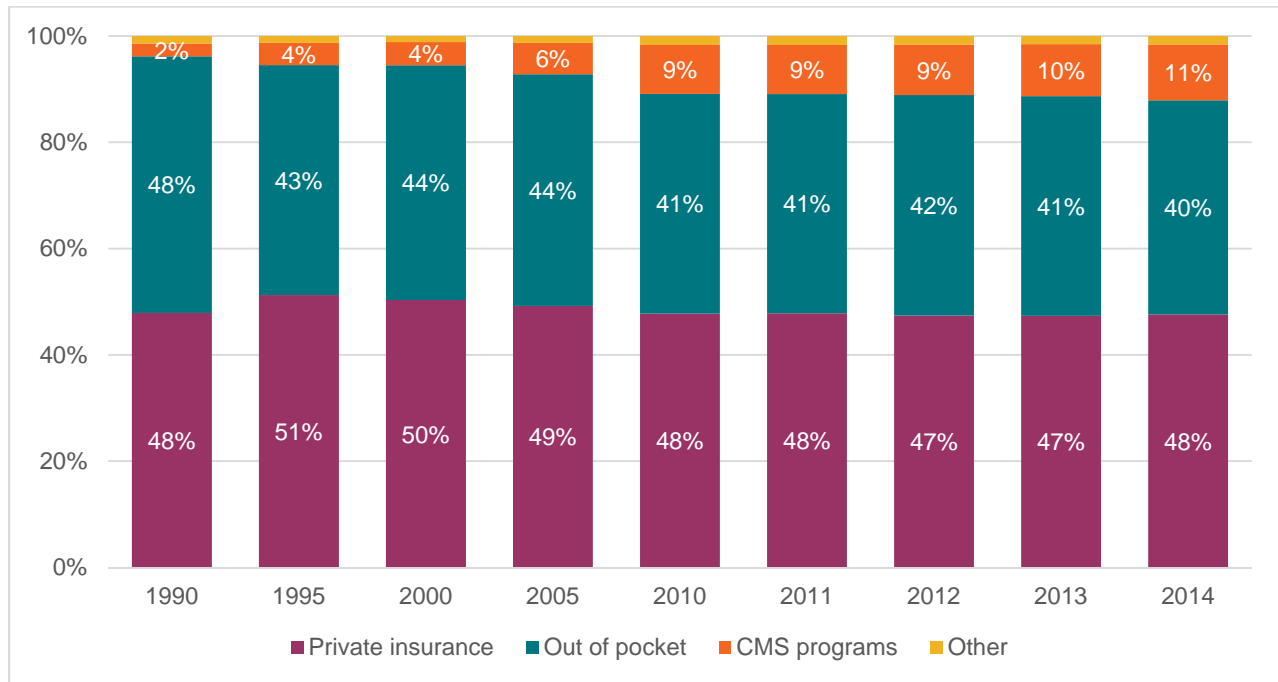
**Source:** Centers for Medicare and Medicaid Services; U.S. Bureau of Economic Analysis. **Note:** Rate calculated as average annual compounded growth rate.

**Figure 4:** Distribution of Overall Health Expenditure by Source of Financing



**Source:** Centers for Medicare and Medicaid Services. **Note:** CMS includes Medicare, Medicaid and CHIP.

**Figure 5:** Distribution of Dental Expenditure by Source of Financing



**Source:** Centers for Medicare and Medicaid Services. **Note:** CMS includes Medicare, Medicaid and CHIP.

## Discussion

Our analysis covers five full years of the period since the end of the Great Recession. Through most of this period, dental expenditures continue to be flat – a clear indication that the dental economy is not rebounding significantly. The 2014 data show a slight uptick in dental spending, but it remains to be seen if this continues. The share of dental spending financed by CMS also continued to increase. This could be a result of increased dental care utilization among Medicaid children, a long standing trend, as well as more Medicaid adults accessing dental care as a result of Medicaid expansion within states that offer optional

adult dental benefits. Further research is needed in this area.

One of the key drivers of the slowdown was a decrease in dental care use among working-age adults.<sup>4</sup> Given that dental care utilization patterns play a big role in the trajectory of dental spending, it is important to note that in 2013, for the first time since 2007, dental care utilization did not decline among working-age adults.<sup>5</sup> Utilization also continued to increase among children. The ADA Health Policy Institute will continue to monitor these and other trends in the dental care market.

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211 E. Chicago Avenue  
Chicago, Illinois 60611  
312.440.2928  
[hpi@ada.org](mailto:hpi@ada.org)

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## References

<sup>1</sup> Wall, T., Vujcic M. No growth in U.S. dental spending in 2013. Health Policy Institute Research Brief. American Dental Association. December 2014. Available from:

[http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief\\_1214\\_4.ashx](http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1214_4.ashx)

<sup>2</sup> Bureau of Economic Analysis, Implicit Price Deflators for Gross National Income,

<http://www.bea.gov/iTable/iTable.cfm?ReqID=9&step=1>

Accessed January 8, 2014.

<sup>3</sup> U.S. Department of Health and Human Services. Agency for Healthcare Research and Quality. Using appropriate price indices for expenditure comparisons. Available from:

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<sup>4</sup> Nasseh K, Vujcic M. Dental care utilization rate highest ever among children, continues to decline among working-age adults. Health Policy Institute Research Brief. American Dental Association. October 2014. Available from:

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<sup>5</sup> Nasseh K, Vujcic M. Dental care utilization rate continues to increase among children, holds steady among working age adults and the elderly. Health Policy Institute Research Brief. American Dental Association. October 2015.

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