

THE  
**PEW**  
CENTER ON THE STATES

# The State of Children's Dental Health: Making Coverage **Matter**



## MAY 2011

The Pew Center on the States is a division of The Pew Charitable Trusts that identifies and advances effective solutions to critical issues facing states. Pew is a nonprofit organization that applies a rigorous, analytical approach to improve public policy, inform the public and stimulate civic life.

The Pew Children's Dental Campaign works to promote policies that will help millions of children maintain healthy teeth, get the care they need and come to school ready to learn.

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For additional information on Pew and the Children's Dental Campaign, please visit [www.pewcenteronthestates.org](http://www.pewcenteronthestates.org).

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# Introduction

Tens of millions of children have dental coverage through either private insurance or a public program such as Medicaid or the Children's Health Insurance Program (CHIP). Unfortunately, for many kids, this does not translate into actual care. In 2009, for example, only 12.9 million (44 percent) of the more than 29 million Medicaid-enrolled children received any dental services.<sup>1</sup>

Nationwide, access to care continues to be a serious problem, especially for children in low-income households. An estimated 16.5 million kids go without even basic care each year. This problem has severe consequences for children and states. Research shows that kids who do not receive needed dental care miss a significant number of school days,<sup>2</sup> use expensive emergency room services more often<sup>3</sup> and face worsened job prospects as adults compared with their peers who do receive care.<sup>4</sup>

The Affordable Care Act, enacted in 2010, included provisions to improve the availability of dental care for at-risk children. Under these new provisions, by 2014, about 5.3 million more children

will have some form of dental insurance.<sup>5</sup> For most, this coverage will come through public insurance programs such as Medicaid and CHIP.

Yet, without changes in state policies, expanded coverage is unlikely to translate into more dental care for every child in need. In *The Cost of Delay*, released in 2010, the Pew Children's Dental Campaign identified eight evidence-based, cost-effective policies that all states can adopt to improve children's dental health. Although only a year has passed since the previous report, new data for these indicators have become available showing significant changes among states in some areas.

This new report uses these same eight benchmarks to grade states' ability to serve insured and soon-to-be-insured children. This 2011 report and the accompanying 51 fact sheets show that while many states improved their performance on one or more of Pew's policy benchmarks, too many still fall short.

Although states continue to face tough fiscal realities, research confirms that children's dental health is a smart

investment. By supporting proven policies, states can ensure that millions of kids do not suffer worsening overall health or fall behind in school and that taxpayers realize the best possible returns on the public insurance programs they fund.

Adding 5.3 million additional kids to the current inadequate system will not lead to better outcomes. Expanded insurance coverage must be coupled with policies that meaningfully improve children's access to care. In other words, states have to make coverage matter.

### Key Findings

Even in a time of major fiscal stress, many states have managed to improve their grades on children's dental health—a result demonstrating that there are ways to strengthen oral health without overburdening state budgets. Our analysis reveals signs of both hope and concern:

- Twenty-two states improved their grades since 2010. These gains were achieved primarily by adopting policies to reimburse physicians for preventive dental services, expanding water fluoridation and increasing the percentage of Medicaid-enrolled children who receive care.
- Grades dropped in six states, mostly due to Medicaid reimbursement rates that have not kept pace with the growth in dentists' fees.

- Only seven states merited A grades: Alaska, Connecticut, Maine, Maryland, Massachusetts, Minnesota and South Carolina. Six of these states met six of Pew's benchmarks. Maryland was the only one to meet seven policy goals, and no state met all eight benchmarks.
- Twenty states received a B by meeting five benchmarks.
- Eighteen states and the District of Columbia received a grade of C or D, meeting just three or four of Pew's policy goals.
- Five states—Florida, Hawaii, Indiana, Montana and New Jersey—received an F, meeting two or fewer benchmarks.

States continued to make progress in providing more care to low-income children enrolled in Medicaid, but the reimbursement rates paid by state Medicaid programs to participating dentists eroded amid fiscal difficulties. Overall, the findings demonstrate that there's ample room for improvement. Even those states with good policies can do much more to ensure children receive care.

## A RECIPE FOR STRENGTHENING KIDS' DENTAL HEALTH

In early 2010, Pew released *The Cost of Delay*, a comprehensive report on dental policies in all 50 states and the District of Columbia. In 2011, Pew again graded the states, focusing on the same four core policy areas:

1. Sealants and Fluoridation: Cost-effective ways to help prevent dental problems.
2. Medicaid Improvements: Policies that encourage more dentists to treat low-income kids.
3. Innovative Workforce Models: New ways to expand the number of qualified professionals available to serve children.
4. Data Collection and Reporting: Systems that enable the public to monitor progress within each state and hold elected officials accountable for improving performance.<sup>6</sup>

**Within these broad categories, Pew grades states on an A-through-F scale, according to their performance in meeting eight key policy benchmarks. These were the identical standards used to determine last year's grades:**

1. Having sealant programs in at least 25 percent of high-risk schools.
2. Allowing a hygienist to place sealants in a school-based program without requiring a dentist's exam.
3. Providing optimally fluoridated water to at least 75 percent of residents who are served by community water systems.
4. Meeting or exceeding the 2007 national average (38.1 percent) of Medicaid-enrolled children ages one to 18 receiving dental services.
5. Paying dentists who serve Medicaid-enrolled children at least the 2008 national average (60.5 percent) of dentists' median retail fees.
6. Reimbursing medical care providers through its state Medicaid program for preventive dental services.
7. Authorizing a new type of primary-care dental provider.
8. Submitting basic screening data to the national database that tracks oral health status.



## The Consequences of Poor Access

Research demonstrates how children's health, education and future economic success suffer when they do not receive dental care:

- Data from a 2007 national survey show that nearly 11 percent of all children and 14 percent of those ages six to 12 had a toothache severe enough for their caregivers to know about and report within the six months prior to the survey. Children living below the federal poverty threshold were about twice as likely as their more affluent peers to have suffered from toothaches, and the likelihood was even greater among children who have special health care needs.<sup>7</sup>
- Kids who do not receive appropriate dental care are more likely to miss school days and fall behind academically. One 2007 study estimates that in California alone, 504,000 children ages five to 17 were absent at least one school day due to a toothache or other dental concern.<sup>8</sup>
- The consequences of untreated childhood dental problems even undermine our nation's military readiness. A 2008 survey by the

U.S. Department of Defense revealed that 52 percent of new recruits were found to be Class 3 in “dental readiness”—meaning they had oral health problems needing urgent attention that would delay overseas deployment.<sup>9</sup>

- Children with untreated dental problems become adults with dental problems, which can hinder their ability to find good jobs.<sup>10</sup>





## State Budget Challenges and Dental Investments

As they work to close record budget gaps, policy makers are looking everywhere to trim spending, including the dental services and coverage offered through Medicaid. Even though dental services comprise less than two percent of Medicaid spending, many states have eliminated or reduced adult dental benefits, which—unlike children’s dental benefits—states are not required to provide.<sup>11</sup> In a recent report, the Kaiser Family Foundation noted that 12 states reduced adult dental benefits in 2010 or 2011.<sup>12</sup>

Lack of care for adults has a ripple effect on children because parental use of dental care is a good predictor of whether their kids will obtain dental services.<sup>13</sup>

Focusing on short-term budget savings by cutting adult dental services could set states up for tougher problems in the future. Even in this strained fiscal environment, state leaders should not overlook the long-term savings that can accrue from the dental health policies embedded in this report’s benchmarks. For example, Texas found that it saved \$24 per child, per year in Medicaid expenditures for children because of the cavities prevented by fluoridated water.<sup>14</sup>

Expanding the dental workforce is another policy improvement states can implement without significant start-up costs. Authorizing new types of providers can help ensure that more kids get care, reducing the odds that cavities will worsen to the point of needing an extraction or a trip to a hospital emergency room (ER).<sup>15</sup>

A survey of 53 hospitals in Washington State found that during an 18-month period, residents made more than 23,000 visits to ERs for toothaches or other dental problems. According to the survey, among the uninsured, patients with dental disorders were the most frequent ER visitors.<sup>16</sup> The treatment delivered to patients in an emergency room is much more costly than care provided at a dental office or clinic. Moreover, physicians in many ERs can only reduce or manage the pain—an approach that fails to address the underlying problem.

Most significantly, this year’s grades demonstrate the fact that fiscal distress need not prevent governors and legislatures from adopting sound policies to improve dental health. Indeed, at a time when budget shortfalls have plagued most states, 22 of them have raised their grades—a change which reflects the fact that Pew’s policy benchmarks cost relatively little and can produce significant savings to taxpayers. ■



# Grades and Benchmarks

Just over half of the 50 states earned a grade of A or B (Exhibit 1). This is an encouraging improvement compared with the 2010 report, in which just 15 states did

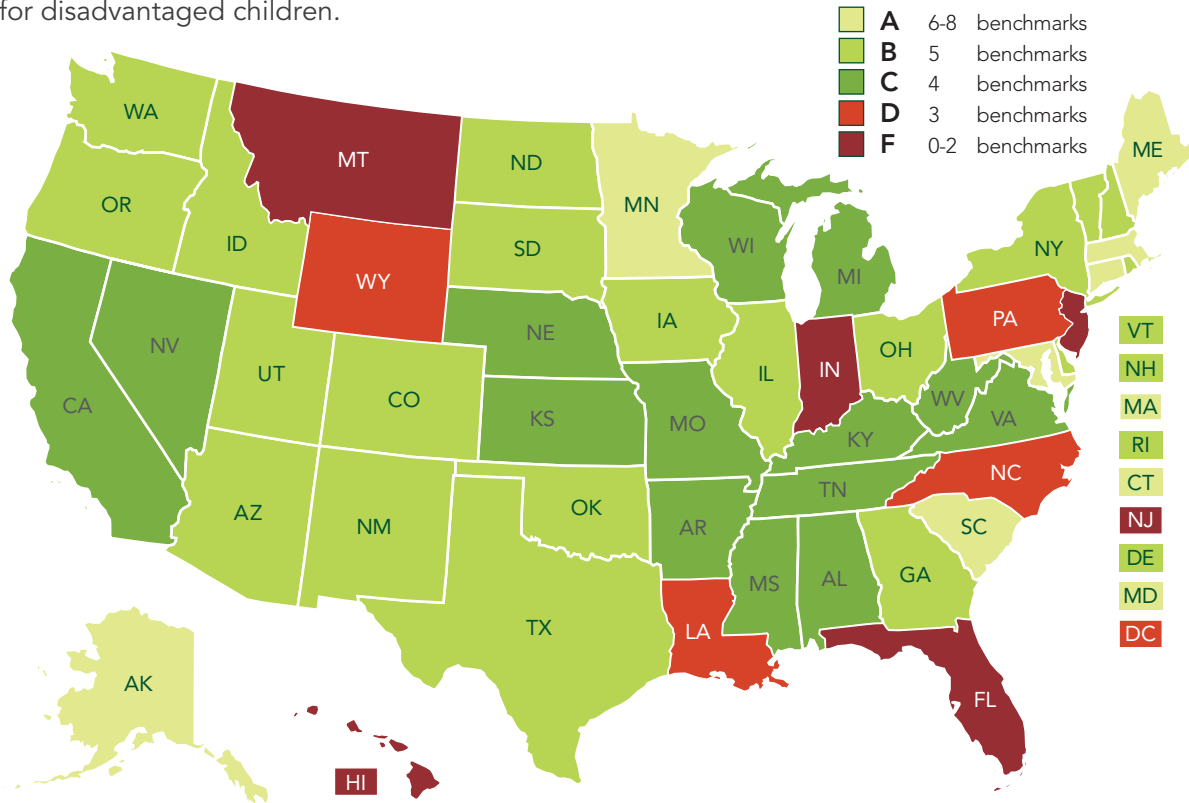
as well. But it is sobering that 24 states and the District of Columbia fulfill no more than four of the eight benchmarks identified by Pew for strengthening children’s oral health.

Visit [www.pewcenteronthestates.org/dental/makingcoveragematter](http://www.pewcenteronthestates.org/dental/makingcoveragematter) for factsheets that provide a detailed description of each state’s grade and assessment.

## Exhibit 1

### GRADING THE STATES

Pew assessed and graded all 50 states and the District of Columbia on whether and how well they have employed eight sound policy approaches to ensure dental health and access to care for disadvantaged children.



Source: Pew Center on the States, 2011

**Policy Benchmark 1: Having sealant programs in at least 25 percent of high-risk schools**

Percentage of high-risk schools with sealant programs, 2010	Number of states
75–100%	2
50–74%	7
25–49%	12
1–24%	23
None	7

Dental sealants are clear plastic coatings applied to the chewing surfaces of molars (the most cavity-prone teeth) that block food and bacteria from gathering in the deep grooves of back teeth, preventing 60 percent of decay at one-third the cost of filling a cavity.<sup>17</sup> Dental sealant programs targeting schools with many high-risk children have been recommended by the U.S. Task Force on Community Preventive Services.<sup>18</sup>



Pew surveyed each state to determine what portion of its high-risk schools was reached by school-based or school-linked sealant programs in the 2009-10 school year. In 23 states, these programs reached fewer than one-quarter of the highest-need schools, and seven states reported having no school-based programs at all.

**Policy Benchmark 2: Allowing a hygienist to place sealants in a school-based program without requiring a dentist’s exam<sup>19</sup>**

State allows hygienist to provide sealants without a dentist’s prior exam, 2010	Number of states
Yes (Exam never required)	16
Yes (Exam sometimes required - for example, certain classifications of hygienist can place sealants without a prior exam)	13
No (Exam always required)	12
No (Exam and dentist’s direct or indirect supervision required)	10

Sealants prevent decay by serving as a barrier between a tooth and cavity-causing bacteria. Sealants also impede the growth of cavities, heading off the need for expensive fillings.<sup>20</sup>

Dental hygienists are the primary providers for school-based sealant programs. The cost of these programs and how many children they serve depend partly on whether states have unnecessary hurdles that interfere with hygienists’ ability to place sealants on kids’ teeth. One such obstacle is the requirement

that children are examined by a dentist before sealants can be applied. State laws vary greatly in this area and many do not reflect the scientific consensus that x-rays and other advanced diagnostic tools are unnecessary to determine the need for sealants.<sup>21</sup>

During the past year, North Dakota and Massachusetts made meaningful policy changes that broaden hygienists' ability to place sealants in public health settings.

**Policy Benchmark 3: Providing optimally fluoridated water to at least 75 percent of residents who are served by public systems**

Percentage of population on community water supplies receiving optimally fluoridated water, 2008	Number of states
75% or greater	28
50–74%	14
25–49%	7
Less than 25%	2

Through community fluoridation, water engineers adjust the level of fluoride to the optimal level to reduce tooth decay. Fluoridation stands out as one of the most effective public health efforts that the United States has ever undertaken.<sup>22</sup> Fluoridated water reduces decay rates for children and adults by between 18 and 40 percent, avoiding the need for costly corrective dental treatments.<sup>23</sup> As a result, for most cities, every \$1 invested in this

preventive measure produces roughly \$38 of savings in dental treatment costs.<sup>24</sup>

When the U.S. Department of Health and Human Services (HHS) recently lowered its recommended fluoride level in drinking water, a handful of critics misrepresented the announcement as a reason to fear fluoridated water. Yet the recommendation simply reflects the fact that Americans are getting fluoride through various products, such as toothpaste and mouth rinses, that weren't commonly used when the fluoride level was set initially. In its announcement, HHS reinforced its view of the health benefits that result when public water systems optimally fluoridate drinking water.<sup>25</sup>

Recent data from the CDC show that as of 2008, fluoridation is reaching 72 percent of residents served by community water supplies, and 64 percent of the total U.S. population.<sup>26</sup> Pew found that 28 states succeeded in bringing fluoridated water to at least 75 percent of its citizens on public supplies, with the addition of Delaware and Oklahoma since 2006. Although California falls short of the national benchmark, the state now provides fluoridated water to more than half of its citizens since cities such as San Diego have begun fluoridating. By contrast, New Jersey and Hawaii fail to reach even 25 percent of their residents.

**Policy Benchmark 4: Meeting or exceeding the 2007 national average (38.1 percent) of Medicaid-enrolled children ages 1 to 18 receiving dental services**

Percentage of Medicaid children receiving any dental service, 2009	Number of states
59% or greater	2
50–58.9%	9
38.1–49.9%	33
30–38.0%	5
Less than 30%	2

Nationwide, only 44 percent of Medicaid-enrolled children received dental care in 2009 despite a federal requirement that states provide it. That figure continues a trend of modest growth in access nationally, but it still falls far below the 58 percent of privately insured children who use dental services each year.<sup>27</sup> (See Exhibit B in the Appendix for state by state Medicaid utilization data since 2000.)

Pew graded states based on whether they exceeded the 2007 national benchmark of 38.1 percent to gauge progress against that baseline. Even with this relatively low bar, seven states failed to meet the threshold.

Florida and Montana provided care to fewer than 30 percent of enrolled children. Thirteen states—Arkansas, California, Delaware, Kentucky, Louisiana, Maine, Maryland, Minnesota, New Jersey, New York, Oregon, South Dakota and Wyoming—and the District of Columbia improved their performance by crossing the threshold of 38.1 percent. Only eleven states—Arkansas, Idaho, Iowa, Massachusetts, Nebraska, New Hampshire, North Carolina, South Carolina, Texas, Vermont and Washington—served more than half of Medicaid-enrolled kids in 2009.

Last year, HHS launched an oral health initiative that included some efforts to help states increase the number of low-income kids who receive care. As one component of the initiative, the Centers for Medicare and Medicaid Services (CMS) reviewed eight state Medicaid programs to identify innovative strategies for improving access. CMS has noted that these new approaches include expanding the roles of existing dental providers and licensing new types of practitioners.<sup>28</sup>

Despite tough fiscal times, Arkansas raised its grade from an F to a C this year. Learn the story behind Arkansas' solid progress at: [www.pewcenteronthestates.org/dental/makingcoveragematter](http://www.pewcenteronthestates.org/dental/makingcoveragematter).



In addition, Pew has recommended that state Medicaid programs ensure their reimbursement rates are high enough to cover the cost of care, as well as offer enrollees the support they need to make and keep dental appointments.

This support could include enhancing transportation assistance, offering translation services or providing case management services to help patients navigate the Medicaid system.

## DENTAL SERVICES IN THE AFFORDABLE CARE ACT

Through the Affordable Care Act (ACA)—the health care reform law enacted in 2010—at least 5.3 million more children will gain dental coverage by 2014. Most of them will enter Medicaid or CHIP programs that already have difficulty ensuring care to their enrollees.

To make the promise of dental coverage matter for these children, federal and state governments need to adopt policies that support prevention and expand the types of providers available to treat children. States that are seriously committed to improving access must ensure their Medicaid reimbursement rates are high enough to cover dentists' costs—doing so will encourage broader Medicaid participation by dentists.

The ACA authorized, but did not actually fund, grants for all 50 states

and the District of Columbia that support states' ability to advance fluoridation, sealant and data-gathering efforts. The Centers for Disease Control and Prevention (CDC) has used its existing budget to offer grants to 19 states—with Kansas, Texas and Vermont being the most recently funded—but Congress must appropriate funds to make these grants available to additional states.<sup>29</sup>

The ACA authorized pilot programs for states that wish to introduce new types of dental providers. These programs would allow for the testing and evaluation of various approaches to expanding the dental team, but funding has not yet been secured for these pilots. Likewise, the law authorized, but did not fund, programs to support oral health literacy and additional grants for school sealant programs.



**Policy Benchmark 5: Paying dentists who serve Medicaid-enrolled children at least the 2008 national average (60.5 percent) of median retail fees<sup>30</sup>**

Medicaid reimbursement rates as a percentage of dentists' retail fees, 2010	Number of states
90–100%	1
80–89%	2
70–79%	2
60.5–69%	13
50–60.4%	14
40–49%	13
Less than 40%	6

Low-income children have difficulty getting care largely due to a shortage of dentists who are willing to treat Medicaid-enrolled patients. A 2010 Government Accountability Office (GAO) report found that in 25 of 39 reporting states, fewer than half of dentists saw any Medicaid patients.<sup>31</sup> Dentists point to low reimbursement rates, administrative hassles and frequent no-shows by patients as deterrents to serving them.



In the current fiscal environment, many states have looked to provider reimbursements as a place to cut Medicaid costs, and dental payment rates have not been immune. In 2010, 33 states—an increase from 26 in 2008—reimbursed less than 60.5 cents of every \$1 billed by a dentist. In some cases, this is due to cutbacks, but in others, it is attributable to Medicaid rates not keeping pace with rising dental fees.

**Policy Benchmark 6: Reimbursing medical care providers through state Medicaid program for preventive dental health services**

Medicaid pays medical staff for early preventive dental health services, 2010	Number of states
Yes	40
No	11

Doctors, nurses, nurse practitioners and physician assistants increasingly are providing preventive dental services to young children. These services include oral health screening and education, application of fluoride varnish (a gel that reduces tooth decay) and referring parents to a dental office when their kids need additional care. Involving medical providers in these ways is especially important since infants and toddlers see these staff earlier and more frequently than they see dentists.

In the past year, more state Medicaid programs—including those in Alaska, Georgia, Mississippi and Pennsylvania—began to reimburse medical providers for delivering preventive dental services, bringing the total to 40. Several other states are considering adopting the policy, and New Hampshire has passed a law (not funded by the time this report was finalized) to enact similar reimbursements.

**Policy Benchmark 7: Authorizing a new type of primary care dental provider**

State has authorized a new type of primary care dental provider, 2010	Number of states
Yes	1
No	50

Some communities simply do not have enough dentists to meet the needs of all of their residents. Across the 50 states and the District of Columbia, almost 48 million people live in areas identified by the federal government as areas in which there is a shortage of dental health professionals. HHS estimates that it would take more than 6,600 dentists to remove those designations. (See Exhibit C in the Appendix for details on dentist shortages by state.)<sup>32</sup>

To close this gap in the oral health workforce, a number of states are exploring new types of allied dental

providers. These professionals would play a role similar to that performed by nurse practitioners in the medical field. Under federal law, dental therapists are serving the needs of Alaska Native Tribes, and similar practitioners will soon begin working in Minnesota—the only state with a law authorizing such providers. (See this [Pew brief](#) for more information on Minnesota’s new providers.) A recent evaluation of dental therapists in Alaska found that they were providing safe, competent care that earned high levels of patient satisfaction.<sup>33</sup>

Although no states authorized a new allied dental provider last year, policy makers in many states are exploring the possibility. Public health advocates in Ohio, Kansas, New Mexico, Vermont and Washington have begun developing proposals to add dental therapists to the dental team, and these efforts are being supported by the W.K. Kellogg Foundation.<sup>34</sup>

Stakeholders in California, Maine and New Hampshire also are working, with support from Pew, to develop proposals that expand the dental workforce.

The Community Dental Health Coordinator (CDHC), a community health worker designed to provide preventive

care and education to families and to assist more people in finding a dentist, is being tested in California, Oklahoma and Pennsylvania. The CDHC pilots are supported by the American Dental Association.<sup>35</sup>

Legislation to enact an Advanced Dental Hygiene Practitioner—a master’s level degree that would allow hygienists to provide restorative care—was introduced this year in Connecticut, Oregon and Washington.<sup>36</sup>

**Policy Benchmark 8: State submits basic screening data to the national database that tracks oral health conditions**

Basic screening data from state posted to the national database, 2010	Number of states
Yes	42
No	9

The ability to collect crucial data is a key element of an effective state dental health program. Without it, states struggle to allocate resources appropriately and

compete for grant funding. Tracking the number of children with untreated tooth decay and the number who have been treated with sealants is essential to crafting state policy solutions and measuring progress.

In the past year, five more states added their data to the National Oral Health Surveillance System, bringing the total to 42.

Unfortunately, eight states and the District of Columbia have never participated in this system. Among the 42 submitting states, the data from 10 are more than five years old, which limits the value of basing decisions on these statistics. ■



Maryland was the top-performing state in Pew’s report on children’s dental health. Learn the story behind Maryland’s success at: [www.pewcenteronthestates.org/dental/makingcoveragematter](http://www.pewcenteronthestates.org/dental/makingcoveragematter).



# Conclusion

Last year saw the passage of a health reform law that will bring dental coverage to an additional 5.3 million American children. But states must do much more to make that coverage matter—meaning these kids actually receive care. The good news is that there are solutions at hand that cost relatively little and have the potential to yield significant returns on investment for children and taxpayers.

As Medicaid rolls grow, states must do much more to improve children's access to care, particularly by strengthening preventive care efforts and broadening the pool of providers. Moreover, states must reduce the need for costly restorative treatments and the other effects of poor dental health by investing in proven low-cost preventive strategies, such as school-based sealant programs and community water fluoridation.

Children's dental care is about more than simple cavities. One in seven elementary-school children ages six to 12 suffers from a toothache, which can affect a child's concentration, school attendance and



academic achievement.<sup>37</sup> Dental problems can lead to lifelong health challenges and difficulties finding and holding a job.

With many states facing long-term challenges to keep their budgets balanced, policy makers should prioritize investments that provide real savings to taxpayers down the road. Some states are leading the way by making modest investments that will pay off in the years to come for children, families, states and the nation as a whole. These investments will help states improve access to dental care, reduce future Medicaid costs and build a healthier future for their children. ■



# Endnotes

<sup>1</sup> U.S. Department of Health and Human Services, Centers for Medicare and Medicaid Services, “Medicaid Early & Periodic Screening & Diagnostic Treatment Benefit – State Agency Responsibilities” (CMS-416), accessed January 10, 2011, [http://www.cms.gov/MedicaidEarlyPeriodicScrn/03\\_StateAgencyResponsibilities.asp](http://www.cms.gov/MedicaidEarlyPeriodicScrn/03_StateAgencyResponsibilities.asp). This figure counts children ages one to 18. Data from the 48 reporting states and the District of Columbia were supplemented with reports obtained directly from Michigan and Oregon.

<sup>2</sup> N. Pourat and G. Nicholson, *Unaffordable Dental Care Is Linked to Frequent School Absences* (Los Angeles, CA: UCLA Center for Health Policy Research, 2009), 1-6, accessed September 2, 2010, <http://www.healthpolicy.ucla.edu/pubs/publication.aspx?pubID=387>.

<sup>3</sup> E. Davis, A. Deinard, and E. Maiga, “Doctor, My Tooth Hurts: The Costs of Incomplete Dental Care in the Emergency Room,” *Journal of Public Health Dentistry* (Spring 2010): 1-6.

<sup>4</sup> M. Willis, C. Esqueda, and R. Schacht, “Social Perceptions of Individuals Missing Upper Front Teeth,” *Perceptual and Motor Skills* 106 (2008): 423–435.

<sup>5</sup> To estimate the number of children who will receive coverage through the ACA, Pew used national data to determine the number of children (approximately eight million) who are currently uninsured and who would likely qualify for public health insurance (Medicaid and the Children’s Health Insurance Program) and the state-based exchanges. (Children enrolled through any of

these programs are required to receive dental benefits.) Not all eight million eligible children will enroll in coverage. To account for families exempted from the law’s requirements, as well as those opting to decline coverage, we used a discount rate of 66 percent, which is drawn from Massachusetts’ health reform experience, to arrive at the figure of 5.3 million children. See “Distribution of the Nonelderly Uninsured by Age” (Henry J. Kaiser Family Foundation, 2009), accessed August 17, 2010, <http://www.statehealthfacts.org/comparable.jsp?typ=1&ind=134&cat=3&sub=40>. See also S. Long and L. Phadera, “Estimates of Health Insurance Coverage in Massachusetts from the 2009 Massachusetts Health Insurance Survey” (The Urban Institute, October 2009), accessed August 17, 2010, [http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/09/his\\_policy\\_brief\\_estimates\\_oct-2009.pdf](http://www.mass.gov/Eeohhs2/docs/dhcfp/r/pubs/09/his_policy_brief_estimates_oct-2009.pdf).

<sup>6</sup> Data on indicators such as children’s untreated tooth decay were not available for every state, and so could not be factored into the grade. Rather, states’ grades are influenced by the extent to which—if at all—they collect and track data on children’s dental health.

<sup>7</sup> C. Lewis and J. Stout, “Toothache in U.S. Children,” *Archives of Pediatric Adolescent Medicine* 164 (2010): 1059-1063, accessed November 4, 2010, <http://archpedi.ama-assn.org/cgi/content/abstract/164/11/1059>. The adjusted odds ratio for toothache among children under the poverty line is 1.88, as compared with children whose family incomes were above 400 percent of the poverty line.

<sup>8</sup> Pourat and Nicholson, *Unaffordable Dental Care*.



- <sup>9</sup> T. M. Leiendoeker, G. C. Martin et al., “2008 DOD Recruit Oral Health Survey: A Report on Clinical Findings and Treatment Need,” Tri-Service Center for Oral Health Studies (2008), 1.
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- <sup>12</sup> V. Smith, et. al., “Hoping for Economic Recovery, Preparing for Health Reform: A Look at Medicaid Spending, Coverage and Policy Trends: Results from a 50-State Medicaid Budget Survey for State Fiscal Years 2010 and 2011,” Kaiser Commission on Medicaid and the Uninsured (September 2010), 44, accessed November 1, 2010, <http://www.kff.org/medicaid/upload/8105.pdf>.
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- <sup>14</sup> Texas Department of Oral Health, “Water Fluoridation Costs in Texas: Texas Health Steps (EPSDT-Medicaid)” (May 2000), 2, accessed February 2, 2011, [www.dshs.state.tx.us/dental/pdf/fluoridation.pdf](http://www.dshs.state.tx.us/dental/pdf/fluoridation.pdf).
- <sup>15</sup> Following the introduction of dental therapists, both New Zealand and Canada saw dramatic reductions in the ratio of extractions to restorations. D. A. Nash and R. I. Nagel, “Confronting Oral Health Disparities among American Indian/Alaska Native Children: The Pediatric Oral Health Therapist,” *American Journal of Public Health*. 95, (no. 8, 2005): 1327.
- <sup>16</sup> Washington State Hospital Association, *Emergency Room Use* (October 2010) 8-12, accessed February 8, 2011, <http://www.wsha.org/files/127/ERreport.pdf>.
- <sup>17</sup> The national median charge among general practice dentists for procedure D1351 (dental sealant) is \$44 and national median charge for procedure D2150 (two-surface amalgam filling) is \$134. American Dental Association. “2009 Survey of Dental Fees,” (2009), 17, accessed June 30, 2010, <http://www.ada.org/members/1443.aspx>.
- <sup>18</sup> Task Force on Community Preventive Services, “Reviews of Evidence on Interventions to Prevent Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries,” *American Journal of Preventive Medicine*, 23 (2002): 21-54, accessed December 1, 2010, <http://www.thecommunityguide.org/oral/oral-ajpm-ev-rev.pdf>.
- <sup>19</sup> In some cases, state grades on this benchmark may have changed as a result of a better understanding among Pew researchers of relevant statutes and clearer interpretations of ambiguous statutes from state officials.
- <sup>20</sup> “Dental Sealants,” Bureau of Health, Maine Department of Human Services (2004), accessed March 30, 2011 at [http://www.cdc.gov/OralHealth/publications/library/burdenbook/pdfs/DS\\_factsheet.pdf](http://www.cdc.gov/OralHealth/publications/library/burdenbook/pdfs/DS_factsheet.pdf).
- <sup>21</sup> Systematic reviews by the CDC and the ADA indicate that it is appropriate to seal teeth that have early non-cavitated lesions, and that visual assessments are sufficient to determine whether non-cavitated lesions are present. J. Beauchamp et al. “Evidence-Based Clinical Recommendations for Use of Pit-and-Fissure Sealants: A Report of the American Dental Association Council on Scientific Affairs,” *Journal of the American Dental Association* 139 (2008): 257-267, accessed December 1, 2010, <http://jada.ada.org/cgi/reprint/139/3/257>. Accreditation standards for dental hygiene training programs include standard 2-11, relating to education of dental hygiene students on dental-specific anatomy and pathology, with the intent of providing “the student with knowledge of oral health and disease as a basis for assuming responsibility for assessing, planning and implementing



preventive and therapeutic services.” Commission on Dental Accreditation, Accreditation Standards for Dental Hygiene Education Programs, 19, accessed December 1, 2010, <http://www.ada.org/sections/educationAndCareers/pdfs/dh.pdf>.

<sup>22</sup> “Ten Great Public Health Achievements – United States, 1900-1999,” *Morbidity and Mortality Weekly Report*, U.S. Centers for Disease Control and Prevention (April 2, 1999) Vol. 48, No. 12, 241-243, accessed on March 28, 2011 at <http://www.cdc.gov/mmwr/preview/mmwrhtml/00056796.htm>.

<sup>23</sup> Centers for Disease Control and Prevention. “Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States,” *Morbidity and Mortality Weekly Report*, Reports and Recommendations, August 17, 2001. accessed December 1, 2010, <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5014a1.htm>.

<sup>24</sup> “Cost Savings of Community Water Fluoridation,” U.S. Centers for Disease Control and Prevention, accessed March 30, 2011 at [http://www.cdc.gov/fluoridation/fact\\_sheets/cost.htm](http://www.cdc.gov/fluoridation/fact_sheets/cost.htm).

<sup>25</sup> “HHS and EPA announce new scientific assessments and actions on fluoride,” a news release by the U.S. Department of Health and Human Services (January 7, 2011), accessed February 11, 2011, <http://www.hhs.gov/news/press/2011pres/01/20110107a.html>.

<sup>26</sup> Centers for Disease Control and Prevention, “2008 Water Fluoridation Statistics,” (October 2010), accessed December 9, 2010, <http://www.cdc.gov/fluoridation/statistics/2008stats.htm>.

<sup>27</sup> The figure of 58 percent reflects data as of 2006, the latest year for which information was available. That figure was unchanged from 2004 and only slightly changed from 1996, when it was 55 percent. R. Manski and E. Brown, “Dental Coverage of Children and Young Adults under Age 21, United States, 1996 and 2006,” Agency for Health Care Research and Quality, Statistical Brief 221 (September 2008), accessed February 23, 2010, [http://www.meps.ahrq.gov/mepsweb/data\\_files/publications/st221/stat221.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/st221/stat221.pdf).

<sup>28</sup> U.S. Department of Health and Human Services, “HHS Launches Oral Health Initiative,” (April 26, 2010), accessed December 9, 2010, <http://www.hhs.gov/ash/news/20100426.html>.

<sup>29</sup> Centers for Disease Control and Prevention, “CDC Funded States,” (October 2010), accessed December 9, 2010, [http://www.cdc.gov/OralHealth/state\\_programs/cooperative\\_agreements/index.htm](http://www.cdc.gov/OralHealth/state_programs/cooperative_agreements/index.htm).

<sup>30</sup> States can choose to operate their Medicaid dental programs in one of two basic ways: 1) fee-for-service, where individual providers are paid by the Medicaid program (or an “administrative services organization”) for services provided to enrollees; and 2) managed care, where the state pays an intermediary—a managed care organization—to establish a network of providers and pay for the care provided to enrollees. While many states have chosen to contract with managed care plans for their Medicaid medical benefits, it is far less prevalent in regard to dental benefits. In 2008, an ADA survey of states found that only 14 used managed care plans to provide dental benefits to more than 50 percent of enrollees.

Managed care organizations establish their reimbursement rates separate from fee-for-service programs. Where fee-for-service programs typically pay providers according to a set, published schedule of fees, managed care organizations generally have more flexibility to negotiate payment rates with individual providers. In some cases, this can result in managed care plans covering benefits that are unavailable through fee-for-service programs, such as enhanced coverage for specialty services and supplemental training for providers in the managed care network. However, evidence also indicates that poorly funded managed care programs can result in worsened access for program enrollees, and some critics argue that managed care principles cannot be applied to dental as effectively as in the medical field.

Please note that in most cases, the payment figures in this report are those paid by the state’s fee-for-service Medicaid program for a set of five common children’s procedures. Pew attempted to obtain detailed

information on fees paid by states' managed care contractors, but states were generally unable to provide this information.

Data obtained from American Dental Association, "State Innovations to Improve Access to Oral Health: A Compendium Update," (2008), accessed December 9, 2010, <http://www.ada.org/2123.aspx>; A. Snyder, "Increasing Access to Dental Care in Medicaid: Targeted Programs for Four Populations," National Academy for State Health Policy (March 2009), 2, accessed June 16, 2010, <http://www.nashp.org/node/642>; U.S. Government Accountability Office, "Medicaid: State and Federal Actions Have Been Taken to Improve Children's Access to Dental Services, but Gaps Remain" (September 2009), 13, accessed July 14, 2010, <http://www.gao.gov/new.items/d09723.pdf>; American Dental Association, "Medicaid Program Administration" (March 2004), accessed July 14, 2010, [http://www.ada.org/sections/professionalResources/pdfs/medicaid\\_administration.pdf](http://www.ada.org/sections/professionalResources/pdfs/medicaid_administration.pdf).

<sup>31</sup> U.S. Government Accountability Office, "Efforts Under Way to Improve Children's Access to Dental Services, but Sustained Attention Needed to Address Ongoing Concerns," (November 2010), 12, accessed December 1, 2010, <http://www.gao.gov/new.items/d1196.pdf>.

<sup>32</sup> U.S. Department of Health and Human Services, Health Resources and Services Administration, Designated HPSA Statistics Report, Table 4, "Health

Professional Shortage Areas by State, Detail for Dental Care Regardless of Metropolitan/Non-Metropolitan Status as of December 6, 2010," accessed December 7, 2010, <http://datawarehouse.hrsa.gov/quickaccessreports.aspx>. Note: This does not count shortage areas in territories such as Puerto Rico and Guam. Including the territories brings the total population living in dental HPSAs to more than 51 million.

<sup>33</sup> S. Wetterhall et. al., "Evaluation of the Dental Health Aide Therapist Workforce Model in Alaska," (October 2010), accessed December 2, 2010, <http://www.wkkf.org/knowledge-center/resources/2010/10/Alaska-Dental-Therapist-Program-RTI-Evaluation-Report.aspx>.

<sup>34</sup> "W.K. Kellogg Foundation Supports Community-Led Efforts in Five States to Increase Oral Health Care Access by Adding Dental Therapists to the Dental Team," (November 17, 2010), accessed February 23, 2011, <http://www.wkkf.org/news/Articles/2010/11/WK-Kellogg-Foundation-Supports-Community-Led-Efforts.aspx>.

<sup>35</sup> American Dental Association, "Community Dental Health Coordinators," accessed February 9, 2011, <http://www.ada.org/cdhc.aspx>.

<sup>36</sup> Megan Fitzpatrick, Director of Government Affairs, American Dental Hygienists' Association, correspondence with Pew Center on the States, January 28, 2011.

<sup>37</sup> Lewis and Stout, "Toothache in U.S. Children," 1061.

## Untreated Decay and Sealant Prevalence, State By State

### Indicators from the National Oral Health Surveillance System (NOHSS)

State	School Year of Data Collection	Percentage of Third Graders with Untreated Tooth Decay	Percentage of Third Graders with Dental Sealants
Alabama	2005-2007	27.6	28.8
Alaska	2007-2008	26.2	55.3
Arizona	2009-2010	40.4	47.1
Arkansas	2009-2010	29.0	27.0
California	2004-2005	28.7	27.6
Colorado	2006-2007	24.5	37.1
Connecticut	2006-2007	17.8	38.1
Delaware	2001-2002	29.9	34.3
Georgia	2004-2005	27.1	40.3
Idaho	2008-2009	22.5	57.1
Illinois	2008-2009	29.1	41.5
Iowa	2008-2009	21.9	49.2
Kansas	2003-2004	27.6	33.1
Kentucky	2000-2001	34.6	28.8
Louisiana	2007-2009	41.9	33.2
Maine	1998-1999	20.4	47.6
Maryland	2000-2001	25.9	23.7
Massachusetts	2006-2007	17.3	45.5
Michigan	2009-2010	27.1	26.4
Minnesota	2009-2010	18.1	64.1
Mississippi	2009-2010	30.6	23.5
Missouri	2004-2005	27.0	28.6
Montana	2005-2006	28.9	46.2
Nebraska	2004-2005	17.0	45.3
Nevada	2008-2009	28.1	37.5
New Hampshire	2008-2009	12.0	60.4
New Mexico	1999-2000	37.0	43.2
New York	2001-2003	33.1	27.0
North Dakota	2009-2010	20.7	60.4
Ohio	2009-2010	18.6	50.4
Oklahoma	2009-2010	22.6	33.1
Oregon	2006-2007	35.4	42.7
Pennsylvania	1998-1999	27.3	26.1
Rhode Island	2007-2008	28.2	36.3
South Carolina	2007-2008	22.6	23.9
South Dakota	2009-2010	29.1	54.8
Texas	2007-2008	42.7	34.4
Utah	2000-2001	23.0	50.0
Vermont	2002-2003	16.2	66.1
Virginia	2008-2009	15.4	49.4
Washington	2009-2010	14.9	51.2
Wisconsin	2007-2008	20.1	50.8

SOURCE: Source: National Oral Health Surveillance System: Oral Health Indicators. Data submitted as of March 2011. <http://www.cdc.gov/nohss/> (accessed March 4, 2011).

See NOHSS for full information and notes on sample size, response rate, etc. Data have not been posted to NOHSS from 9 jurisdictions: District of Columbia, Florida, Hawaii, Indiana, New Jersey, North Carolina, Tennessee, West Virginia, and Wyoming.

## Percentage of Low-Income Children Receiving Dental Services, State by State

Medicaid Utilization for Children Ages 1-18, Federal Fiscal Years 2000-2009

State	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Alabama	23.9%	28.9%	32.2%	36.2%	39.6%	41.2%	42.5%	51.9%	46.2%	49.9%
Alaska	37.1%	38.8%	41.0%	41.1%	41.8%	43.3%	43.0%	41.9%	41.7%	42.0%
Arizona	23.9%	23.3%	29.2%	31.1%	31.6%	31.8%	37.9%	40.1%	43.6%	47.2%
Arkansas	24.5%	26.7%	28.9%	30.8%	32.6%	31.8%	32.6%	29.5%	40.6%	57.1%
California	32.4%	34.4%	34.1%	34.5%	32.6%	33.8%	31.1%	31.3%	33.4%	38.9%
Colorado	38.6%	30.2%	32.8%	38.6%	39.3%	47.2%	38.5%	40.2%	43.0%	46.6%
Connecticut	33.7%	30.3%	33.3%	34.5%	35.6%	33.0%	36.5%	41.4%	40.5%	42.5%
Delaware <sup>1</sup>	23.1%	25.2%	17.3%	26.7%	29.3%	30.4%	32.4%	34.5%	37.1%	41.1%
District of Columbia	25.4%	30.5%	24.8%	19.8%	30.4%	32.0%	28.8%	35.5%	37.7%	44.6%
Florida	25.9%	24.0%	24.9%	25.8%	25.9%	22.5%	23.2%	23.8%	23.5%	25.7%
Georgia	24.5%	20.3%	23.8%	35.5%	37.9%	41.3%	39.4%	41.5%	47.9%	42.5%
Hawaii <sup>2</sup>	30.6%	37.4%	0.8%	0.8%	0.8%	43.8%	45.2%	39.9%	46.8%	45.8%
Idaho	29.9%	32.0%	20.9%	36.3%	29.2%	42.1%	43.9%	42.8%	61.0%	67.7%
Illinois	29.1%	29.5%	28.2%	30.3%	32.8%	35.7%	39.1%	40.1%	42.4%	46.5%
Indiana	32.2%	35.1%	37.4%	40.5%	41.1%	40.9%	42.5%	43.0%	45.0%	47.4%
Iowa <sup>2</sup>	35.1%	38.1%	3.3%	42.4%	40.0%	44.9%	46.0%	46.9%	49.3%	53.8%
Kansas	22.2%	22.5%	25.7%	29.9%	35.2%	38.2%	40.4%	41.2%	43.7%	45.4%
Kentucky <sup>2</sup>	35.1%	35.5%	38.3%	39.1%	20.3%	7.8%	36.4%	24.5%	42.2%	40.8%
Louisiana	28.6%	29.4%	30.9%	31.6%	33.7%	33.7%	30.2%	32.4%	35.7%	41.8%
Maine <sup>3</sup>	37.9%	35.0%	33.2%				35.8%	37.1%	39.4%	40.3%
Maryland	11.4%	20.0%	24.0%	28.5%	30.1%	33.0%	32.9%	36.1%	40.2%	41.8%
Massachusetts	33.8%	34.3%	35.7%	36.7%	38.9%	40.2%	41.6%	44.6%	48.6%	52.3%
Michigan <sup>4</sup>	22.8%	24.0%	31.5%	32.6%	33.0%	33.0%	33.0%	34.5%	35.6%	36.8%
Minnesota	34.6%	32.2%	32.1%	35.2%	35.8%	37.3%	37.2%	37.7%	40.5%	42.1%
Mississippi <sup>2</sup>	27.6%	29.1%	27.1%	32.1%	69.4%	69.7%	37.3%	38.1%	41.8%	45.5%
Missouri	20.4%	21.6%	22.8%	23.3%	23.8%	24.1%	26.2%	27.9%	27.5%	30.3%
Montana	26.5%	25.9%	26.0%	25.9%	25.2%	25.9%	25.8%	29.2%	28.6%	29.9%
Nebraska	42.0%	42.5%	44.9%	43.2%	46.4%	47.5%	47.9%	49.9%	50.4%	52.5%
Nevada	20.6%	20.4%	17.1%	15.8%	13.8%	19.3%	22.4%	27.5%	34.0%	41.9%
New Hampshire	34.1%	34.7%	36.6%	27.7%	38.1%	42.3%	45.4%	47.0%	50.8%	54.2%
New Jersey	18.2%	19.7%	21.6%	23.4%	23.7%	25.5%	28.1%	33.9%	35.7%	40.9%
New Mexico	24.7%	29.8%	39.3%	42.8%	41.7%	33.0%	45.1%	47.6%	46.9%	49.8%
New York	27.3%	25.9%	27.1%	26.6%	27.7%	32.9%	30.1%	33.7%	35.5%	38.4%
North Carolina	24.6%	28.0%	32.3%	36.0%	37.2%	41.1%	43.3%	45.7%	48.4%	52.1%
North Dakota	13.8%	33.0%	31.6%	33.4%	27.8%	27.5%	21.2%	28.1%	32.6%	36.9%
Ohio	43.1%	25.6%	29.4%	33.2%	35.6%	37.0%	38.8%	39.9%	39.8%	42.7%
Oklahoma	17.0%	18.4%	14.3%	19.8%	29.2%	36.9%	40.5%	42.7%	43.1%	46.0%
Oregon <sup>4</sup>	28.6%	32.8%	31.9%	30.1%	30.5%	32.0%	34.4%	34.9%	36.5%	38.8%
Pennsylvania	23.2%	27.8%	28.8%	31.3%	29.5%	29.9%	29.8%	32.2%	29.8%	37.3%
Rhode Island	36.7%	36.3%	36.4%	36.9%	37.7%	39.4%	41.0%	43.8%	50.3%	46.7%
South Carolina	31.3%	19.2%	38.8%	41.5%	42.9%	46.1%	46.8%	46.9%	50.3%	51.9%
South Dakota	14.6%	29.4%	31.5%	33.3%	33.7%	37.0%	37.5%	37.0%	42.0%	46.0%
Tennessee	29.5%	28.0%	28.5%	34.9%	40.2%	41.7%	40.7%	40.2%	42.0%	46.4%
Texas	42.8%	41.7%	42.5%	46.6%	47.6%	48.3%	47.8%	53.7%	54.5%	59.8%
Utah	34.0%	33.6%	36.1%	35.7%	37.5%	38.6%	39.3%	39.5%	40.5%	42.6%
Vermont	48.9%	49.5%	49.7%	50.9%	50.8%	52.7%	56.3%	57.1%	55.6%	57.3%
Virginia	21.8%	24.2%	20.9%	26.6%	26.8%	27.0%	35.4%	40.8%	42.6%	45.7%
Washington	46.7%	47.7%	41.1%	43.5%	43.2%	45.7%	46.1%	47.6%	49.3%	52.4%
West Virginia <sup>2,3</sup>	34.6%	35.4%	37.2%	37.7%		45.2%	62.2%	45.6%	46.5%	48.5%
Wisconsin	22.2%	20.9%	27.5%	32.4%	35.7%	23.0%	24.1%	25.7%	27.4%	30.1%
Wyoming	33.5%	28.7%	32.3%	32.2%	33.0%	35.8%	36.5%	37.3%	40.4%	43.5%
National	29.8%	29.4%	30.8%	33.6%	34.8%	36.1%	36.3%	38.1%	40.2%	43.8%

SOURCE: Centers for Medicare and Medicaid Services. 1995-2009 Medicaid Early & Periodic Screening & Diagnostic Treatment Benefit (CMS-416). [http://www.cms.hhs.gov/MedicaidEarlyPeriodicScrn/03\\_StateAgencyResponsibilities.asp](http://www.cms.hhs.gov/MedicaidEarlyPeriodicScrn/03_StateAgencyResponsibilities.asp) (accessed January 10, 2011). Percentages were calculated by dividing the number of children ages 1-18 receiving any dental service by the total number of enrollees ages 1-18.

<sup>1</sup> Delaware data from 2007 have been updated to reflect information obtained from the Delaware Medicaid agency. The agency reports problems with the original 2007 submission to CMS.

<sup>2</sup> Hawaii submitted data in 2002, 2003, and 2004 that appear to be abnormally low, as did Iowa in 2002 and Kentucky in 2005. Mississippi submitted data in 2004 and 2005 that appear to be abnormally high, as did West Virginia in 2006, indicating possible problems with the submission. Please use caution when interpreting the data in question for those years.

<sup>3</sup> Blank values indicate that data were not submitted for the year in question.

<sup>4</sup> Note that 2009 data for Michigan and Oregon were not included in the CMS data file. These data were obtained directly from each state's Medicaid agency.

## Exhibit C

Dentist Shortage, State by State Percentage of each state's population that is living in Dental Health Professional Shortage Areas (DHPSAs) and estimated to be unserved (December 2010)

State	Total Population Living in DHPSAs	Estimated Unserved Population in DHPSAs	Total Population (HRSA estimate)	Percent Living in DHPSAs	Percent Unserved	Number of Dentists Needed to Remove Shortage Designation (approximate)
Alabama	1,521,655	1,111,883	4,514,827	33.7%	24.6%	287
Alaska	144,115	76,915	654,052	22.0%	11.8%	13
Arizona	1,323,701	807,346	5,684,787	23.3%	14.2%	135
Arkansas	344,359	188,491	2,738,858	12.6%	6.9%	27
California	2,647,514	1,400,269	35,849,123	7.4%	3.9%	388
Colorado	476,156	288,888	4,597,702	10.4%	6.3%	70
Connecticut	463,489	341,689	3,501,403	13.2%	9.8%	61
Delaware	242,220	143,220	825,677	29.3%	17.3%	27
District of Columbia	27,595	22,195	560,178	4.9%	4.0%	5
Florida	3,612,032	2,954,578	17,260,294	20.9%	17.1%	788
Georgia	1,402,188	946,123	8,794,398	15.9%	10.8%	201
Hawaii	343,119	168,182	1,269,194	27.0%	13.3%	30
Idaho	427,285	263,785	1,383,295	30.9%	19.1%	52
Illinois	2,141,049	1,746,800	12,704,832	16.9%	13.7%	426
Indiana	264,704	192,104	6,223,030	4.3%	3.1%	48
Iowa	436,022	289,027	2,948,982	14.8%	9.8%	61
Kansas	653,750	457,937	2,731,719	23.9%	16.8%	94
Kentucky	574,983	269,413	4,136,773	13.9%	6.5%	40
Louisiana	2,662,958	1,442,258	4,506,731	59.1%	32.0%	218
Maine	520,812	222,712	1,313,256	39.7%	17.0%	48
Maryland	610,038	415,938	5,554,946	11.0%	7.5%	56
Massachusetts	1,011,505	544,084	6,447,064	15.7%	8.4%	94
Michigan	1,291,460	985,166	10,109,402	12.8%	9.7%	259
Minnesota	468,263	291,908	5,088,140	9.2%	5.7%	55
Mississippi	1,685,858	970,013	2,890,760	58.3%	33.6%	183
Missouri	1,359,092	1,032,382	5,729,634	23.7%	18.0%	239
Montana	328,259	227,459	922,057	35.6%	24.7%	54
Nebraska	48,909	28,567	1,746,803	2.8%	1.6%	4
Nevada	441,382	379,282	2,296,683	19.2%	16.5%	86
New Hampshire	59,144	27,644	1,298,571	4.6%	2.1%	6
New Jersey	114,236	82,167	8,687,337	1.3%	0.9%	22
New Mexico	788,123	514,506	1,889,363	41.7%	27.2%	104
New York	2,086,458	1,233,552	19,234,323	10.8%	6.4%	221
North Carolina	1,465,446	1,008,655	8,486,358	17.3%	11.9%	222
North Dakota	79,638	53,238	632,801	12.6%	8.4%	11
Ohio	1,199,703	850,177	11,454,693	10.5%	7.4%	181
Oklahoma	303,858	195,858	3,526,503	8.6%	5.6%	55
Oregon	832,367	539,763	3,590,017	23.2%	15.0%	114
Pennsylvania	1,835,906	1,192,628	12,388,063	14.8%	9.6%	272
Rhode Island	158,516	112,316	1,082,243	14.6%	10.4%	31
South Carolina	1,542,834	961,348	4,178,754	36.9%	23.0%	183
South Dakota	124,540	96,640	766,802	16.2%	12.6%	19
Tennessee	1,772,803	1,249,901	5,878,423	30.2%	21.3%	218
Texas	4,739,183	2,774,311	22,406,324	21.2%	12.4%	509
Utah	255,076	166,415	2,377,214	10.7%	7.0%	26
Vermont	28,818	15,618	621,262	4.6%	2.5%	1
Virginia	1,164,606	675,490	7,458,295	15.6%	9.1%	132
Washington	1,060,000	687,922	6,182,560	17.1%	11.1%	117
West Virginia	242,099	137,215	1,812,508	13.4%	7.6%	28
Wisconsin	563,011	482,311	5,496,679	10.2%	8.8%	117
Wyoming	69,011	38,411	502,975	13.7%	7.6%	7
TOTAL	47,959,848	31,304,700	292,936,668	16.4%	10.7%	6,645

SOURCE: U.S. Department of Health and Human Services, Health Resources and Services Administration, Designated HPSA Statistics Report, Table 4, "Health Professional Shortage Areas by State, Detail for Dental Care Regardless of Metropolitan/Non-Metropolitan Status as of December 6, 2010," <http://datawarehouse.hrsa.gov/quickaccessreports.aspx> (Accessed December 7, 2010). And U.S. Department of Health and Human Services, Health Resources and Services Administration, "State Population and Health Professional Shortage Area Population Statistics as of 12/8/10," <http://datawarehouse.hrsa.gov/quickaccessreports.aspx> (Accessed December 9, 2010)

## Pew Center on the States Analysis of Eight Key Policy Indicators

State	Grade	Total policy benchmarks met or exceeded	State has sealant programs in place in at least 25 percent of high-risk schools, 2010	Meets or exceeds benchmarks	State does not require a prior dentist's exam before a hygienist sees a child in a school sealant program, 2010	State provides optimally fluoridated water to at least 75 percent of citizens on community systems, 2008
National Benchmark		25% or more	Yes	75%		
Alabama	C	4	<25%		No(DS)	82.2% ✓
Alaska	A	6	75-100%	✓	Yes (ES)	✓ 62.8%
Arizona	B	5	25-49%	✓	Yes (ES)	✓ 52.3%
Arkansas	C	4	<25%		Yes (ES)	✓ 60.5%
California	C	4	<25%		Yes (EN)	✓ 58.8%
Colorado	B	5	25-49%	✓	Yes (EN)	✓ 70.6%
Connecticut	A	6	<25%		Yes (EN)	✓ 89.9% ✓
Delaware	B	5	25-49%	✓	No (EA)	76.8% ✓
District of Columbia	D	3	<25%		No (DS)	100.0% ✓
Florida	F	2	<25%		No (EA)	78.3% ✓
Georgia	B	5	25-49%	✓	No (DS)	95.8% ✓
Hawaii	F	1	0%		No (DS)	10.8%
Idaho	B	5	25-49%	✓	Yes (ES)	✓ 31.2%
Illinois	B	5	50-74%	✓	No (EA)	95.4% ✓
Indiana	F	2	<25%		No (DS)	94.5% ✓
Iowa	B	5	<25%		Yes (ES)	✓ 91.8% ✓
Kansas	C	4	<25%		Yes (ES)	✓ 44.7%
Kentucky	C	4	<25%		No (EA)	99.4% ✓
Louisiana	D	3	<25%		No (EA)	28.3%
Maine	A	6	50-74%	✓	Yes (EN)	✓ 79.7% ✓
Maryland	A	7	25-49%	✓	Yes (EN)	✓ 99.8% ✓
Massachusetts	A	6	25-49%	✓	Yes (ES)	✓ 65.4%
Michigan	C	4	<25%		Yes (EN)	✓ 89.8% ✓
Minnesota	A	6	<25%		Yes (EN)	✓ 98.8% ✓
Mississippi	C	4	<25%		No (DS)	54.6%
Missouri	C	4	0%		Yes (ES)	✓ 79.8% ✓
Montana	F	2	0%		No (EA)	30.0%
Nebraska	C	4	<25%		Yes (EN)	✓ 69.9%
Nevada	C	4	<25%		Yes (ES)	✓ 72.0%
New Hampshire	B	5	75-100%	✓	Yes (EN)	✓ 42.6%
New Jersey	F	2	0%		No (DS)	13.6%
New Mexico	B	5	<25%		Yes (EN)	✓ 77.0% ✓
New York	B	5	25-49%	✓	Yes (EN)	✓ 72.2%
North Carolina	D	3	<25%		No (EA)	85.6% ✓
North Dakota	B	5	<25%		Yes (EN)	✓ 96.4% ✓
Ohio	B	5	50-74%	✓	No (EA)	84.1% ✓
Oklahoma	B	5	0%		Yes (ES)	✓ 75.3% ✓
Oregon	B	5	50-74%	✓	Yes (EN)	✓ 27.4%
Pennsylvania	D	3	<25%		Yes (ES)	✓ 54.3%
Rhode Island	B	5	50-74%	✓	No (EA)	84.6% ✓
South Carolina	A	6	50-74%	✓	Yes (EN)	✓ 94.4% ✓
South Dakota	B	5	0%		No (EA)	93.3% ✓
Tennessee	C	4	25-49%	✓	No (EA)	91.4% ✓
Texas	B	5	<25%		No (DS)	78.6% ✓
Utah	B	5	25-49%	✓	Yes (ES)	✓ 54.3%
Vermont	B	5	50-74%	✓	Yes (ES)	✓ 58.5%
Virginia	C	4	<25%		No (EA)	94.9% ✓
Washington	B	5	25-49%	✓	Yes (EN)	✓ 62.4%
West Virginia	C	4	25-49%	✓	No (DS)	90.6% ✓
Wisconsin	C	4	<25%		Yes (EN)	✓ 89.7% ✓
Wyoming	D	3	0%		No (DS)	36.8%

SOURCE: Pew Center on the States, 2011. See Methodology for details on data sources for individual indicators.

Key for exam indicator: EN - dentist's exam never required; ES - dentist's exam sometimes required; EA - dentist's exam always required; DS - dentist's exam and direct/indirect supervision required.

## APPENDIX TABLES

Exhibit D

(continued)

State meets or exceeds the 2007 national average of children ages 1 to 18 on Medicaid receiving dental services, 2009		State pays dentists who serve Medicaid-enrolled children at least the national average of Medicaid rates as a percentage of the dentists' median retail fees, 2010		State Medicaid program reimburses medical care providers for preventive dental health services, 2010		State has authorized a new primary care dental provider, 2010		State submits basic screening data to the National Oral Health Surveillance System, 2010	
<b>38.1%</b>		<b>60.5%</b>		<b>Yes</b>		<b>Yes</b>		<b>Yes</b>	
49.9%	✓	53.6%		Yes	✓	No		Yes	✓
42.0%	✓	91.4%	✓	Yes	✓	No <sup>1</sup>		Yes	✓
47.2%	✓	68.9%	✓	No		No		Yes	✓
57.1%	✓	63.9%	✓	No		No		Yes	✓
38.9%	✓	32.8%		Yes	✓	No		Yes	✓
46.6%	✓	51.1%		Yes	✓	No		Yes	✓
42.5%	✓	78.5%	✓	Yes	✓	No		Yes	✓
41.1%	✓	80% <sup>2</sup>	✓	No		No		Yes	✓
44.6%	✓	84.1%	✓	No		No		No	
25.7%		27.5%		Yes	✓	No		No	
42.5%	✓	51.9%		Yes	✓	No		Yes	✓
45.8%	✓	37.7%		No		No		No	
67.7%	✓	43.0%		Yes	✓	No		Yes	✓
46.5%	✓	48.4%		Yes	✓	No		Yes	✓
47.4%	✓	58.0%		No		No		No	
53.8%	✓	46.8%		Yes	✓	No		Yes	✓
45.4%	✓	55.0%		Yes	✓	No		Yes	✓
40.8%	✓	51.9% <sup>3</sup>		Yes	✓	No		Yes	✓
41.8%	✓	67.9%	✓	No		No		Yes	✓
40.3%	✓	46.5%		Yes	✓	No		Yes	✓
41.8%	✓	70.7%	✓	Yes	✓	No		Yes	✓
52.3%	✓	68.6%	✓	Yes	✓	No		Yes	✓
36.8%		45.9% <sup>4</sup>		Yes	✓	No		Yes	✓
42.1%	✓	40.1%		Yes	✓	Yes	✓	Yes	✓
45.5%	✓	61.9% <sup>3</sup>	✓	Yes	✓	No		Yes	✓
30.3%		46.7%		Yes	✓	No		Yes	✓
29.9%		55.6%		Yes	✓	No		Yes	✓
52.5%	✓	49.4%		Yes	✓	No		Yes	✓
41.9%	✓	54.7%		Yes	✓	No		Yes	✓
54.2%	✓	61.8%	✓	No		No		Yes	✓
40.9%	✓	42.8% <sup>4</sup>		Yes	✓	No		No	
49.8%	✓	53.5%		Yes	✓	No		Yes	✓
38.4%	✓	57.3%		Yes	✓	No		Yes	✓
52.1%	✓	55.5%		Yes	✓	No		No	
36.9%		66.2%	✓	Yes	✓	No		Yes	✓
42.7%	✓	43.9%		Yes	✓	No		Yes	✓
46.0%	✓	64.4%	✓	No		No		Yes	✓
38.8%	✓	43.3%		Yes	✓	No		Yes	✓
37.3%		48.8%		Yes	✓	No		Yes	✓
46.7%	✓	35.4% <sup>4</sup>		Yes	✓	No		Yes	✓
51.9%	✓	57.1%		Yes	✓	No		Yes	✓
46.0%	✓	62.4%	✓	Yes	✓	No		Yes	✓
46.4%	✓	67.3%	✓	No		No		No	
59.8%	✓	63.8%	✓	Yes	✓	No		Yes	✓
42.6%	✓	33.2%		Yes	✓	No		Yes	✓
57.3%	✓	54.5%		Yes	✓	No		Yes	✓
45.7%	✓	59.4%		Yes	✓	No		Yes	✓
52.4%	✓	46.5%		Yes	✓	No		Yes	✓
48.5%	✓	62.5%	✓	No		No		No	
30.1%		36.4%		Yes	✓	No		Yes	✓
43.5%	✓	65.3%	✓	Yes	✓	No		No	

<sup>1</sup> Dental Health Aide Therapists are authorized under federal law and the authority of the Alaska Native Tribal Health Consortium, not the state.

<sup>2</sup> Note that no calculation was performed for Delaware, since it has no set fee schedule, and simply pays 80 percent of each dentist's billed charges.

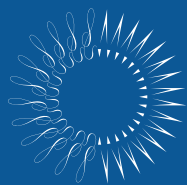
<sup>3</sup> Includes only four procedures, due to missing value.

<sup>4</sup> Weighted average of fee-for-service and managed care payment rates.









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