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Research Brief

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

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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.[1] 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.[2] There has also been a steady increase in dental care utilization among children enrolled in Medicaid and CHIP over the past fifteen years.[3] 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.[2] However, 35.2 percent of adults in the U.S. do not have any form of dental coverage.[2]

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

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reimbursement rates, low compliance with recommended treatment, and cumbersome administrative procedures.[4] 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[5-7] as well as dentist participation in Medicaid.[6,8]

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 78.6 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 (38.7 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 (59.4 percent), North Dakota (59.0 percent), Montana (56.9 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.[7] 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.[8] Maryland's Medicaid program increased dental care reimbursement, carved Medicaid dental services out of managed care,[9] 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.[10] During this time, Maryland has seen one of the largest increases in dental care use among Medicaid-enrolled children of any state.[11,12] 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.[13] 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.[14] 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

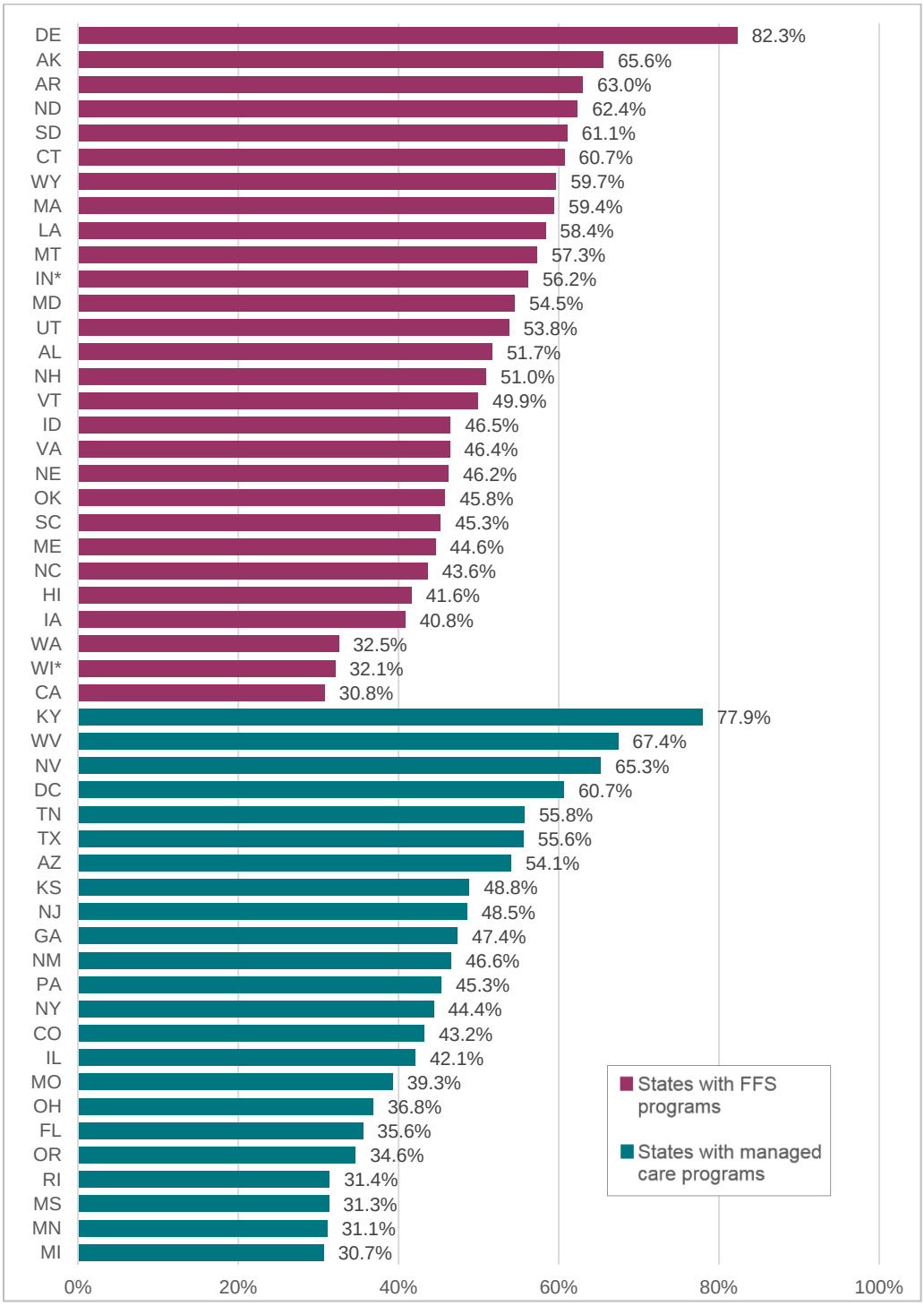
dentist participation and dental care use among Medicaid enrollees. We will also compare Medicaid reimbursement rates provided to dentists to those provided to physicians.

Table 1: Summary of Reimbursement Rates, 2016

	Medicaid fee-for-service reimbursement relative to fees charged by dentists	Medicaid fee-for-service reimbursement relative to private dental insurance reimbursement	Private dental insurance reimbursement relative to fees charged by dentists
Child dental services	49.4%	61.8%	80.5%
Adult dental services	37.2%	46.1%	78.6%

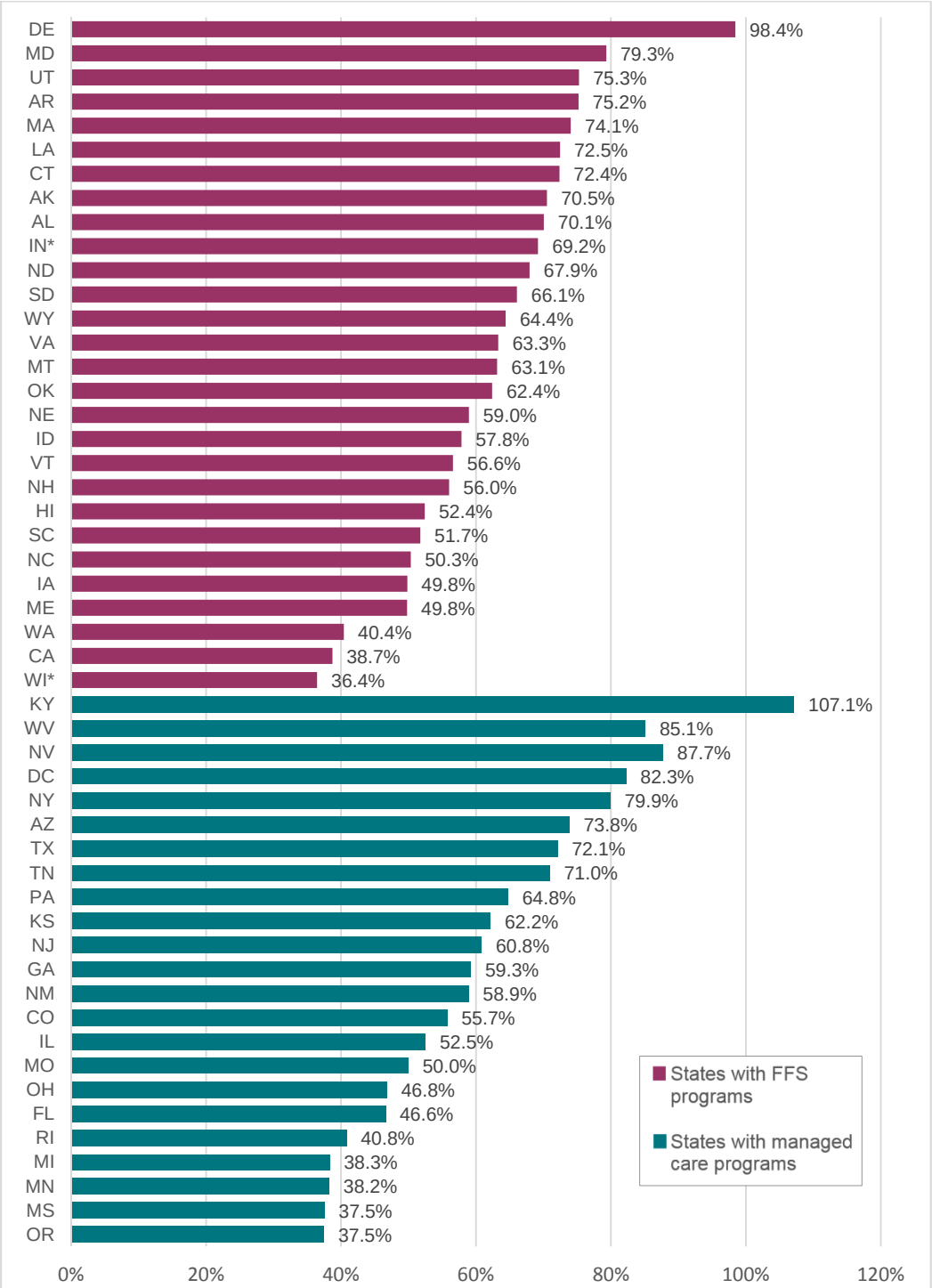
Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies, FAIR Health, and Truven Health MarketScan® Research Database. **Note**: For child dental services, this table provides the average across 50 states and Washington, D.C. For adult dental services, 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



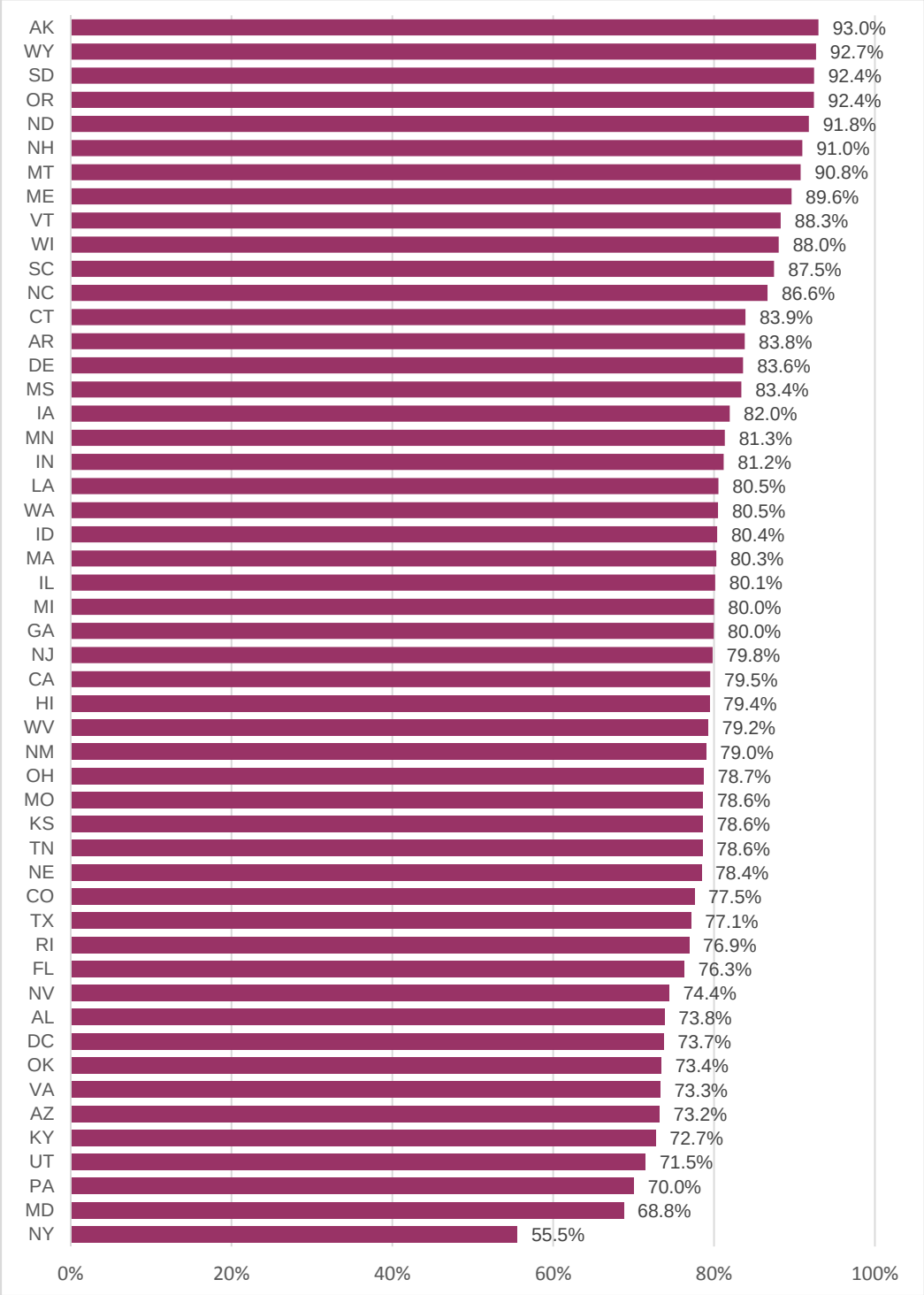
Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies and FAIR Health. FFS versus managed care designation primarily based on analysis by the Kaiser Commission on Medicaid and the Uninsured. **Note**: Some states enroll only certain segments of Medicaid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

Figure 2: Medicaid Fee-For-Service Reimbursement as a Percentage of Private Dental Insurance Reimbursement, Child Dental Services, 2016



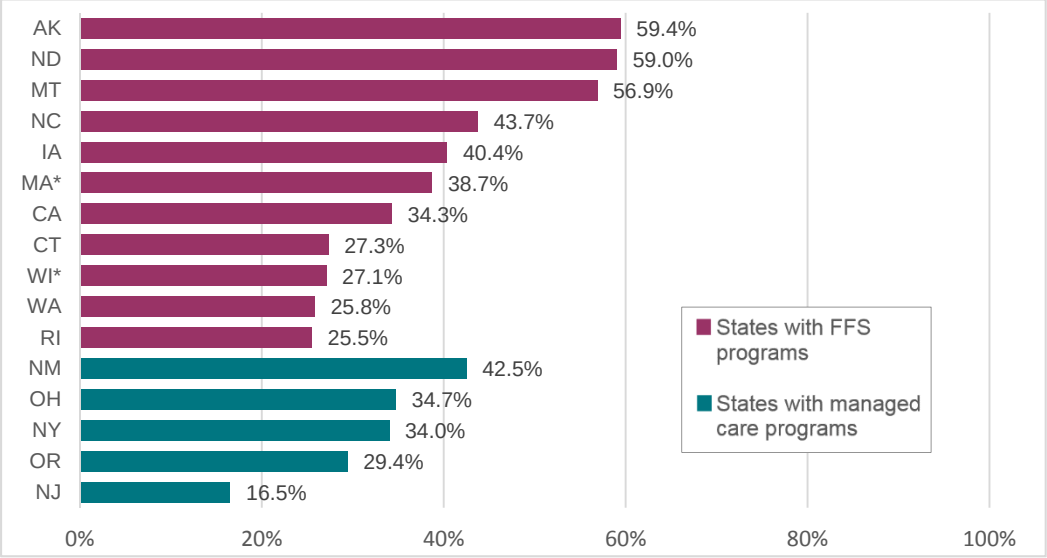
Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies and Truven Health MarketScan® Research Database. FFS versus managed care designation primarily based on analysis by the Kaiser Commission on Medicaid and the Uninsured. **Note**: Some states enroll 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



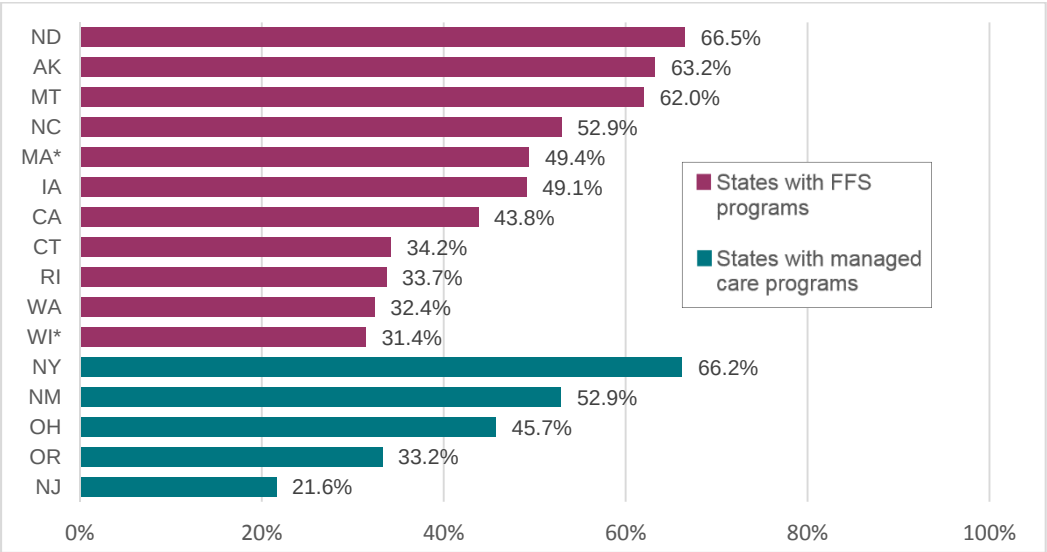
Source: HPI analysis of Truven Health MarketScan® Research Database and FAIR Health.

Figure 4: Medicaid Fee-For-Service Reimbursement as a Percentage of Fees Charged by Dentists, Adult Dental Services, 2016



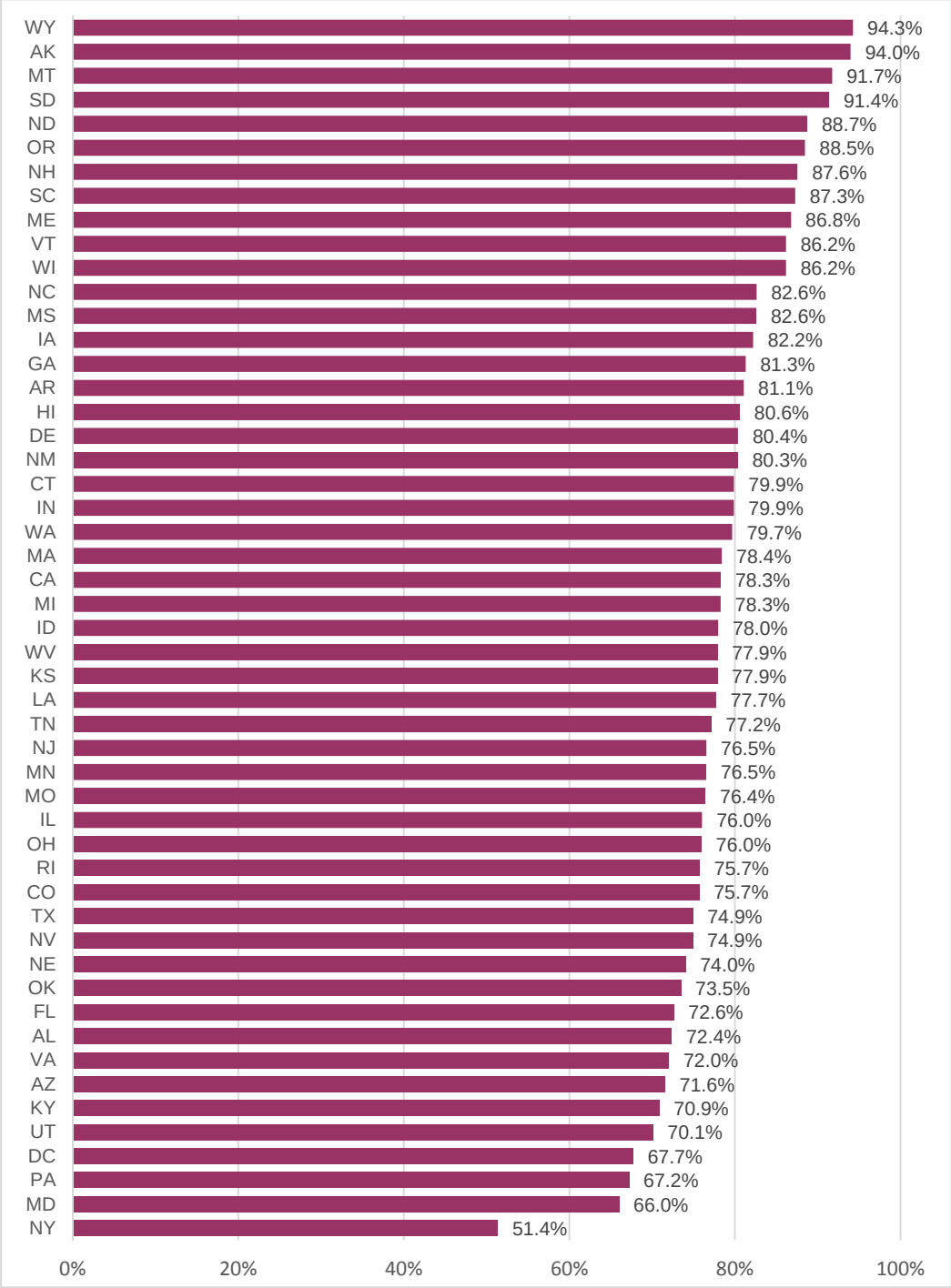
Source: HPI analysis of Medicaid fee-for-service reimbursement data collected from state Medicaid agencies and FAIR Health. FFS versus managed care designation primarily based on analysis by the Kaiser Commission on Medicaid and the Uninsured. **Note**: Some states enroll only certain segments of Medicaid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

Figure 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 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 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

CDT Procedure Code	Weight
D0120 - Periodic oral evaluation - established patient	25.614%
D1120 - Prophylaxis - child	25.125%
D1110 - Prophylaxis - adult	14.113%
D1208 - Topical application of fluoride – excluding varnish	9.010%
D1351 - Sealant - per tooth	7.280%
D0272 - Bitewings - two radiographic images	6.340%
D0274 - Bitewings - four radiographic images	5.561%
D1206 - Topical application of fluoride varnish	3.234%
D0220 - Intraoral - periapical first radiographic image	2.218%
D0230 - Intraoral - periapical each additional radiographic image	1.505%

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

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

CDT Procedure Code	Weight
D1110 - Prophylaxis - adult	36.856%
D0120 - Periodic oral evaluation – established patient	20.065%
D0274 - Bitewings – four radiographic images	9.751%
D2392 - Resin-based composite – two surfaces, posterior	8.469%
D4910 - Periodontal maintenance	6.347%
D2391 - Resin-based composite – one surface, posterior	6.108%
D0140 - Limited oral evaluation – problem focused	3.777%
D0150 - Comprehensive oral evaluation – new or established patient	3.578%
D0220 - Intraoral - periapical first radiographic image	3.535%
D0230 - Intraoral – periapical each additional radiographic image	1.515%

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.[19] 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.[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.[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.[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).[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).[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.[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.

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

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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.

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Suggested Citation

Gupta N, Yarbrough C, Vujicic M, Blatz A, Harrison B. Medicaid fee-for-service reimbursement rates for child and adult dental care services for all states, 2016. Health Policy Institute Research Brief. American Dental Association. April 2017. Available from: http://www.ada.org/~/media/ADA/Science%20and%20Research/HPI/Files/HPIBrief_0417_1.pdf.