

Research Brief

Gap in Dental Care Utilization Between Medicaid and Privately Insured Children Narrows, Remains Large for Adults

Authors: Marko Vujcic, Ph.D.; Kamyar Nasseh, Ph.D.

The Health Policy Institute (HPI) is a thought leader and trusted source for policy knowledge on critical issues affecting the U.S. dental care system. HPI strives to generate, synthesize, and disseminate innovative research for policy makers, oral health advocates, and dental care providers.

Who We Are

HPI's interdisciplinary team of health economists, statisticians, and analysts has extensive expertise in health systems policy research. HPI staff routinely collaborates with researchers in academia and policy think tanks.

Contact Us

Contact the Health Policy Institute for more information on products and services at hpi@ada.org or call 312.440.2928.

Key Messages

- *In all forty-seven states and the District of Columbia where we have reliable data, dental care utilization among Medicaid-enrolled children increased between 2005 and 2013. This resulted in a significant narrowing of the gap in dental care utilization between Medicaid-enrolled children and children with private dental benefits.*
- *Most states experienced a drop in dental care utilization among adults with private dental benefits between 2005 and 2013. In contrast, most states saw an increase in dental care utilization among children with private dental benefits.*
- *While dental care utilization for Medicaid children continues to “catch up” to children with private dental benefits, a very large gap remains among adults. Policymakers ought to focus on reforms to Medicaid if access to dental care issues for adults are to be addressed.*

Introduction

Dental care utilization patterns have been shifting dramatically in the United States the past decade. More children than ever are visiting the dentist, with the largest increases over time coming from low-income children. In contrast, adult dental care utilization rates have been falling steadily for all income groups and also among those with private dental benefits coverage.¹ Many factors are contributing to these trends. Financial barriers to dental care are increasing among adults, while for children they are much lower and have not changed over time. Expanded dental benefits coverage for children, mainly through Medicaid and the Children's Health Insurance Program, and decreased dental benefits coverage among adults have also played key roles.^{2,3,4}

In this research brief, we analyze trends in dental care utilization in individual states and the District of Columbia using new data. We analyze children and adults separately. We

compare dental care utilization among Medicaid enrollees and those with private dental benefits. We discuss the policy implications of our results.

Data & Methods

By state, we calculated dental care utilization rates for children and adults enrolled in Medicaid or private dental plans. We gathered 2005 and 2013 Medicaid data for children from the Centers of Medicare and Medicaid Services (CMS) 416 form.⁵ States are required to report this information to CMS every fiscal year. Beginning in 2010, this rate was based on children ages 1 to 20 who had at least 90 days of continuous Medicaid enrollment during the fiscal year. Prior to 2010, the dental care utilization rate was based on children ages 0 to 20 who were enrolled in Medicaid at any time during the fiscal year.⁶ We define dental care utilization as the ratio of the total number of children receiving any dental services (Line 12a) to the total number of children enrolled in Medicaid (Line 1b). It is important to note that because CMS changed its reporting methods beginning in 2010, we are not able to construct a consistent time series of dental care utilization. In other words, some component of the change in dental care utilization between 2005 and 2013 in the CMS data will be due to the changes in how Medicaid enrollment is reported in the CMS 416 data. There is no way to adjust for this in our analysis. Medicaid officials from Ohio indicated that 2013 dental care utilization data for Medicaid-enrolled children were unreliable. Thus, we did not analyze these data.

We applied for and received dental care utilization data among Medicaid adults from the Medicaid Statistical Information System (MSIS) granular database. All data were collected and analyzed by CMS and Mathematica Policy Research at our request, and a data output file was produced on May 27, 2015.⁷ Medicaid adults are defined as individuals ages 19 through 64 that had at least 90 days of continuous Medicaid enrollment during

the federal fiscal year. The beneficiary had to have received any type of dental service during the federal fiscal year to be included in the numerator. To calculate utilization rates, we divided the number of enrollees receiving any type of dental service by the total number of enrollees ages 19 through 64 with at least 90 days continuous enrollment. We omitted services provided in hospital emergency rooms from the numerator. We recognize that some adult Medicaid enrollees in some states may not be eligible for dental benefits. Therefore, our utilization rate must be interpreted carefully. It is among all Medicaid-enrolled adults, not necessarily only those eligible for dental benefits. For Medicaid adults, we only analyzed 2013 data.

For adults ages 21 to 64 and children ages 0 to 20 with private dental benefits, we measured dental care utilization in 2005 and 2013 using integrated medical, pharmacy and dental commercial claims from Truven Health Analytics MarketScan® Research Databases. These data included dental insurance claims as well as enrollment data from large employers and health plans across the United States who provide private dental coverage for employees, their spouses and dependents. These databases included 3.8 million covered lives in 2005 and 10.7 million covered lives in 2013. Based on the latest data from the 2012 Medical Expenditure Panel Survey (MEPS),⁸ we estimate that as of 2012, the Truven Health Analytics MarketScan® Research Databases cover about 7.6 percent of privately insured individuals in the U.S. This administrative claims database includes a variety of fee-for-service (FFS), preferred provider organizations (PPO) and capitated health plans. As with Medicaid enrollees, we calculated dental care utilization rates among individuals who were continuously enrolled in a private dental plan for at least 90 days. An individual in a private dental plan was considered to be utilizer of dental services if he or she had at least one dental

Research Brief

claim during their enrollment period. The first year for which we have these data is 2005, hence our analysis in this research brief starts in 2005.

For each state and the U.S. as a whole, we assessed changes in Medicaid and private dental plan dental care utilization, defined as the percentage of individuals with a dental visit, from 2005 to 2013. For children, we analyzed the relative gap, defined as the ratio of private dental care utilization to Medicaid dental care utilization, in 2013. We did the same analysis for adults, but we limited our analysis to states that have limited or extensive adult Medicaid dental benefits.⁹ In addition, we measured the change in the relative gap between privately insured and Medicaid children from 2005 to 2013 in each state. Due to a lack of 2005 adult Medicaid dental care utilization data, we cannot assess the change in the relative gap between privately insured and Medicaid adults.

Results

In 2013, 64.3 percent of Medicaid-enrolled children in Connecticut had a dental visit in the past year, up significantly from 31.9 percent in 2005. Dental care use among Medicaid-enrolled children in 2013 was higher in Connecticut than any other state in the U.S. Conversely, at 27.9 percent, Medicaid dental care utilization among children in Wisconsin was the lowest in the nation, but was up from 21.7 percent in 2005. In the U.S., dental care utilization among Medicaid-enrolled children was at 48.3 percent in 2013, up from 35.3 percent in 2005. In all 47 states and the District of Columbia where we had data for 2005 and 2013, dental care utilization increased among Medicaid enrolled children (see Figure 1).

Massachusetts had the highest dental care utilization rate among children with private dental benefits in 2013. Dental care utilization among children with private dental benefits in Massachusetts increased

from 70.5 percent in 2005 to 75.9 percent in 2013. At 47.7 percent, Hawaii had the lowest dental care utilization rate among children with private dental benefits in 2013, down slightly from 50.0 percent in 2005. In the U.S., dental care utilization among children with private dental benefits was 64.0 percent in 2013, up from 59.8 percent in 2005. From 2005 to 2013, 39 states and the District of Columbia had an increase in dental care utilization among children with private dental benefits (see Figure 2).

Figure 3 plots the relative gap in dental care utilization in 2013 between Medicaid-enrolled children and children with private dental benefits. In 46 states and the District of Columbia, dental care utilization among children with private dental benefits was higher than dental care utilization among Medicaid-enrolled children. However, two states, Texas and Hawaii, had a “reverse” gap. That is, dental care utilization among Medicaid-enrolled children in these states was higher than dental care utilization among children with private dental benefits. In the U.S. in 2013, dental care utilization among children with private dental benefits was higher than those with Medicaid, resulting in a relative gap of 15.7 percentage points.

In Figure 4, we plot the change in the relative gap in dental care utilization between Medicaid and privately insured children in the 45 states and the District of Columbia where we have data.¹⁰ In all these states, the gap in dental care utilization between Medicaid and privately insured children narrowed between 2005 and 2013. On average, the gap in dental care utilization between Medicaid-enrolled children and children with private dental benefits decreased by 53 percent between 2005 and 2013.

Among adults with private dental benefits in the U.S., Oregon had the highest dental care utilization rate in 2013. Dental care utilization among adults with private dental benefits in Oregon increased from 61.3 percent

Research Brief

in 2005 to 69.1 percent in 2013. At 41.5 percent, Hawaii had the lowest dental care utilization rate among adults with private dental benefits in 2013, down from 46.5 percent in 2005. In the U.S., dental care utilization among adults with private dental benefits was 59.2 percent in 2013, down slightly from 60.2 percent in 2005. From 2005 to 2013, 21 states and the District of Columbia had an increase in dental care utilization among adults with private dental benefits, while 28 states had a decrease (see Figure 5).

In Figure 6, for each state, we plot the relative gap in dental care utilization in 2013 between Medicaid-enrolled adults and adults with private dental benefits in states that have limited or extensive adult dental benefits in their Medicaid program. Alaska, Minnesota and Nebraska had the smallest relative gap in dental care utilization between privately and publically insured adults. Vermont, New Mexico and Arkansas had the largest relative gap.

Discussion

Our analysis provides several important conclusions related to dental care utilization trends. First, dental care utilization continues to increase among Medicaid-enrolled children. In all states where we had reliable data, dental care utilization among Medicaid-enrolled children increased between 2005 and 2013. Second, dental care utilization among Medicaid-enrolled children continues to “catch up” to utilization levels among children with private dental benefits. Where we have complete data, the relative gap in dental care utilization between Medicaid and privately insured children shrunk between 2005 and 2013. Two states – Texas and Hawaii – actually have a “reverse” gap where dental care utilization among Medicaid-enrolled children is higher than among children with private dental benefits. Third, nationally, dental care utilization among adults with private dental benefits remained

fairly flat between 2005 and 2013. However, more states saw a decline than an increase. Fourth, among states that provide dental benefits to Medicaid-enrolled adults, there is a significant gap in dental care utilization between Medicaid-enrolled adults and adults with private dental benefits. The public-private gap in dental care utilization for adults is much larger than for children.

Our analysis provides compelling evidence that despite significant increases in enrollment between 2005 and 2013, Medicaid programs have only been able to increase dental care utilization among children. We acknowledge that a major weakness in our analysis is that we focus only on dental care utilization and not, for example, treatment plan completion rates or oral health status. This is simply a reflection of data availability. Nevertheless, the data are clear: more Medicaid children are visiting the dentist.

There are numerous factors that could explain the steady gains in dental care utilization among Medicaid children. Several states have implemented comprehensive, multi-pronged reforms to their Medicaid dental program to put in place key “enabling conditions” needed to ensure access to dental care. The experiences in Maryland, Connecticut and Texas provide good examples of such reforms.¹¹ Some commentators have argued that shifts in the dental care delivery model, namely the growth of large group practice, could have increased the availability of Medicaid-accepting dental care providers.¹² An increase in the overall supply of dentists in the United States,¹³ combined with a decline in dental practice busyness levels,¹⁴ might also have been a factor. Unfortunately, there are no reliable time-series data on the percentage of dentists who accept Medicaid patients, and further research is needed to shed light on these hypotheses.

Research Brief

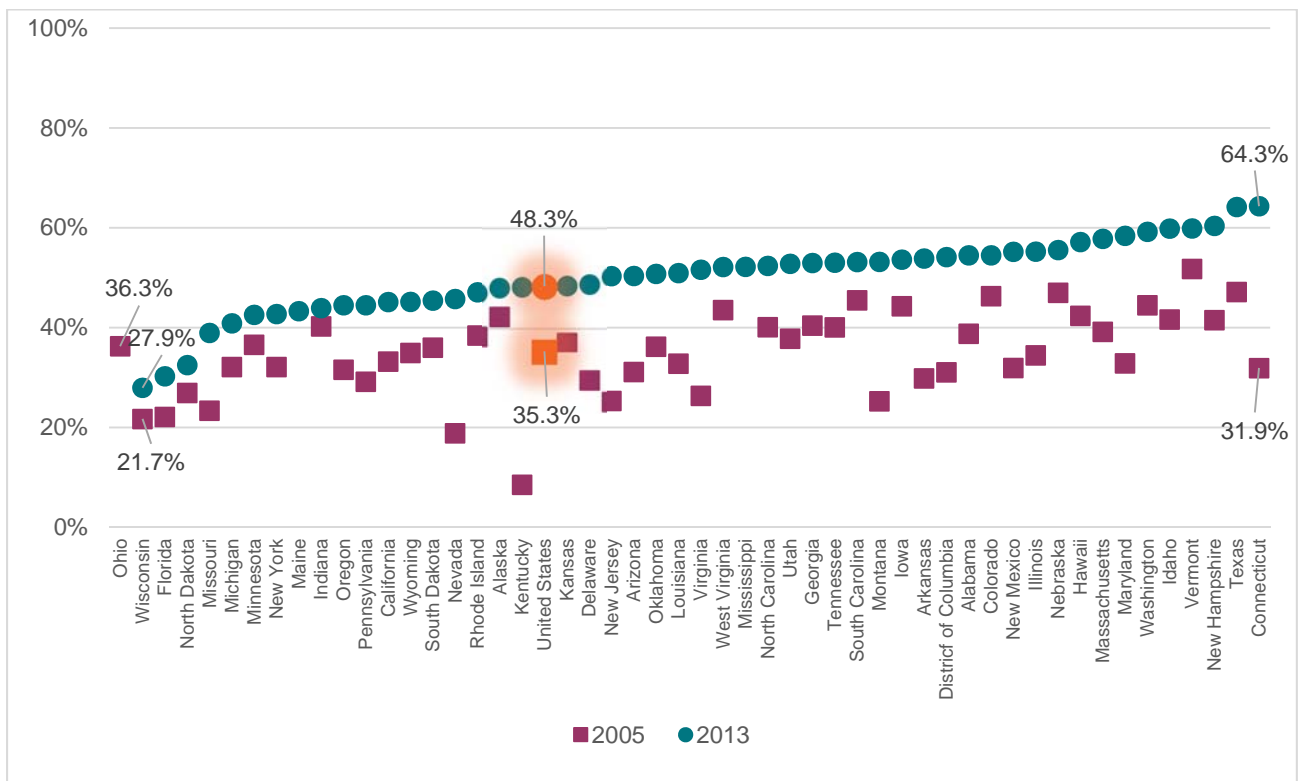
Our analysis also shows convincingly that dental care utilization trends for adults and children continue to diverge. The majority of states saw declines in dental care use among adults with private dental benefits. In contrast, in most states, dental care use among children with private dental benefits increased. The public-private gap in dental care utilization is much larger for adults than it is for children. These are not new trends,¹⁵ but our analysis confirms they are continuing. In fact, due to a wide variety of factors, we believe that there is little on the horizon to reverse current dental care utilization trends for adults.¹⁶ Federal and state policymakers simply have not

prioritized adult dental to the same level as for children. Medicaid programs have not, in general, replicated for adults the successful policy reforms that have been applied to children when it comes to dental care. The Health Policy Institute will continue to monitor dental care utilization trends in the coming years.

Acknowledgements

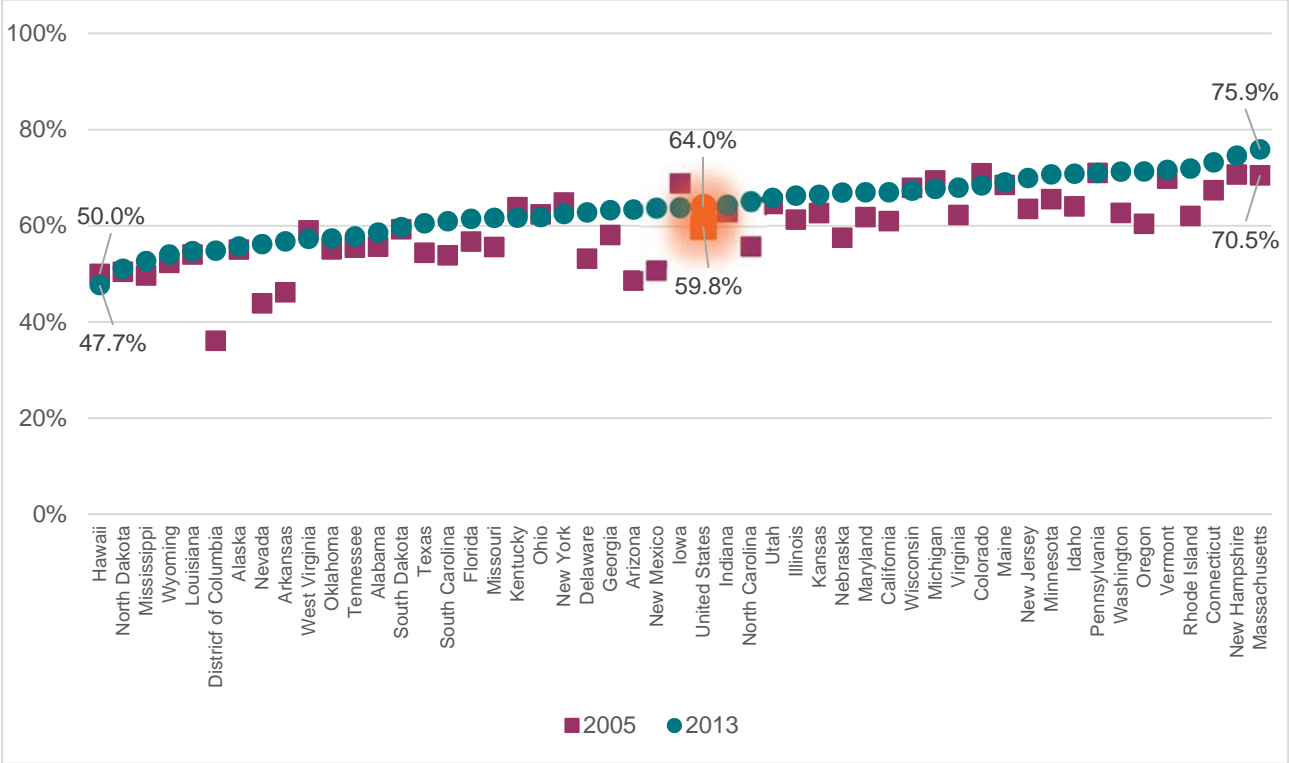
We acknowledge Barry Grau, Tom Wall and Cassandra Yarborough for excellent research assistance in helping to put together this brief.

Figure 1: Percentage with a Dental Visit in the Past Year, Medicaid-Enrolled Children



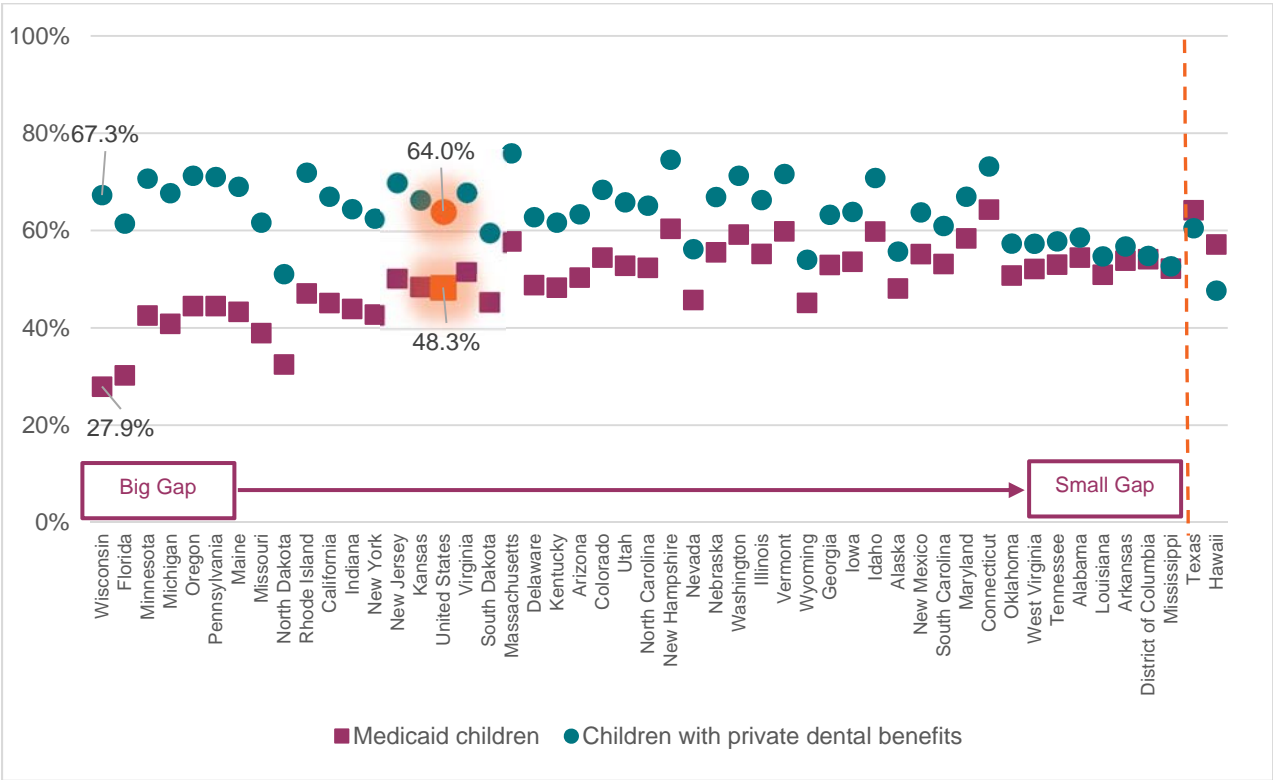
Source: HPI analysis of Medicaid data from CMS 416 reports. Notes: States are ordered from left to right according to the percentage with a dental visit in 2013. Medicaid population is based on children continuously enrolled in Medicaid for 90 days. Maine and Mississippi dental care utilization data from CMS were not available in 2005. Due to unreliable data for 2013 in Ohio, dental care utilization in 2013 is not reported.

Figure 2: Percentage with a Dental Visit in the Past Year, Children with Private Dental Benefits



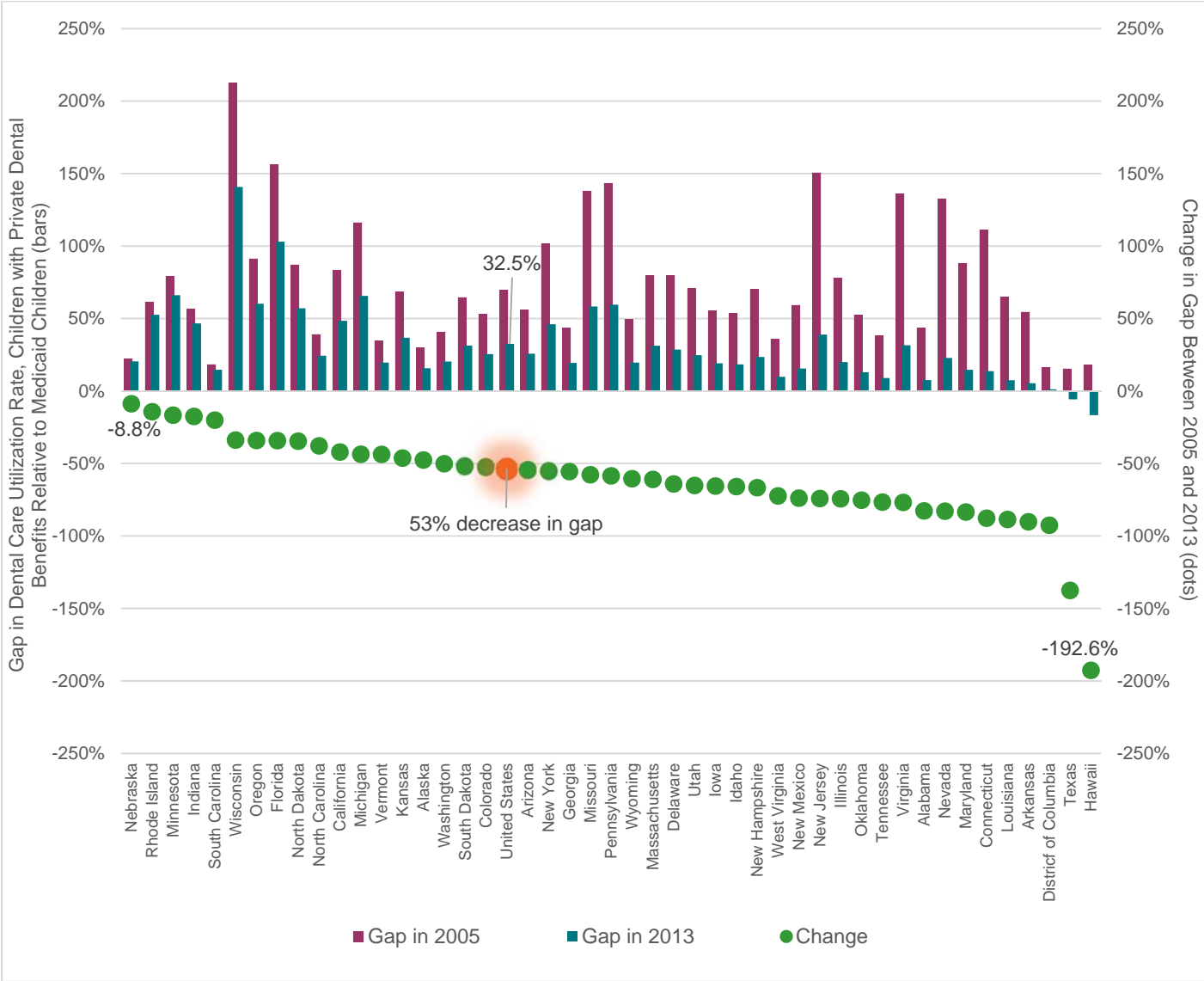
Source: HPI analysis of Truven Health Analytics MarketScan® Research Databases. Notes: Due to unreliable data from Montana, we were unable to calculate a dental care utilization rate for that state in 2013. States are ordered from left to right according to the percentage with a dental visit in 2013. Privately insured population is based on children continuously enrolled in a private dental plan for 90 days.

Figure 3: Relative Gap in Dental Care Utilization between Medicaid-Enrolled Children and Children with Private Dental Benefits, 2013



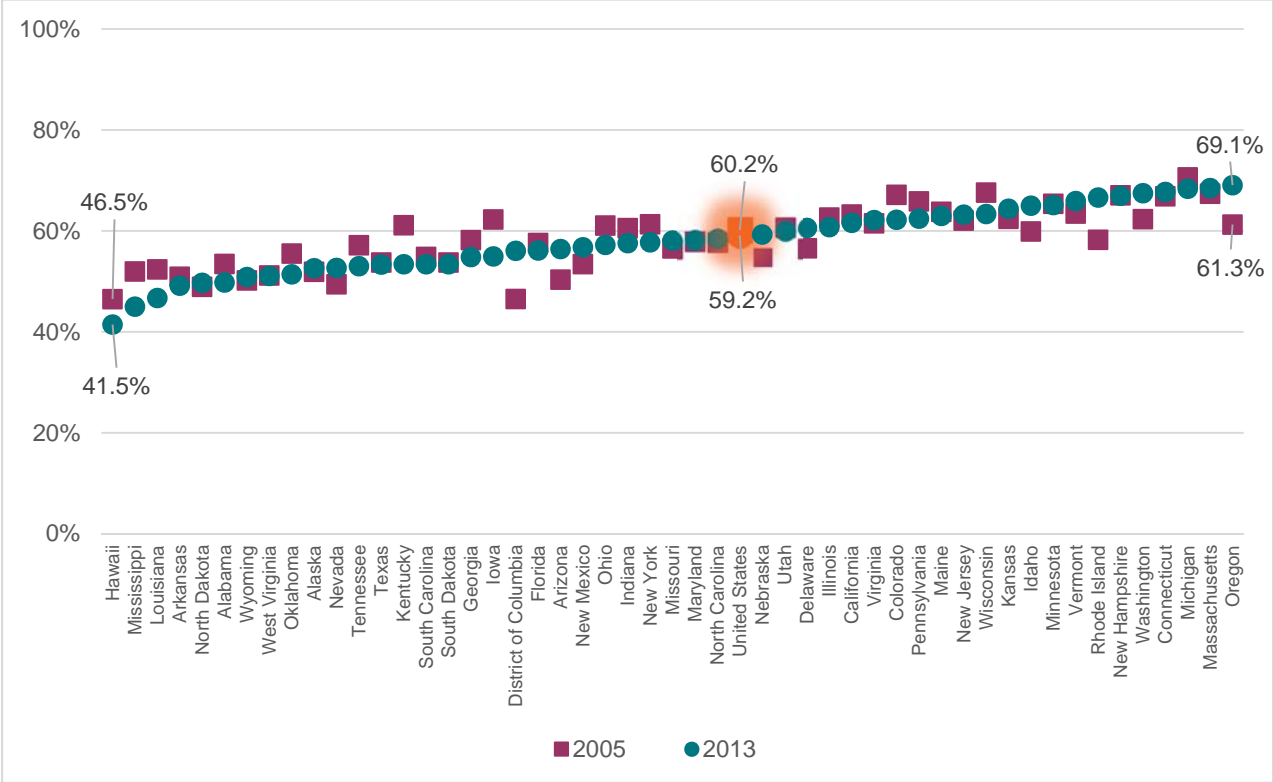
Source: HPI analysis of Truven Health Analytics MarketScan® Research Databases and Medicaid data from CMS 416 reports. **Notes:** States are ordered from left to right according to the relative gap between Medicaid-insured children and children with private dental benefits. Due to unreliable data from Montana and Ohio, we were unable to calculate the relative gap for these states in 2013. Population is based on children continuously enrolled in Medicaid or a private dental plan for 90 days.

Figure 4: Change in Relative Gap in Dental Care Utilization between Medicaid-Enrolled Children and Children with Private Dental Benefits, 2005 to 2013



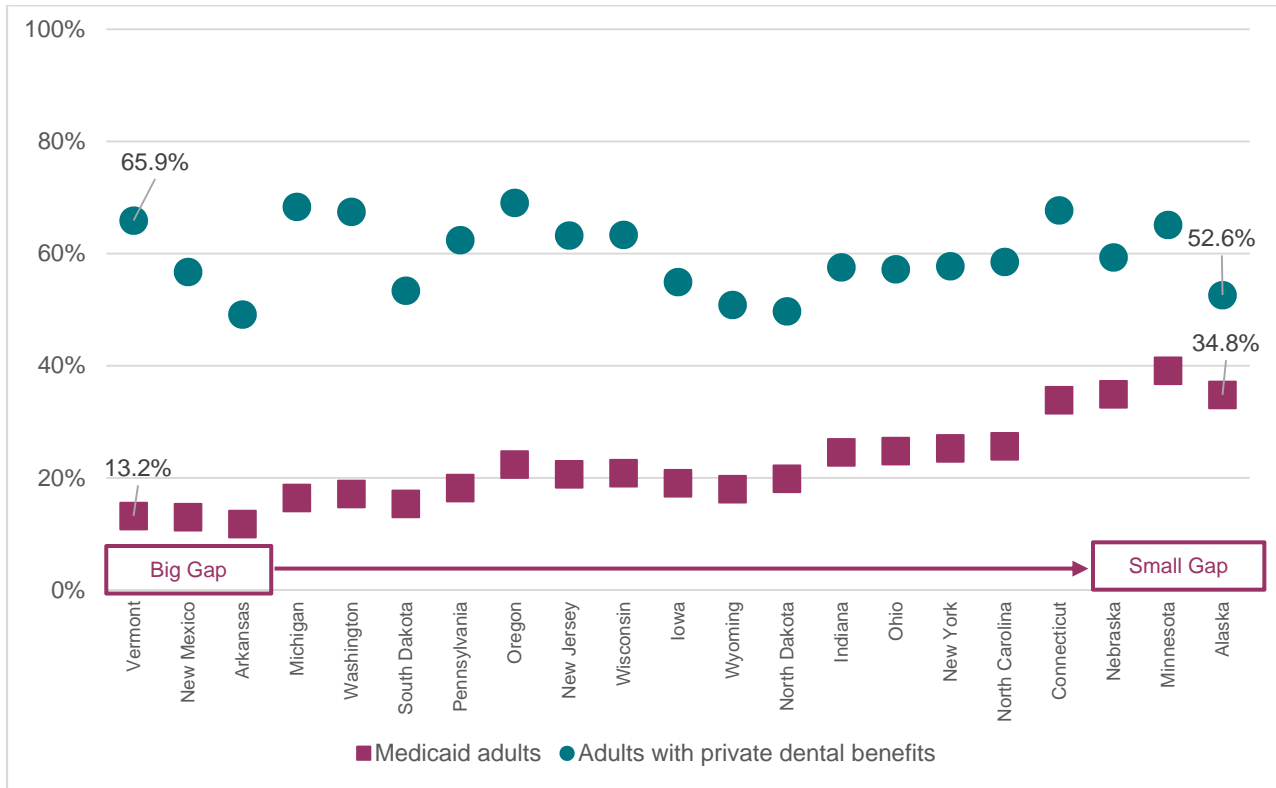
Source: HPI analysis of Truven Health Analytics MarketScan® Research Databases and Medicaid data from CMS 416 reports. **Notes:** States are ordered from left to right according to the change in the relative gap between Medicaid-insured children and children with private dental benefits. Population is based on children continuously enrolled in Medicaid or a private dental plan for 90 days. Due to incomplete data from Kentucky, Maine, Mississippi, Montana and Ohio, we are unable to plot these states.

Figure 5: Percentage with a Dental Visit in the Past Year, Adults with Private Dental Benefits



Source: HPI analysis of Truven Health Analytics MarketScan® Research Databases. Notes: Due to unreliable data from Montana, we were unable to calculate a dental care utilization rate for that state in 2013. States are ordered from left to right according to the percentage with a dental visit in 2013. Privately insured population is based on adults continuously enrolled in a private dental plan for 90 days.

Figure 6: Relative Gap in Dental Care Utilization between Medicaid-Enrolled Adults and Adults with Private Dental Benefits, 2013



Source: HPI analysis of Truven Health Analytics MarketScan® Research Databases and Medicaid data from Medicaid Statistical Information System provided by CMS. **Notes:** States are ordered from left to right according to the relative gap between Medicaid-insured adults and adults with private dental benefits. Population is based on adults continuously enrolled in Medicaid or a private dental plan for 90 days. The states plotted provide adult Medicaid dental benefits.

This Research Brief was published by the American Dental Association’s Health Policy Institute.

211 E. Chicago Avenue
 Chicago, Illinois 60611
 312.440.2928
hpi@ada.org

For more information on products and services, please visit our website, www.ada.org/hpi.

References

- ¹ 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: http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_4.ashx. Accessed August 5, 2015.
- ² Nasseh K, Vujcic M. Dental benefits expanded for children, young adults in 2012. Health Policy Institute Research Brief. American Dental Association. October 2014. Available from: http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_5.ashx. Accessed August 5, 2015.
- ³ Wall T, Nasseh K, Vujcic M. Fewer Americans forgoing dental care due to cost. Health Policy Institute Research Brief. American Dental Association. October 2014. Available from: http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_6.ashx. Accessed August 5, 2015.
- ⁴ Vujcic M, Nasseh K. A decade in dental care utilization among adults and children (2001-2010). *Health Serv Res.* 2014;49(2):460-80.
- ⁵ Centers for Medicaid and Medicare Services (CMS). Early and Periodic Screening, Diagnosis & Treatment (EPSDT). EPSDT Data. Form CMS-416. Available from: <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Benefits/Early-and-Periodic-Screening-Diagnostic-and-Treatment.html>. Accessed August 5, 2015.
- ⁶ In 2010 the CMS Form 416 instructions for line 12a were changed as follows: Enter the unduplicated number of individuals under the age of 21 with at least 90 continuous days of enrollment during the federal fiscal year from Line 1b who received at least one dental service by or under the supervision of a dentist.
- ⁷ Centers for Medicaid and Medicare Services. Medicaid Statistical Information System Granular Database. Federal Fiscal Years 2000 through 2014. Received May 29, 2015.
- ⁸ Medical Expenditure Panel Survey (MEPS). MEPS HC-155: 2012 Full Year Consolidated Data File. Agency for Healthcare Research and Quality. September 2014. Available from: http://meps.ahrq.gov/mepsweb/data_stats/download_data_files_detail.jsp?cboPufNumber=HC-155. Accessed August 10, 2015.
- ⁹ Nasseh K, Vujcic M, Yarbrough C. A ten-year, state-by-state, analysis of Medicaid fee-for-service reimbursement rates for dental care services. Health Policy Institute Research Brief. American Dental Association. October 2014. Available from: http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_1014_3.ashx. Accessed August 6, 2015.
- ¹⁰ Due to incomplete data from Kentucky, Maine, Mississippi and Montana, we are unable to plot these states.
- ¹¹ Nasseh K, Vujcic M. The impact of Medicaid reform on children's dental care utilization in Connecticut, Maryland, and Texas. *Health Serv Res.* 2015; 50(4):1236-49.
- ¹² Edelstein B. Dental Visits for Medicaid Children: Analysis & Policy Recommendations. Children's Dental Health Project. June 30, 2012. Available from: <https://www.cdhp.org/resources/173-dental-visits-for-medicaid-children-analysis-policy-recommendations>. Accessed August 5, 2015.
- ¹³ Supply of Dentists in the U.S.:2001-2013. Health Policy Institute. American Dental Association. February 2015. Available from: <http://www.ada.org/en/science-research/health-policy-institute/data-center/supply-of-dentists>. Accessed August 5, 2015.
- ¹⁴ Munson M, Vujcic M. Dentist earnings not recovering with economic growth. 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_1.ashx. Accessed August 5, 2015.
- ¹⁵ Vujcic M. A tale of two safety nets. *J Am Dent Assoc.* 2014;145(1):83-5.
- ¹⁶ Vujcic M. Where have all the dental care visits gone? *J Am Dent Assoc.* 2015;146(6):412-4.

Suggested Citation

Vujcic M, Nasseh, K. Gap in dental care utilization between Medicaid and privately insured children narrows, remains large for adults. Health Policy Institute Research Brief. American Dental Association. December 2015 (Revised). Available from:
http://www.ada.org/~media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_0915_1.ashx.