MEMORANDUM

DATE: August 29, 2017

TO: Ms. Nicole Cunningham, DMMA Planning & Policy Development Unit

FROM: Ms. Jamie Wolfe, Chairperson State Council for Persons with Disabilities

RE: 21 DE Reg. 124 [DMMA Proposed Medicaid Dental Fee Schedule (8/1/17)]

The State Council for Persons with Disabilities (SCPD) has reviewed the Department of Health and Social Services/Division of Medicaid and Medical Assistance’s (DMMAs) proposal to amend the Medicaid State Plan to reduce the reimbursement rate for child dental care. The Division recites that the current rate is “81.1% of commercial insurance charges”. At 125. The Division proposes a 14% reduction in the rate, i.e., to approximately 69.75%. The proposed regulation was published as 21 DE Reg. 124 in the August 1, 2017 issue of the Register of Regulations.

The SCPD has the following observations.

First, there is ostensibly ample justification for the proposed rate reduction. DMMA notes that the 81.1% rate is the highest in the Nation based on a 2014 Health Policy Institute Policy Brief. The Health Policy Institute published a more recent Brief in April, 2017. A copy of the 2017 Brief is also attached. It corroborates that the Delaware Medicaid reimbursement rate is an “outlier” and exceeds that of all other states. See pp. 5-6.

Second, since the Medicaid reimbursement rate is based on a percentage of local commercial/insurance rates, the local commercial/insurance rates in Delaware are material in assessing the Medicaid rate. Delaware’s commercial/private insurance child dental services rates rank 15th in the Nation. Id at p. 7. As a result, the new 69.75% rate would result in a higher reimbursement than application of the same rate in a state with a low commercial/insurance rate.
Third, as DMMA observes, the 14% rate reduction was incorporated into the State FY18 budget. At p. 125. Therefore, as a practical matter, it would be difficult to prompt reconsideration of the proposed Medicaid Plan amendment.

Fourth, it is instructive to assess the likely effect of the lower rate on access to services. Consistent with the attached access statistics for Delaware, New Jersey, Pennsylvania, and Maryland, the lower reimbursement rates in our sister states have not had any negative effect on access to dentists accepting Medicaid.

Fifth, DMMA projects a cost savings of $2.6 million in state funds and $4.1 million in federal funds in FY18. Therefore, while the State may save $2.6 million, the value of this savings is undercut by the loss of $4.1 million in federal dollars to the Delaware economy.

Sixth, the 2017 Brief (pp. 1-2) offers the following statistics:

A. Fifty-four percent (54%) of Medicaid-enrolled adults live in states that provide adult dental benefits in their Medicaid program.

B. Medicaid FFS reimbursement, on average, is 49.4 percent of fees charged by dentists for children and 37.2 percent for adults.

Thus, while Delaware is at the forefront in supporting child dental services, it is a laggard in supporting adult dental services. Since the average Medicaid reimbursement rates for adults nationwide (37.2%) is much lower than the rates for children (49.4%), it would be propitious if DMMA would assess prospects for devoting cost savings for children’s dental services to adult coverage. The attached fiscal note on 2016 legislation (S.B. No. 142) to offer adult dental coverage was approximately $7.3 million on an annualized basis. DMMA could assess the following financial options:

1) the effect of capping dental care assistance to an eligible recipient at $500 instead of the $1,000 contemplated by S.B. No. 142;

2) the effect of incorporating lower adult reimbursement rates into the fiscal note to reflect national norms; and

3) the effect of initially limiting the adult dental benefit to subpopulations (e.g. DDDS Lifespan Waiver enrollees).

The above options, alone or in combination, could facilitate adoption of an adult Medicaid benefit and potentially “draw down” millions of dollars in federal matching funds.

Thank you for your consideration and please contact SCPD if you have any questions regarding our position and observations on the proposed regulation.
cc: The Honorable Bethany Hall-Long, Lt. Governor
     Ms. Jill Rogers, DDDS
     Mr. Steve Groff, DMMA
     Mr. Brian Hartman, Esq.
     Governor's Advisory Council for Exceptional Citizens
     Developmental Disabilities Council
A Ten-Year, State-by-State, Analysis of Medicaid Fee-for-Service Reimbursement Rates for Dental Care Services

Authors: Kamyar Naseh, Ph.D.; Marko Vujicic, Ph.D.; Cassandra Yarbrough, M.P.P.

Key Messages

- In 2013, the average Medicaid fee-for-service reimbursement rate was 48.8 percent of commercial dental insurance charges for pediatric dental care services.
- In 2014, the average Medicaid fee-for-service reimbursement rate was 40.7 percent of commercial dental insurance charges for adult dental care services in states that provide at least limited adult dental benefits in their Medicaid program.
- From 2003 to 2013, for pediatric dental care services, Medicaid fee-for-service reimbursement relative to commercial dental insurance charges fell in 39 states and rose in seven states and the District of Columbia.
- The available evidence strongly suggests that increasing Medicaid reimbursement rates for dental care services, in conjunction with other reforms, increases provider participation and access to dental care for Medicaid enrollees.

Introduction

Recent years have brought significant changes in dental care use patterns for low-income Americans. In 47 out of 50 states plus the District of Columbia (DC), dental care utilization among Medicaid-enrolled children increased during the past decade.\(^1\)\(^2\) In contrast, dental care use among low-income adults has declined steadily.\(^3\) As a result, the gap in dental care utilization between low-income and high-income children has narrowed,\(^4\) while it has widened for adults.\(^5\)

Low-income children and adults are subject to different dental safety nets. Medicaid and the Children’s Health Insurance Program (CHIP) must provide dental benefits for children, but states have the option of providing dental benefits for adults in Medicaid.\(^6\) In fact, increased
enrollment in Medicaid and CHIP led to a decline in the percentage of U.S. children without any form of dental benefits. The increase in the dental care utilization rate among Medicaid-enrolled children during a time of significant enrollment expansion – one out of three U.S. children were in Medicaid or CHIP by 2011 – has been a truly remarkable achievement.

A key issue for Medicaid is having a sufficient number of providers willing to participate. Research has shown that a variety of reasons, including a high rate of cancelled appointments among Medicaid enrollees, low reimbursement rates, low compliance with recommended treatment and cumbersome administrative procedures, limit the number of dentists that accept Medicaid. For a good overview of factors contributing to the low use of dental services by low-income individuals, see a report published in 2000 by the U.S Government Accountability Office (GAO). In terms of reimbursement rates, recent research has documented a modest, but statistically significant positive relationship between Medicaid fee-for-service (FFS) reimbursement rates and dental care utilization among publicly insured children as well as dentist participation in Medicaid.

In this research brief, we analyze the most up-to-date information on Medicaid FFS reimbursement rates for dental care services. We measure Medicaid FFS reimbursement relative to typical commercial dental insurance charges. We analyze changes in pediatric Medicaid FFS reimbursement between 2003 and 2013. For pediatric dental care services, we present data for all states and DC. For adult dental care services, we focus only on states that provide dental benefits beyond emergency care to their adult Medicaid population. We discuss the policy implications of our findings, particularly in light of Medicaid enrollment expansion under the Affordable Care Act (ACA).

Data & Methods

We acquired pediatric Medicaid FFS reimbursement rate data for 2003 from previously published research. The Health Policy Institute collected 2013 reimbursement rate data from state Medicaid program webpages. Reimbursement rate data for pediatric dental care services were collected for all states and DC. Data for adult dental care services were collected, where available, from states that provided either extensive (AK, CA, CO, CT, IA, IL, MA, NC, ND, NM, NY, OH, OR, RI, WA and WI) or limited (AR, DC, IN, KY, KS, MI, MN, MT, NJ, PA, SD, VT, VA and WV) adult Medicaid dental benefits as of August 2014. Two states, Louisiana and Nebraska, offer limited adult Medicaid dental benefits, but have insufficient FFS data on their webpages and are excluded from the analysis. Medicaid programs in Kansas and Maryland do not officially cover services beyond emergency care. The majority of Medicaid beneficiaries in these states are enrolled in managed care programs which provide limited adult dental benefits.

Many state Medicaid programs contract with a "managed care" provider and do not pay dentists directly through FFS. For example, New Jersey is a state that contracts the majority of their pediatric Medicaid enrollees to dental managed care providers. Managed care reimbursement data are not available publicly in any state, to our knowledge, and were not included in our analysis. In other words, we focused solely on Medicaid FFS reimbursement rates understanding that in many states this is not how most dental care is reimbursed. We attempted to identify the states that enroll the majority of their Medicaid beneficiaries in dental managed care programs based on an email survey and interviews with Medicaid dental program directors carried out between September 2, 2014 and September 9, 2014. In instances where we did not receive a conclusive response from program
directors (AL, DE, FL, HI, IA, LA, OH, TN and VT), we reviewed state Medicaid websites and the Centers for Medicare and Medicaid Services website to try to ascertain how states managed Medicaid dental services.\textsuperscript{32,33,24,25,26,27,28,29,30} In instances where we did not receive a response and could not find information on the management of Medicaid dental services on a state’s website (KS, KY, ME, MS, OK, PA, SC, UT and WV), we referenced previous analysis of managed care in Medicaid from 2010 data.\textsuperscript{31} We could find no other source of information to classify states according to their intensity of managed care in Medicaid.

In fiscal year 2010, approximately 62 percent of full-benefit Medicaid-enrolled children were in a comprehensive managed care program.\textsuperscript{32} However, we cannot definitively state how many of these managed care enrolled children received dental benefits via managed care. Further, these data are from fiscal year 2010, and many states have made changes to their Medicaid delivery models since then.

The lack of availability of reimbursement data within managed care systems presented a significant limitation to our analysis. While state Medicaid programs post FFS schedules on their websites, Medicaid managed care providers may be subject to completely different reimbursement schedules.

We obtained commercial dental insurance reimbursement charges for each state and DC for 2003 and 2013 from the FAIR Health Dental Benchmark Module.\textsuperscript{33} The most recent data contained within the FAIR Health database cover 125 million individuals with commercial dental insurance,\textsuperscript{34} which captures approximately 80 percent\textsuperscript{35} of the total commercial dental insurance market. The FAIR Health database provides charge data for dental procedures, billed using the American Dental Association (ADA) CDT® codes. The benchmarks are based on the non-discounted reimbursement rates charged by providers before network discounts are applied. Since our Medicaid FFS data for adult dental care services were from 2014, we inflated the 2013 FAIR Health reimbursement rates to 2014 levels using the all-items Consumer Price Index in order to match data years.\textsuperscript{36}

We constructed an index that measures FFS reimbursement rates in Medicaid relative to commercial dental insurance charges. We feel this is a useful measure as it takes into account Medicaid reimbursement relative to “market” conditions. Nationwide, 97.6 percent of dentists report accepting some form of commercial dental insurance and, on average, such payments account for 53.9 percent of gross billings.\textsuperscript{37} Commercial dental insurance is a significant source of dental care financing in the United States, accounting for 48 percent of dental care expenditure in 2012.\textsuperscript{38}

The index for pediatric dental care services is based on fourteen common procedures: periodic oral exam (D0120), comprehensive oral exam (D0150), complete x-rays (D0210), bitewing x-rays with two radiographic images (D0272), panoramic x-rays (D0330), child prophylaxis (D1120), application of topical fluoride (D1203/D1208), application of dental sealants (D1351), permanent tooth amalgam (D2150), anterior tooth resin (D2331), prefabricated steel crown (D2930), therapeutic pulpotomy (D3220), root canal (D3310), and extractions (D7140). This same basket of procedures was used to construct a Medicaid reimbursement index in previous research.\textsuperscript{39}

The index for adult dental care services is based on ten common procedures: periodic oral exam (D0120), comprehensive oral exam (D0150), complete x-rays (D0210), bitewing x-rays with four radiographic images (D0274), panoramic x-rays (D0330), adult prophylaxis (D1110), permanent tooth amalgam (D2150), anterior tooth resin (D2331), root canal (D3310) and extractions (D7140).
Within our index, the reimbursement rate for each procedure was weighted by its share of total billings in the aggregated 2010-12 FAIR Health database. In other words, both the Medicaid FFS reimbursement index and the commercial dental insurance charges index were constructed using a common weighting scheme that is based on commercial dental insurance billings patterns. We divided the Medicaid FFS reimbursement index by the commercial dental insurance charges index to calculate our main outcome of interest: Medicaid reimbursement relative to commercial dental insurance charges. We did this separately for pediatric and adult dental care services.

To test the sensitivity of our analysis, we also created indices where the reimbursement rate for a procedure is weighted by its share of total number of procedures in the aggregated 2010-12 FAIR Health database. Our results did not change substantively.

We calculated the percentage change in Medicaid-to-commercial-dental-insurance fees from 2003 to 2013 for pediatric dental services.

We also calculated Medicaid-to-commercial-dental-insurance fees in 2014 for adult dental services. The list of procedures and their corresponding weights in the pediatric and adult dental fee indices are shown in Tables 1 and 2.

There are several limitations to our analysis. First, as noted, our Medicaid reimbursement rates are based on FFS schedules. In some states, these are less relevant since most care is delivered through managed care arrangements. Second, our reimbursement indices are based on a limited set of procedures. While, ideally, all procedures would be included, this is not feasible given the data availability on Medicaid webpages and our interest in comparability across states. Moreover, our sensitivity analysis shows that alternative weighting schemes do not alter our conclusions significantly. Third, our weighting scheme is based on care patterns within the commercially-insured population. There are differences in the relevant importance of various procedures between the Medicaid and commercially-insured population. Due to data constraints—mainly that we do not have access to claims-level data from Medicaid programs—we feel our approach is the best possible. Fourth, there may be some inconsistency in how dentists submit charge data in commercial claims which could lead to measurement error. FAIR Health’s dental module provides fee data based on “the non-discounted fees charged by providers before network discounts are applied.”

However, based on anecdotal information, we feel that providers often submit the fees they expect to be paid rather than their true, non-discounted fees. We have no basis to evaluate this empirically and simply raise this as a potential limitation.

An alternative data source for market fees would be HPI’s annual fee survey that collects full, undiscounted fees from a national sample of dentists. We did not use these data because they are not available at the state level.

Results

As shown in Figure 1, there is wide variation in Medicaid reimbursement rates for pediatric dental care services. In the United States in 2013, Medicaid reimbursement was, on average, 48.8 percent of commercial insurance charges for pediatric dental services. Minnesota (26.7 percent), Rhode Island (27.9 percent), California (23.0 percent), Wisconsin (31.5 percent), Michigan (32.5 percent), Illinois (32.5 percent) and Oregon (32.6 percent) have the lowest Medicaid reimbursement rates. Delaware (81.1 percent), West Virginia (69.9 percent), New Jersey (68.8 percent) and Connecticut (68.6 percent) have the highest. As noted in the Data & Methods section, it is important to note that New Jersey, for example, has a high concentration of managed care and the Medicaid FFS reimbursement rate does not capture average
payment rates to dental providers. As a result, the New Jersey calculation needs to be interpreted extremely carefully.

Figure 2 and Table 3 also show the percentage change in Medicaid-to-commercial-dental-insurance fees for pediatric dental care services from 2003 to 2013. Connecticut, Louisiana and Texas had the largest increase in Medicaid FFS reimbursement relative to commercial dental insurance charges for pediatric dental services. For example, in Connecticut, pediatric dental Medicaid FFS reimbursement increased from 38.7 percent of commercial dental insurance charges in 2003 to 66.8 percent in 2013. Conversely, Minnesota, Tennessee, Wisconsin, New York and Iowa had the largest decline in the Medicaid-to-commercial-dental-insurance fee ratio for pediatric dental services between 2003 and 2013.

Between 2003 and 2013, 39 states experienced a decline in the Medicaid-to-commercial-dental-insurance fee ratio for pediatric dental services. Only seven states and DC experienced an increase. This means that Medicaid FFS reimbursement has not kept up with "market" rates in most states.

In 2014, there is also wide variation in Medicaid FFS reimbursement for adult dental care services (see Figure 3). Illinois (13.8 percent), New Jersey (17.8 percent) and Michigan (20.3 percent) have the lowest Medicaid FFS reimbursement rates compared to commercial dental insurance charges. Arkansas (60.5 percent), North Dakota (60.2 percent) and Alaska (58.4 percent) have the highest Medicaid FFS reimbursement rates relative to commercial dental insurance charges. In the sample of states we focused on – those that have at least a limited adult dental benefit in Medicaid – Medicaid FFS reimbursement averaged 40.7 percent of commercial dental insurance charges for adult dental care services.

Indices using weights based on the total count of procedures do not produce substantively different results. This alternative analysis is available on request.
Table 1: List of Procedures and Corresponding Weights for Pediatric Dental Services

<table>
<thead>
<tr>
<th>CDT Procedure Code</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0120: Periodic Oral Exam</td>
<td>32.1%</td>
</tr>
<tr>
<td>D1120: Child Prophylaxis</td>
<td>10.5%</td>
</tr>
<tr>
<td>D0150: Comprehensive Oral Exam</td>
<td>8.9%</td>
</tr>
<tr>
<td>D0210: Complete X-Rays</td>
<td>7.4%</td>
</tr>
<tr>
<td>D7140: Extraction</td>
<td>7.0%</td>
</tr>
<tr>
<td>D0330: Panoramic X-rays</td>
<td>6.5%</td>
</tr>
<tr>
<td>D2150: Permanent Tooth Amalgam</td>
<td>5.5%</td>
</tr>
<tr>
<td>D1203/D1208: Application of Topical Fluoride</td>
<td>4.5%</td>
</tr>
<tr>
<td>D2331: Anterior Tooth Resin</td>
<td>4.5%</td>
</tr>
<tr>
<td>D0272: Bitewing X-rays with 2 Radiographic</td>
<td>4.4%</td>
</tr>
<tr>
<td>D3310: Root Canal</td>
<td>3.8%</td>
</tr>
<tr>
<td>D1351: Application of Dental Sealants</td>
<td>3.0%</td>
</tr>
<tr>
<td>D2930: Prefabricated Steel Crown</td>
<td>1.1%</td>
</tr>
<tr>
<td>D3220: Therapeutic Pulpotomy</td>
<td>0.6%</td>
</tr>
</tbody>
</table>


Table 2: List of Procedures and Corresponding Weights for Adult Dental Services

<table>
<thead>
<tr>
<th>CDT Procedure Code</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1110: Adult Prophylaxis</td>
<td>37.8%</td>
</tr>
<tr>
<td>D0120: Periodic Oral Exam</td>
<td>21.8%</td>
</tr>
<tr>
<td>D0274: Bitewing X-rays with 4 Radiographic</td>
<td>10.7%</td>
</tr>
<tr>
<td>D0150: Comprehensive Oral Exam</td>
<td>6.0%</td>
</tr>
<tr>
<td>D0210: Complete X-Rays</td>
<td>5.0%</td>
</tr>
<tr>
<td>D7140: Extraction</td>
<td>4.8%</td>
</tr>
<tr>
<td>D0330: Panoramic X-rays</td>
<td>4.4%</td>
</tr>
<tr>
<td>D2150: Permanent Tooth Amalgam</td>
<td>3.7%</td>
</tr>
<tr>
<td>D2331: Anterior Tooth Resin</td>
<td>3.0%</td>
</tr>
<tr>
<td>D3310: Root Canal</td>
<td>2.6%</td>
</tr>
</tbody>
</table>

Figure 1: Pediatric Dental Medicaid Fee-for-Service Reimbursement as a Percentage of Commercial Dental Insurance Charges in 2013

Source: Medicaid FFS reimbursement data collected from state Medicaid agencies. Commercial dental insurance charges data collected from FAIR Health. Notes: The following states contract the majority of their Medicaid enrollees to managed care programs for dental services: DC, FL, GA, ID, KY, LA, MI, MN, NJ, NM, NV, NY, OH, OR, RI, TN, TX, VT and WV. The relative fee rates shown in this figure for these states, therefore, may not be representative of typical dentist reimbursement in Medicaid.
Figure 2: Percentage Change in the Ratio of Medicaid Fee-for-Service Reimbursement to Commercial Dental Insurance Charges, Pediatric Dental Care Services, 2003 to 2013

Source: Medicaid FFS reimbursement data collected from state Medicaid agencies. Commercial dental insurance charges data collected from FAIR Health. Notes: 2003 Medicaid FFS data for pediatric services were not available for Maine, North Dakota, South Dakota, Vermont and Wyoming. For Maine, the percentage change in the relative Medicaid FFS to commercial insurance charges rate for pediatric dental services was calculated from 2004 through 2013. The following states contract the majority of their Medicaid enrollees to managed care programs for dental services: DC, FL, GA, ID, KY, LA, MI, MN, NJ, NM, NV, NY, OH, OR, RI, TN, TX, VT and WV. For these states, the percentage change from 2003 through 2013 in relative reimbursement rates shown in this figure may not be representative of changes in typical dentist reimbursement in Medicaid.
<table>
<thead>
<tr>
<th>State</th>
<th>2003</th>
<th>2013</th>
<th>% Change</th>
</tr>
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<tbody>
<tr>
<td>Alabama</td>
<td>78.7%</td>
<td>53.6%</td>
<td>-31.9%</td>
</tr>
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<td>Alaska</td>
<td>59.2%</td>
<td>61.5%</td>
<td>3.6%</td>
</tr>
<tr>
<td>Arizona</td>
<td>72.5%</td>
<td>54.7%</td>
<td>-25.0%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>61.8%</td>
<td>67.2%</td>
<td>6.4%</td>
</tr>
<tr>
<td>California</td>
<td>40.4%</td>
<td>29.6%</td>
<td>-28.2%</td>
</tr>
<tr>
<td>Colorado</td>
<td>50.9%</td>
<td>45.1%</td>
<td>-11.4%</td>
</tr>
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<td>Connecticut</td>
<td>38.7%</td>
<td>66.8%</td>
<td>72.4%</td>
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<td>Delaware</td>
<td>85.0%</td>
<td>81.1%</td>
<td>-4.6%</td>
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<td>District of Columbia**</td>
<td>35.4%</td>
<td>58.4%</td>
<td>74.6%</td>
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<td>Florida**</td>
<td>36.7%</td>
<td>36.5%</td>
<td>-0.3%</td>
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<tr>
<td>Georgia**</td>
<td>76.6%</td>
<td>54.0%</td>
<td>-33.7%</td>
</tr>
<tr>
<td>Hawaii</td>
<td>57.6%</td>
<td>47.1%</td>
<td>-10.5%</td>
</tr>
<tr>
<td>Idaho**</td>
<td>58.6%</td>
<td>44.8%</td>
<td>-23.8%</td>
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<td>Illinois</td>
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<td>Iowa</td>
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<td>47.2%</td>
<td>-30.6%</td>
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<td>Kentucky**</td>
<td>46.8%</td>
<td>44.0%</td>
<td>-5.1%</td>
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<td>Louisiana**</td>
<td>51.3%</td>
<td>61.0%</td>
<td>19.8%</td>
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<td>Maine*</td>
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<td>43.8%</td>
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<td>45.7%</td>
<td>47.8%</td>
<td>4.4%</td>
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<td>-5.9%</td>
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<td>46.6%</td>
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<td>-30.4%</td>
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<td>26.7%</td>
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<td>47.6%</td>
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<td>Nevada**</td>
<td>58.7%</td>
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<td>NA</td>
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<tr>
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<td>49.3%</td>
<td>-26.2%</td>
</tr>
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<td>56.1%</td>
<td>37.1%</td>
<td>-37.3%</td>
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<td>North Carolina</td>
<td>63.1%</td>
<td>48.2%</td>
<td>-23.6%</td>
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<tr>
<td>North Dakota</td>
<td>NA</td>
<td>62.7%</td>
<td>NA</td>
</tr>
<tr>
<td>Ohio**</td>
<td>59.2%</td>
<td>40.6%</td>
<td>-31.6%</td>
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<td>Oklahoma</td>
<td>70.1%</td>
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<td>Oregon**</td>
<td>44.9%</td>
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<td>Pennsylvania</td>
<td>53.8%</td>
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<td>-20.0%</td>
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<td>Rhode Island**</td>
<td>38.6%</td>
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<td>South Carolina</td>
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<td>88.0%</td>
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</tr>
<tr>
<td>Vermont**</td>
<td>NA</td>
<td>49.7%</td>
<td>NA</td>
</tr>
<tr>
<td>Virginia</td>
<td>54.6%</td>
<td>47.4%</td>
<td>-13.2%</td>
</tr>
<tr>
<td>Washington</td>
<td>48.3%</td>
<td>40.9%</td>
<td>-17.0%</td>
</tr>
<tr>
<td>West Virginia**</td>
<td>74.5%</td>
<td>69.9%</td>
<td>-5.6%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>50.8%</td>
<td>31.5%</td>
<td>-38.0%</td>
</tr>
<tr>
<td>Wyoming</td>
<td>NA</td>
<td>61.2%</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: Medicaid FFS reimbursement data collected from state Medicaid agencies. Commercial dental insurance charges data collected from FAIR Health. Notes: 2003 Medicaid FFS data for pediatric dental care services were not available for ME, ND, SD, VT and WY. *For Maine, the percentage change in the ratio of Medicaid FFS to commercial dental insurance charges for pediatric dental care services was calculated from 2004 through 2013. **These states enroll the majority of their Medicaid beneficiaries in managed care programs for dental services; for these states, the data shown in this table may not be representative of typical dentist reimbursement in Medicaid.
Discussion

In most states included in our analysis, Medicaid FFS reimbursement rates have decreased in recent years when measured relative to "market" rates. For pediatric dental care services, 39 states experienced a decline in Medicaid-to-commercial-dental-insurance fees compared to seven states and DC that experienced an increase.

Low Medicaid FFS reimbursement is one of many important factors influencing the success of Medicaid programs. Research has shown that Medicaid FFS reimbursement increases, in conjunction with other reforms, have a significant positive effect on provider participation and access to dental care. For example, Connecticut, Maryland and Texas significantly reformed their Medicaid programs in recent years and this led to increased dental care use for Medicaid-eligible children.

The Medicaid program in Connecticut increased dental reimbursement rates to the 70th percentile of commercial dental insurance rates in mid-2008 and implemented a case management program to reduce appointment cancellations. This led to a significant increase in provider participation, access to dental care, and dental care use among Medicaid-enrolled children.

Maryland's Medicaid program increased dental care reimbursement, carved Medicaid dental services out of managed care, increased the Medicaid dental provider network, improved customer services for providers and patients, streamlined credentialing, and created a missed appointment tracker. Over the past decade Maryland has seen one of the largest increases in dental care use among Medicaid-enrolled children of any state.
The Texas Medicaid program increased dental reimbursement by more than 50 percent in September 2007,\textsuperscript{50} implemented loan forgiveness programs for dentists who agreed to practice in underserved areas and allocated more funds to dental clinics in underserved communities.\textsuperscript{51} By 2010, dental care use among Medicaid-enrolled children in Texas had increased so much that it actually exceeded the rate among children with commercial dental insurance.\textsuperscript{52}

The experience of Maryland, Texas and Connecticut illustrate the impact of "enabling conditions" – reimbursement closer to market rates, patient and provider outreach, streamlined administrative procedures, patient navigators, enhanced incentives in underserved areas – on provider participation and, ultimately, access to dental care.

In addition to state-specific evidence of the impact of Medicaid reforms, analysis at the national level also confirms the important role enhanced provider reimbursement plays in increasing provider participation and dental care use.\textsuperscript{53,54} Unfortunately, far less research is available to quantify the impact of other types of program innovations such as the introduction of patient navigators, community dental health coordinators, enhanced program integrity measures, and streamlined administrative procedures. This is an important area for future research.

Looking forward, over eight million adults\textsuperscript{55} and more than three million children\textsuperscript{56} could gain dental benefits through Medicaid expansion under the ACA, significantly increasing demand for dental care among the Medicaid population. At the same time, there is strong evidence of significant unused capacity within the dental care delivery system,\textsuperscript{57} which could potentially be leveraged to deliver care to this growing Medicaid population. In fact, new research demonstrates that significant increases in dental care delivery to low-income adults can be achieved with the existing dental workforce.\textsuperscript{58} However, for the unused capacity in the dental care delivery system to be harnessed effectively, certain "enabling conditions" are needed, one of which, is reasonable financial incentives to providers.

It is important to highlight that low Medicaid reimbursement has been recognized as a critical issue not just in dentistry but in primary care more broadly. In fact, one key provision of the ACA mandated increases in Medicaid reimbursement rates to primary care physicians. Specifically, states were mandated to increase Medicaid reimbursement rates for key primary care services to Medicare levels, resulting in a 73 percent average increase in Medicaid reimbursement rates in 2013.\textsuperscript{59} Dental care services were exempt from this provision of the Affordable Care Act.

The evidence strongly suggests that moving Medicaid FFS reimbursement rates for dental care services closer to commercial dental insurance levels, in conjunction with other reforms, increases provider participation and access to dental care for Medicaid enrollees. To reverse the growing gap in dental care utilization between low-income and high-income adults\textsuperscript{60} policy makers can look to the success stories and ‘promising practices’ of states such as Maryland, Texas, and Connecticut in considering reforms to their Medicaid program.

**Acknowledgments**

We would like to thank Thomas Buchmueller, Ph.D., from the University of Michigan for providing HPI historical Medicaid FFS dental reimbursement data and Jonathan Gruber, Ph.D., from the Massachusetts Institute of Technology for providing insightful comments on an earlier draft. We would also like to thank Paul O’Connor from the American Dental Association for his tireless assistance and support in collecting Medicaid reimbursement data.
Disclaimer

Research for this article is based upon healthcare charge data compiled and maintained by FAIR Health, Inc. HPI is solely responsible for the research and conclusions reflected in this article. FAIR Health, Inc. is not responsible for the conduct of the research or for any of the opinions expressed in this article.
References


28 State of Ohio. Medicaid Managed Care Benefit Package. Available at: http://medicaid.ohio.gov/Portals/0/Providers/ProviderTypes/Managed%20Care/ManagedCareBenefitPackage.pdf, Accessed September 18, 2014.


Buchmueller et al. 2013 also included porcelain crown (C2751) in their Medicaid reimbursement index. However, many states do not cover this procedure for children in their Medicaid programs. Upon further consultation with dental experts at the ADA, we decided to exclude this procedure code from our Medicaid and commercial insurance reimbursement indices. For more information, see Buchmueller TC, Orzol S, Shore-Shapard LD. The effect of Medicaid payment rates on access to dental care among children. NBER Working Paper No. 19218, July 2013. Available at: http://www.nber.org/papers/w19218.pdf/new_window=1. Accessed September 3, 2014.

A reimbursement index is calculated using the following formula:

\[
\text{Price Index} = \frac{\sum_{i=1}^{n} \text{weight}_i \times \text{Fee}_i}{\sum_{i=1}^{n} \text{weight}_i}
\]

where \(n\) is the number of dental procedures in the basket of services that make up the reimbursement index. \(\text{Fee}_i\) is the measured dollar reimbursement rate for procedure \(i\). Separate commercial and Medicaid reimbursement indices are calculated in this brief.


For comprehensive data on full, undiscounted rates, by procedure, ADA members may visit the ADA Center for Professional Success.


Suggested Citation
Medicaid Fee-For-Service Reimbursement Rates for Child and Adult Dental Care Services for all States, 2016

Authors: Niodita Gupta, M.D., M.P.H., Ph.D.; Cassandra Yarbrough, M.P.P.; Marko Vujicic, Ph.D.; Andrew Blatz, M.S.; Brittany Harrison, M.A.

Key Messages
- Wisconsin, Washington and California had the lowest Medicaid reimbursement rates for both adult and child dental care services among states that provide dental services via fee-for-service.
- There is considerable variation across states in Medicaid fee-for-service reimbursement rates.

Introduction
Low-income children and adults are subject to different dental safety nets. States are required to provide dental benefits to children, who are covered by Medicaid and the Children’s Health Insurance Program (CHIP), but providing adult dental benefits is optional. Increased enrollment in Medicaid and CHIP led to a historic low of 11 percent of children lacking dental benefits in 2014, the most recent year data are available. There has also been a steady increase in dental care utilization among children enrolled in Medicaid and CHIP over the past fifteen years. Low-income adults have not experienced similar gains. In 2014, the latest year for which we have data since Medicaid expansion under the Affordable Care Act, 54 percent of Medicaid-enrolled adults lived in states that provide adult dental benefits in their Medicaid programs. However, 35.2 percent of adults in the U.S. do not have any form of dental coverage.

A key issue for Medicaid is having a sufficient number of providers willing to participate. Research shows that a variety of factors limit the number of dentists that accept Medicaid, including high rates of cancelled appointments among Medicaid enrollees, low
reimbursement rates, low compliance with recommended treatment, and cumbersome administrative procedures. In terms of reimbursement rates, numerous studies illustrate a statistically significant positive relationship between Medicaid reimbursement rates and dental care utilization among publicly insured children as well as dentist participation in Medicaid.

In this research brief, we analyze Medicaid reimbursement rates for dental care services in all states and the District of Columbia for 2016.

Results

Table 1 describes Medicaid fee-for-service (FFS) reimbursement relative to fees charged by dentists and private dental insurance reimbursement. Medicaid FFS reimbursement, on average, is 49.4 percent of fees charged by dentists for children and 37.2 percent for adults. Medicaid FFS reimbursement, on average, is 61.8 percent of private dental insurance reimbursement for children and 46.1 percent for adults. Private dental insurance reimbursement is, on average, 80.5 percent of fees charged by dentists for children and 76.6 percent for adults.

Figure 1 illustrates Medicaid FFS reimbursement as a percentage of fees charged by dentists for child dental services. Delaware (82.3 percent), Alaska (65.6 percent), Arkansas (63.0 percent), North Dakota (62.4 percent), and South Dakota (61.1 percent) have the highest Medicaid FFS reimbursement rates relative to fees charged by dentists while California (30.8 percent), Wisconsin (32.1 percent), Washington (32.5 percent), Iowa (40.8 percent), and Hawaii (41.6 percent) have the lowest.

Figure 2 illustrates Medicaid FFS reimbursement as a percentage of private dental insurance reimbursement for child dental services. Delaware (98.4 percent), Maryland (79.3 percent), Utah (75.3 percent), Arkansas (75.2 percent), and Massachusetts (74.1 percent) have the highest Medicaid FFS reimbursement rates relative to private dental insurance reimbursement rates while Wisconsin (36.4 percent), California (33.7 percent), Washington (40.4 percent), Maine (49.8 percent), and Iowa (49.8 percent) have the lowest.

Figure 3 illustrates private dental insurance reimbursement as a percentage of fees charged by dentists for child dental services. Alaska (93.0 percent), Wyoming (92.7 percent), South Dakota (92.4 percent), Oregon (92.4 percent), and North Dakota (91.8 percent) have the highest rates relative to fees charged by dentists while New York (55.5 percent), Maryland (68.8 percent), Pennsylvania (70.0 percent), Utah (71.5 percent), and Kentucky (72.7 percent) have the lowest.

Figure 4 illustrates Medicaid FFS reimbursement as a percentage of fees charged by dentists for adult dental services in states with extensive adult dental benefits within their Medicaid programs. Alaska (69.4 percent), North Dakota (59.0 percent), Montana (56.8 percent), North Carolina (43.7 percent), and Iowa (40.4 percent) have the highest Medicaid FFS reimbursement rates relative to fees charged by dentists while Rhode Island (25.5 percent), Washington (25.8 percent), Wisconsin (27.1 percent), Connecticut (27.3 percent), and California (34.3 percent) have the lowest.

Figure 5 illustrates Medicaid FFS reimbursement as a percentage of private dental insurance reimbursement for adult dental services in states with extensive adult dental benefits within their Medicaid programs. North Dakota (66.5 percent), Alaska (63.2 percent), Montana (62.0 percent), North Carolina (52.9 percent), and Massachusetts (49.4 percent) have the highest Medicaid FFS reimbursement rates relative to private dental insurance reimbursement rates while Wisconsin
(31.4 percent), Washington (32.4 percent), Rhode Island (33.7 percent), Connecticut (34.2 percent), and California (43.8 percent) have the lowest.

Figure 6 replicates Figure 3, but for adult dental services. Wyoming (94.3 percent), Alaska (94.0 percent), Montana (91.7 percent), South Dakota (91.4 percent), and North Dakota (88.7 percent) have the highest private dental insurance reimbursement rates relative to fees charged by dentists while New York (51.4 percent), Maryland (66.0 percent), Pennsylvania (67.2 percent), District of Columbia (67.7 percent), and Utah (70.1 percent) have the lowest.

**Discussion**

In our view, we have the most up-to-date, comprehensive, and scientifically sound analysis of Medicaid FFS reimbursement for dental care services in the United States. As noted in our methods section, our analysis has several important shortcomings, which all stem from data limitations. Most notably, for states with managed care programs for Medicaid dental care services, there is no publicly available source of data for reimbursement rates. The managed care "data void" continues to be a limiting factor for researchers, and we continue to urge state policymakers to push for data transparency.

While our analysis in this research brief is descriptive, there are some important conclusions that can be drawn. First, the lowest Medicaid FFS reimbursement for both adult and child dental care services tend to be found in the same states: Wisconsin, Washington and California. Second, there is considerable variation across states in Medicaid FFS reimbursement rates. Third, there is considerable variation across states in the private dental insurance "discount" rate.

Medicaid reimbursement rates, in part, determine the success of Medicaid programs. Research has shown that adjusting Medicaid payment rates closer to "market" levels in conjunction with other reforms has a significantly positive effect on access to dental care. For example, the Medicaid program in Connecticut increased dental reimbursement rates to the 70th percentile of private dental insurance rates in mid-2008 and implemented a case management program to reduce appointment cancellations. This led to a considerable increase in provider participation, access to dental care, and dental care use among Medicaid-enrolled children. Maryland’s Medicaid program increased dental care reimbursement, carved Medicaid dental services out of managed care, increased the Medicaid dental provider network, improved customer services for providers and patients, streamlined credentialing, and created a missed appointment tracker over the past decade. During this time, Maryland has seen one of the largest increases in dental care use among Medicaid-enrolled children of any state. The Texas Medicaid program increased dental reimbursement by more than 50 percent in September 2007, implemented loan forgiveness programs for dentists who agreed to practice in underserved areas, and allocated more funds to dental clinics in underserved communities. By 2010, dental care use among Medicaid-enrolled children in Texas had increased so much that it actually exceeded the rate among children with commercial dental insurance. The experiences of Connecticut, Maryland and Texas illustrate the impact of "enabling conditions" — reimbursement closer to market rates, patient and provider outreach, streamlined administrative procedures, patient navigators, enhanced incentives in underserved areas — on provider participation and, ultimately, access to dental care.

The Health Policy Institute is pursuing additional research based on the data summarized in this research brief. We aim to answer questions about the impact of Medicaid FFS reimbursement rates on
dentist participation and dental care use among Medicaid enrollees. We will also compare Medicaid reimbursement rates provided to dentists to those provided to physicians.

Table 1: Summary of Reimbursement Rates, 2016

<table>
<thead>
<tr>
<th></th>
<th>Medicaid fee-for-service reimbursement relative to fees charged by dentists</th>
<th>Medicaid fee-for-service reimbursement relative to private dental insurance reimbursement</th>
<th>Private dental insurance reimbursement relative to fees charged by dentists</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child dental services</strong></td>
<td>49.4%</td>
<td>61.8%</td>
<td>80.5%</td>
</tr>
<tr>
<td><strong>Adult dental services</strong></td>
<td>37.2%</td>
<td>46.1%</td>
<td>78.6%</td>
</tr>
</tbody>
</table>

Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies, FAIR Health, and Truven Health MarketScan® Research Database. Note: For child dental services, this table provides the average across 50 states and Washington, D.C. For adult dental services, this table provides the average across 16 states with an extensive Medicaid adult dental benefit for the Medicaid FFS reimbursement relative to fees charged by dentists and Medicaid FFS reimbursement relative to private dental insurance reimbursement. For adult dental services, this tables provides the average across 50 states and Washington, D.C. for the private dental insurance reimbursement relative to fees charged by dentists.
Figure 1: Medicaid Fee-For-Service Reimbursement as a Percentage of Fees Charged by Dentists, Child Dental Services, 2016

<table>
<thead>
<tr>
<th>State</th>
<th>FFS Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>DE</td>
<td>65.6%</td>
</tr>
<tr>
<td>AK</td>
<td>63.0%</td>
</tr>
<tr>
<td>AR</td>
<td>61.1%</td>
</tr>
<tr>
<td>ND</td>
<td>60.7%</td>
</tr>
<tr>
<td>SD</td>
<td>59.7%</td>
</tr>
<tr>
<td>CT</td>
<td>59.4%</td>
</tr>
<tr>
<td>WY</td>
<td>59.4%</td>
</tr>
<tr>
<td>MA</td>
<td>58.4%</td>
</tr>
<tr>
<td>LA</td>
<td>58.2%</td>
</tr>
<tr>
<td>MT</td>
<td>57.3%</td>
</tr>
<tr>
<td>IN*</td>
<td>56.5%</td>
</tr>
<tr>
<td>MD</td>
<td>54.8%</td>
</tr>
<tr>
<td>UT</td>
<td>53.8%</td>
</tr>
<tr>
<td>AL</td>
<td>51.7%</td>
</tr>
<tr>
<td>NH</td>
<td>51.0%</td>
</tr>
<tr>
<td>VT</td>
<td>49.9%</td>
</tr>
<tr>
<td>ID</td>
<td>49.4%</td>
</tr>
<tr>
<td>NE</td>
<td>48.6%</td>
</tr>
<tr>
<td>OK</td>
<td>45.3%</td>
</tr>
<tr>
<td>SC</td>
<td>45.8%</td>
</tr>
<tr>
<td>ME</td>
<td>45.3%</td>
</tr>
<tr>
<td>NC</td>
<td>43.6%</td>
</tr>
<tr>
<td>HI</td>
<td>41.6%</td>
</tr>
<tr>
<td>IA</td>
<td>40.6%</td>
</tr>
<tr>
<td>WA</td>
<td>38.0%</td>
</tr>
<tr>
<td>WV*</td>
<td>32.1%</td>
</tr>
<tr>
<td>CA</td>
<td>30.6%</td>
</tr>
<tr>
<td>KY</td>
<td>29.6%</td>
</tr>
<tr>
<td>TN</td>
<td>28.9%</td>
</tr>
<tr>
<td>TX</td>
<td>28.7%</td>
</tr>
<tr>
<td>AZ</td>
<td>28.7%</td>
</tr>
<tr>
<td>KS</td>
<td>28.7%</td>
</tr>
<tr>
<td>NJ</td>
<td>28.7%</td>
</tr>
<tr>
<td>GA</td>
<td>28.7%</td>
</tr>
<tr>
<td>NM</td>
<td>27.0%</td>
</tr>
<tr>
<td>NY</td>
<td>26.0%</td>
</tr>
<tr>
<td>CO</td>
<td>24.2%</td>
</tr>
<tr>
<td>IL</td>
<td>24.1%</td>
</tr>
<tr>
<td>MO</td>
<td>24.1%</td>
</tr>
<tr>
<td>OH</td>
<td>35.8%</td>
</tr>
<tr>
<td>FL</td>
<td>36.8%</td>
</tr>
<tr>
<td>OR</td>
<td>35.6%</td>
</tr>
<tr>
<td>RI</td>
<td>34.5%</td>
</tr>
<tr>
<td>MS</td>
<td>31.3%</td>
</tr>
<tr>
<td>MN</td>
<td>31.1%</td>
</tr>
<tr>
<td>MI</td>
<td>30.7%</td>
</tr>
</tbody>
</table>

Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies and FAIR Health. FFS versus managed care designation primarily based on analysis by the Kaiser Commission on Medicaid and the Uninsured. Note: Some states enroll only certain segments of Medicaid enrollees in managed care programs, or provide certain services through managed care programs. These states are denoted by *. 

[Graph showing state percentages with FFS and managed care programs]
Figure 2: Medicaid Fee-For-Service Reimbursement as a Percentage of Private Dental Insurance Reimbursement, Child Dental Services, 2016

Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies and Truven Health MarketScan® Research Database. FFS versus managed care designation primarily based on analysis by the Kaiser Commission on Medicaid and the Uninsured. Note: Some states enroll only certain segments of Medicaid enrollees in managed care programs, or provide only certain services through managed care programs. These states are denoted by *.
Figure 3: Private Dental Insurance Reimbursement as a Percentage of Fees Charged by Dentists, Child Dental Services, 2016

Source: HPI analysis of Truven Health MarketScan® Research Database and FAIR Health.
Figure 4: Medicaid Fee-For-Service Reimbursement as a Percentage of Fees Charged by Dentists, Adult Dental Services, 2016

Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies and FAIR Health. FFS versus managed care designation primarily based on analyses by the Kaiser Commission on Medicaid and the Uninsured. Note: Some states enroll only certain segments of Medicaid enrollees in managed care programs, or provide only certain services through managed care programs. These states are denoted by *.

Figure 5: Medicaid Fee-For-Service Reimbursement as a Percentage of Private Dental Insurance Reimbursement, Adult Dental Services, 2016

Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies and Truven Health MarketScan® Research Database. FFS versus managed care designation primarily based on analyses by the Kaiser Commission on Medicaid and the Uninsured. Note: Some states enroll only certain segments of Medicaid enrollees in managed care programs, or provide only certain services through managed care programs. These states are denoted by *.
Figure 6: Private Dental Insurance Reimbursement as a Percentage of Fees Charged by Dentists, Adult Dental Services, 2016

Source: HPI analysis of Truven Health MarketScan® Research Database and FAIR Health.
Table 2: List of Procedures and Corresponding Weights for Child Dental Services

<table>
<thead>
<tr>
<th>CDT Procedure Code</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>D0120 - Periodic oral evaluation - established patient</td>
<td>25.614%</td>
</tr>
<tr>
<td>D1120 - Prophylaxis - child</td>
<td>25.125%</td>
</tr>
<tr>
<td>D1110 - Prophylaxis - adult</td>
<td>14.113%</td>
</tr>
<tr>
<td>D1208 - Topical application of fluoride – excluding varnish</td>
<td>9.010%</td>
</tr>
<tr>
<td>D1351 - Sealant - per tooth</td>
<td>7.280%</td>
</tr>
<tr>
<td>D0272 - Bitewings - two radiographic images</td>
<td>6.340%</td>
</tr>
<tr>
<td>D0274 - Bitewings - four radiographic images</td>
<td>5.501%</td>
</tr>
<tr>
<td>D1206 - Topical application of fluoride varnish</td>
<td>3.234%</td>
</tr>
<tr>
<td>D0220 - Intraoral - periapical first radiographic image</td>
<td>2.216%</td>
</tr>
<tr>
<td>D0230 - Intraoral - periapical each additional radiographic image</td>
<td>1.505%</td>
</tr>
</tbody>
</table>

Source: HPI analysis of Truven Health MarketScan® Research Database.

Table 3: List of Procedures and Corresponding Weights for Adult Dental Services

<table>
<thead>
<tr>
<th>CDT Procedure Code</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1110 - Prophylaxis - adult</td>
<td>36.856%</td>
</tr>
<tr>
<td>D0120 - Periodic oral evaluation – established patient</td>
<td>20.065%</td>
</tr>
<tr>
<td>D0274 - Bitewings – four radiographic images</td>
<td>9.751%</td>
</tr>
<tr>
<td>D2392 - Resin-based composite – two surfaces, posterior</td>
<td>8.466%</td>
</tr>
<tr>
<td>D4910 - Periodontal maintenance</td>
<td>6.347%</td>
</tr>
<tr>
<td>D2391 - Resin-based composite – one surface, posterior</td>
<td>6.106%</td>
</tr>
<tr>
<td>D0140 - Limited oral evaluation – problem focused</td>
<td>3.777%</td>
</tr>
<tr>
<td>D0150 - Comprehensive oral evaluation – new or established patient</td>
<td>3.576%</td>
</tr>
<tr>
<td>D0220 - Intraoral – periapical first radiographic image</td>
<td>3.535%</td>
</tr>
<tr>
<td>D0230 - Intraoral – periapical each additional radiographic image</td>
<td>1.515%</td>
</tr>
</tbody>
</table>

Source: HPI analysis of Truven Health MarketScan® Research Database.
Data & Methods

We collected 2016 Medicaid fee-for-service (FFS) reimbursement rate data from state Medicaid program webpages on March 18 and 20, 2017. For some of the states that had updated their reimbursement rates for 2017, we used 2017 reimbursement rate data. Data for child dental care services were collected for all 50 states and D.C. Data for adult dental care services were collected for states that provided extensive dental benefits to Medicaid-enrolled adults in 2016 (AK, CA, CT, IA, MA, MT, NJ, NM, NY, NC, ND, OH, OR, RI, WA, WI).15

Many state Medicaid programs contract with a managed care provider and do not pay dental care providers via the publicly available FFS schedule. To our knowledge, managed care reimbursement rate data are not publicly available in any state and we were not able to include such data in our analysis. We focused solely on Medicaid FFS reimbursement rates, understanding that in many states, this is not how most dental care is reimbursed. According to the Kaiser Commission on Medicaid and the Uninsured, Medicaid programs in 23 states contracted with managed care organizations for children’s dental care services (AZ, CO, DC, FL, GA, IL, KS, KY, MI, MN, MS, MO, NV, NJ; NM, NY, OH, OR, PA, RI, TN, TX, WV) and in 15 states for adult dental care services (AZ, CO, DC, FL, IL, KY, MN, MS, MO, NJ, NM, NY, OH, OR, PA) in 2015.16 In some cases, however, certain dental care services are covered under a managed care program while others are covered under FFS. Two states have such arrangement for dental services for children (IN, WI) and four states have such arrangement for dental services for adults (IN, MA, MI, WI).16 The lack of transparent, publicly available data on reimbursement rates within managed care programs presented a significant limitation to our analysis. While Medicaid FFS reimbursement rates are intended to be a benchmark or guide for managed care organizations, it is unclear whether this happens in practice. As a result, we distinguish FFS states and managed care states in our analysis.

We obtained private dental insurance reimbursement rate data for each state and D.C. for 2015 from the Truven Health MarketScan® Research Databases (Truven). Truven contains medical and dental claims and enrollment data from beneficiaries of large employer medical and dental plans across the United States, including claims from a variety of FFS, preferred provider organization (PPO), and capitated dental plans. Truven includes the amount paid to the dentist for various procedures as well as the amount paid out of pocket by the beneficiary. In other words, it includes total payments to dentists. In 2015, there were 8.8 million people with private dental insurance included in Truven. Based on the latest data from the Medical Expenditure Panel Survey (MEPS),17 we estimate that Truven captures about 5.4 percent of the private dental insurance market in the United States. Because our Medicaid reimbursement rate data are for 2016, we inflated the Truven reimbursement rate data to 2016 levels using the all-items Consumer Price Index.18

We obtained data on fees charged by dentists for each state and D.C. for 2015 from the FAIR Health Dental Benchmark Module (FAIR Health).19 FAIR Health provides data on the non-discounted amount charged by dentists for various procedures before network discounts are applied. In 2015, there were 54.7 million people with private dental insurance included in FAIR Health. Based on the latest MEPS data,17 we estimate that FAIR Health captures about 33.5 percent of the private dental insurance market in the United States. We also inflated the 2015 FAIR Health charges
data to 2016 levels using the all-items Consumer Price Index.\textsuperscript{18}

We constructed two measures of Medicaid FFS reimbursement: (1) Medicaid FFS reimbursement rates relative to the fees charged by dentists, and (2) Medicaid FFS reimbursement rates relative to reimbursement rates through private dental insurance. These measures express Medicaid FFS reimbursement relative to "market" rates. We also constructed a measure of private dental insurance reimbursement relative to the fees charged by dentists. Nationwide, 97.6 percent of dentists report accepting some form of private dental insurance and, on average, such payments account for 41.5 percent of gross billings in dental offices.\textsuperscript{20} Private dental insurance is a significant source of dental care financing in the U.S., accounting for 47 percent of total dental care expenditures in 2015.\textsuperscript{21}

The analysis for child dental care services is based on the top ten most common procedures among children with private dental insurance as identified in previous research (see Table 2).\textsuperscript{22} These ten procedures accounted for 40.3 percent of the total of billings and 74.2 percent of the total number of procedures among children with private dental insurance in 2015 within the Truven data set. We consider children ages 0 to 18.

The analysis for adult dental care services is based on the top ten most common procedures among adults with private dental insurance as identified in previous research (see Table 3).\textsuperscript{23} These ten procedures accounted for 39.2 percent of the total billings and 73.7 percent of the total number of procedures among adults with private dental insurance in 2015 within the Truven data set. We consider adults ages 19 to 64.

We computed the weighted average of the reimbursement rates for the ten most common procedures to create an index. The weights for each of the ten procedures were calculated as the share of total billings represented by each procedure. The weights were calculated separately for child dental care services and adult dental care services. The weights are summarized in Tables 2 and 3. The Medicaid FFS reimbursement rate index, the fees charged by dentists index, and the private dental insurance reimbursement rate index were constructed using this common weighting scheme.

We divided the Medicaid FFS reimbursement index by the fees charged by dentist index to calculate our first outcome of interest: Medicaid reimbursement relative to fees charged by dentists. We divided the Medicaid FFS reimbursement index by the private dental insurance reimbursement index to calculate our second outcome of interest: Medicaid reimbursement relative to private dental insurance reimbursement. We also calculated private dental insurance reimbursement relative to fees charged by dentists to estimate the average "discount" rate off of dentist charges. We did this separately for child and adult dental care services.

It is important to note that previous research shows no substantial differences in results if the indices were created by weighting reimbursement rates and charges by their share of the total number of procedures performed versus total billings.\textsuperscript{24}

There are several limitations to our analysis. First, as noted, our Medicaid reimbursement rates are based on FFS schedules. In some states, these are less relevant because most care is delivered through managed care arrangements. To account for this, we present managed care states separately from FFS states, according to the best publicly available information.

Second, our reimbursement indices are based on a limited set of procedures. While ideally all procedures would be included, this is not feasible given our interest
in comparability across states. Because our procedure lists capture three quarters of the total volume of dental procedures, we feel we struck an appropriate balance between comprehensiveness and feasibility.

Third, our weighting scheme is based on the mix of dental care services for adults and children with private dental insurance. There are likely differences in the relevant importance of various procedures between the Medicaid and privately insured populations.25,26 Unfortunately, we do not have access to Medicaid claims data in order to assess these differences. However, several Medicaid colleagues and researchers have indicated the procedure mix within Medicaid and privately insured populations will be comparable, particularly for children. Moreover, our list of the top ten most common procedures is quite comparable to published research focusing on Medicaid populations.27-29 Again, we feel we struck an appropriate balance between feasibility and complexity in our analysis.

Fourth, we were not able to distinguish PPO, HMO, and other types of plans within our private dental insurance reimbursement rate data. It is likely that reimbursement rates to dentists differ systematically across these types of private dental insurance plans. We have no way of assessing this with the Truven data, and we assume simply that the mix of PPO, HMO, and other types of plans are representative of the market. According to the National Association of Dental Plans, in 2015, PPO plans accounted for 82 percent of the private dental insurance market and HMO plans accounted for 7 percent.30

Fifth, there may be some inconsistency in how dentists submit charges data on private dental insurance claims, which could lead to measurement error. FAIR Health’s dental module provides fee data based on "the non-discounted fees charged by providers before network discounts are applied." In theory, this should be true, non-discounted fees. However, based on provider feedback, providers often submit the fees they expect to be paid rather than their true, non-discounted fees. We have no basis to evaluate this empirically and simply raise this as a potential limitation. An alternative data source for market fees would be HPI’s annual fee survey that collects full, undiscounted fees from a national sample of dentists.31 We did not use these data because they are not available at the state level.

Disclaimer

Research for this article is based upon the data compiled and maintained by FAIR Health, Inc. and Truven Health Analytics™. HPI is solely responsible for the research and conclusions reflected in this article. FAIR Health, Inc. and Truven Health Analytics™ are not responsible for the conduct of the research or for any of the opinions expressed in this article.
References


personal communication with Michigan Dental Association and Rhode Island State dental director, these two states were categorized as states with managed care program for children dental care services.


Suggested Citation

DENTAL OFFICE LOCATIONS AND PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE

- Office does not participate in Medicaid
- Office participates in Medicaid

Percentage of children with public insurance:
- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

GEOGRAPHIC COVERAGE OF MEDICAID DENTISTS

- 15-Minute travel time to Medicaid office

Percentage of children with public insurance:
- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

PUBLICLY INSURED CHILDREN PER MEDICAID DENTIST WITHIN A 15-MINUTE TRAVEL TIME

- No Medicaid office
- <500:1
- 500:1-2,000:1
- >2,000:1

POPULATION PER DENTIST WITHIN A 15-MINUTE TRAVEL TIME

- No dental office
- <2,500:1
- 2,500:1-5,000:1
- >5,000:1

Sources: Based on ADA Health Policy Institute analysis of the 2015 ADA office database and 2011-2015 American Community Survey. For full methodology, see Naseh K, Eisenberg Y, Vujicic M. Geographic access to dental care varies in Missouri and Wisconsin. J Public Health Dent 2017 Jan 11. Notes: in this infographic, a Medicaid dentist is a dentist who is an enrolled provider in Medicaid or the Children’s Health Insurance Program. Percentages in table might not add up to 100% due to rounding. For analyses based on alternative travel time or provider-to-client thresholds, contact hpi@ada.org.

For more information, visit ADA.org/HPI or contact the Health Policy Institute at hpi@ada.org.
Geographic Access to Dental Care: New Jersey

DENTAL OFFICE LOCATIONS AND PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE
- Office does not participate in Medicaid
- Office participates in Medicaid

PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE
- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

GEOGRAPHIC COVERAGE OF MEDICAID DENTISTS
- 15-minute travel time to Medicaid office

PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE
- 0-10%
- 10.1-20%
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- 30.1-40%
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- 50.1-60%
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PUBLICLY INSURED CHILDREN PER MEDICAID DENTIST WITHIN A 15-MINUTE TRAVEL TIME
- No Medicaid office
- <500:1
- 500:1-2,000:1
- >2,000:1

POPULATION PER DENTIST WITHIN A 15-MINUTE TRAVEL TIME
- No dental office
- <2,500:1
- 2,500:1-5,000:1
- >5,000:1

Sources: Based on ADA Health Policy Institute analysis of the 2015 ADA office database and 2011-2015 American Community Survey. For full methodology, see Nassiri K, Eisenberg Y, Vujicic M. Geographic access to dental care varies in Missouri and Wisconsin. J Public Health Dent. 2017 Jan 11. Notes: In this infographic, a Medicaid dentist is a dentist who is an enrolled provider in Medicaid or the Children’s Health Insurance Program. Percentages in table might not add up to 100% due to rounding. For analyses based on alternative travel time or population-to-provider thresholds, contact hpi@ada.org.

For more information, visit ADA.org/HPI or contact the Health Policy Institute at hpi@ada.org.
97% of publicly insured children live within 15 minutes of a Medicaid dentist.

96% of publicly insured children live in areas where there is at least one Medicaid dentist per 2,000 publicly insured children within a 15-minute travel time.

93% of the population live in areas where there is at least one dentist per 5,000 population within a 15-minute travel time.

DENTAL OFFICE LOCATIONS AND PERCENTAGE OF CHILDREN WITH PUBLIC INSURANCE

- Office does not participate in Medicaid
- Office participates in Medicaid

Percentage of children with public insurance:
- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

GEOGRAPHIC COVERAGE OF MEDICAID DENTISTS

- 15-minute travel time to Medicaid office

Percentage of children with public insurance:
- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

PUBLICLY INSURED CHILDREN PER MEDICAID DENTIST WITHIN A 15-MINUTE TRAVEL TIME

- No Medicaid office
- <500:1
- 500:1-2,000:1
- >2,000:1

POPULATION PER DENTIST WITHIN A 15-MINUTE TRAVEL TIME

- No dental office
- <2,500:1
- 2,500:1-5,000:1
- >5,000:1

Sources: Based on ADA Health Policy Institute analysis of the 2015 ADA office database and 2011-2015 American Community Survey. For full methodology, see Najive K, Eisenberg Y, Vujicic M. Geographic access to dental care varies in Missouri and Wisconsin. J Public Health Dent. 2017 Jan 11. Notes: In this infographic, a Medicaid dentist is a dentist who is an enrolled provider in Medicaid or the Children's Health Insurance Program. Percentages in table might not add up to 100% due to rounding. For analyses based on alternative travel time or population-to-provider thresholds, contact hpi@ada.org.

For more information, visit ADA.org/HPI or contact the Health Policy Institute at hpi@ada.org.
Geographic Access to Dental Care: Pennsylvania

97% of publicly insured children live within 15 minutes of a Medicaid dentist.

96% of publicly insured children live in areas where there is at least one Medicaid dentist per 2,000 publicly insured children within a 15-minute travel time.

89% of the population live in areas where there is at least one dentist per 5,000 population within a 15-minute travel time.

Dental Office Locations and Percentage of Children with Public Insurance

- Office does not participate in Medicaid
- Office participates in Medicaid

Percentage of Children with Public Insurance
- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

Geographic Coverage of Medicaid Dentists

- 15-minute travel time to Medicaid office

Percentage of Children with Public Insurance
- 0-10%
- 10.1-20%
- 20.1-30%
- 30.1-40%
- 40.1-50%
- 50.1-60%
- >60%

Dentally Insured Children Per Medicaid Dentist Within a 15-Minute Travel Time

- No Medicaid office
- <500:1
- 500:1-2,000:1
- >2,000:1

Population Per Dentist Within a 15-Minute Travel Time

- No dental office
- <2,500:1
- 2,500:1-5,000:1
- >5,000:1

Sources: Based on ADA Health Policy Institute analysis of the 2015 ADA office database and 2011-2015 American Community Survey. For full methodology, see Nasim K, Eisenberg Y, Vujcic M. Geographic access to dental care varies in Missouri and Wisconsin. J Public Health Dent. 2017 Jan 11. Notes: In this infographic, a Medicaid dentist is a dentist who is an enrolled provider in Medicaid or the Children's Health Insurance Program. Percentages in table might not add up to 100% due to rounding. For analyses based on alternative travel time or population-to-provider thresholds, contact hpi@ada.org.

For more information, visit ADA.org/HPI or contact the Health Policy Institute at hpi@ada.org.
**148TH GENERAL ASSEMBLY**

**FISCAL NOTE**

**BILL:** SENATE BILL NO. 142

**SPONSOR:** Senator Hall-Long

**DESCRIPTION:** AN ACT TO AMEND TITLE 31 OF THE DELAWARE CODE RELATING TO PREVENTATIVE AND URGENT DENTAL CARE FOR MEDICAID RECIPIENTS.

**ASSUMPTIONS:**

1. This Act shall become effective upon appropriation by the General Assembly of funds sufficient to accomplish the purpose of the Act.

2. The Act expands Delaware's Public Assistance Code to provide preventative and urgent dental care to all Medicaid recipients. Payments for preventative and urgent dental care treatments shall be subject to a $10.00 recipient co-pay and the total amount of dental care assistance provided to an eligible recipient shall not exceed $1,000.00 per year, except that an additional $1,500.00 may be authorized for an emergency basis for urgent dental care treatments through a review process.

3. This Act would provide preventative and urgent dental care to approximately 116,918 eligible recipients.

4. The estimated total cost of the Act for Fiscal Year 2015 is $14,780,551 for both Federal and State share combined. The state share estimated at the State Fiscal Year 2016 FMAP is projected at $4,311,622. This project is a result of the following assumptions:
   a. Projections are based on experience with recipients between the age of 19 and 21 currently covered and assumes that older recipients will be more expensive;
   b. Projections include an assumption that a certain percentage of recipients will exceed the $1,000 a year spending cap; and
   c. Projections include a rate adjustment from CY 2012 to SFY 2016.

5. The estimated total cost for this Act for Fiscal Year 2016 and Fiscal Year 2017 assume an FMAP of 50%.

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<tr>
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Office of Controller General
June 23, 2015
KARN:KARN
4531480002

(Amounts are shown in whole dollars)