



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

### **METHODOLOGY**

This 2011 report is an attempt to gauge each state’s policy responses to the dental health challenges faced by America’s disadvantaged children. We set out to answer four questions:

- Are states making optimal use of proven preventive strategies?
- Are states meeting their obligation to provide children on Medicaid with access to dental health care?
- Are states taking advantage of promising approaches for expanding the oral health workforce in order to provide care to more children?
- Are states collecting data to track their progress?

We used public data sources and direct surveys of states to assess eight key policies that states have at their disposal to improve low-income children’s dental health and access to care. This is not an exhaustive list. Other approaches, such as public education about dental hygiene for kids, or state loan repayment programs for dentists who locate in shortage areas, may also play a role—but they are outside of the scope of this report.

As in the 2010 report, *The Cost of Delay*, the 2011 report presents data—but does not grade states—on the rates of untreated tooth decay among children. Only 42 states report state-level data on this measure to the National Oral Health Surveillance System (NOHSS). Even among those states, the information is not available for a comparable time period; some states have submitted data as recently as 2010, while others have not updated their information within the last five years. As a result of these data limitations, we focused our assessment on policy responses for which comparable data were available for all 51 jurisdictions.

#### **Setting Benchmarks**

This report compares updated data on each of the eight key policy approaches to the benchmarks established in *The Cost of Delay*.<sup>1</sup>

The benchmarks have different origins. In some cases, as with water fluoridation, the benchmark is a goal established in the Healthy People national objectives that are monitored by the U.S. Department of Health and Human Services. In other instances, such as the authorization of new primary care dental providers, the policy standard is whether a state has taken an action or adopted a specific policy. For two of the eight benchmarks—Medicaid utilization rates and Medicaid payment rates—we used the national averages (38.1 percent and 60.5 percent, respectively). It is important to note that just because a state met or exceeded a national average does not mean it has “solved” the problem. For instance, we set the benchmark for Medicaid utilization at 38.1 percent—the national average for Medicaid-enrolled children who received

dental services in 2007. That is not a high bar, but it is a practical and realistic baseline that allows us to distinguish between states with a policy framework that moves them in the right direction and those states which are falling behind.

## The Grades

A point was given for each benchmark that a state met. We adopted this approach because of the variety of types of policy indicators involved in the analysis—some require a simple yes or no, while others assess percentages on a continuous scale. For indicators such as water fluoridation, states may have made progress toward the benchmarks but have not quite met them. We have attempted to indicate the range of state performance in the tables describing each indicator.

We assigned letter grades based on the following scale:

Benchmarks met	Grade
6-8	A
5	B
4	C
3	D
0-2	F

## The Indicators

### 1. Providing Sealant Programs in High-Risk Schools

*Benchmark: State has sealant programs in place in at least 25 percent of high-risk schools.*

Pew conducted an e-mail survey of state dental directors (or other applicable program staff) in all 51 jurisdictions regarding the prevalence of sealant programs in high-risk schools. The Association of State and Territorial Dental Directors (ASTDD) assisted us in contacting states, and in reconfirming the final data. States were asked to report the percentage of target high-risk schools reached by school-based or school-linked sealant programs in one of five categories: no programs; programs reaching less than 25 percent of target schools; those reaching between 25 and 49 percent of target schools; those reaching between 50 and 74 percent of target schools; and those reaching 75 percent or more of target schools.<sup>2</sup>

States were awarded a point if they reached 25 percent or more of their target schools.

This benchmark was identified because it reflects a state's progress toward the U.S. Task Force on Community Preventive Services' recommendation that sealant programs be implemented in all high-risk schools.<sup>3</sup>

### 2. Eliminating Unnecessary Barriers for Hygienists to Work in School Sealant Programs

*Benchmark: State does not require a dentist's exam before a hygienist sees a child in a school sealant program.*

The ability of school-based sealant programs to use resources efficiently and serve as many high-risk children as possible depends in part on whether programs must find and pay dentists to examine children before sealants can be placed. Dental hygienists are the primary workforce for school-based sealant programs. Recent reviews by the Centers for Disease Control and Prevention (CDC) and the American Dental Association's (ADA) Council on Scientific Affairs have found that a simple visual assessment, which dental hygienists are qualified to perform, is sufficient to determine whether a tooth is healthy enough for a sealant.<sup>4</sup>

Pew conducted separate e-mail surveys of state dental directors (or other applicable program staff) and state boards of dentistry to collect information on states' requirements for dental hygienists working in school sealant programs. Information from those surveys was assessed on a four-level scale: dentist's exam not required; dentist's exam sometimes required (for example, if there is a "public health" designation that a hygienist can receive to secure the authority to place sealants without a dentist's prior exam); dentist's exam always required; dentist's exam and physical presence (direct or indirect supervision) required. States were awarded a point for meeting the benchmark if they fall into one of the first two categories—in other words, if a dentist's exam is not always required in public health settings.

### 3. Fluoridating Community Water Supplies

*Benchmark: State provides optimally fluoridated water to at least 75 percent of citizens on community systems.*

We evaluated 2008 CDC estimates to determine the percentage of each state's population that is on public water supplies with access to optimally fluoridated water. Note that this excludes the portion of the population in each state that is not connected to a community water supply—for example, people who get their drinking water from private wells, which is about 11 percent of the U.S. population.<sup>5</sup>

The Healthy People 2010 national goal, in place when *The Cost of Delay* was published, called for states to provide optimally fluoridated water to at least 75 percent of their population on community water systems.<sup>6</sup> States meeting or exceeding this level were awarded a point.

### 4. Providing Care to Medicaid-Enrolled Children

*Benchmark: State meets or exceeds the national average (38.1 percent) of children ages 1-18 on Medicaid receiving dental services in 2007.*

We used Medicaid data reported by states to the federal Centers for Medicare and Medicaid Services to determine the percentage of Medicaid-enrolled children ages 1 to 18 who received any dental care in federal fiscal year 2009. Michigan and Oregon were not included in the federal data file, so data were obtained directly from each of those states' Medicaid agencies.

Dividing the number of Medicaid-enrolled children who received any dental service by the total number of children in the program at any time during the year yields a percentage of children

receiving dental services.<sup>7</sup> The grade is based on data from 2009, but data showing the trend since 2000 are reported in each state fact sheet.

States meeting or exceeding the 2007 national average were awarded a point. As discussed earlier, this level of performance indicates a state is progressing toward a goal. However, beating the 2007 national average does not mean a state has succeeded in meeting its obligation to provide dental health care to low-income children. Indeed, the 2007 national average of 38.1 percent falls well short of the national average of 58 percent for children with private dental insurance who received services in 2006 (the latest year for which data were available).<sup>8</sup>

## 5. Improving Medicaid reimbursement rates for dentists

*Benchmark: State pays dentists who serve Medicaid-enrolled children at least the 2008 national average (60.5 percent) of Medicaid rates as a percentage of dentists' median retail fees.*

We collaborated with the Medicaid-SCHIP Dental Association (MSDA) to survey each jurisdiction on the fees paid by state Medicaid fee-for-service and managed care programs in 2010 for five very common children's procedures. The five *Current Dental Terminology* procedure codes that were used represent core children's dental services: examination; fluoride application; sealants; a basic filling; and tooth extraction.<sup>9</sup> These Medicaid fees were compared to ADA survey data of the median retail charges of dentists in each state's region in 2009, the most recent data available.<sup>10</sup> Total Medicaid payments for these five procedures were divided by the total retail charges for the procedures.<sup>11</sup>

In most cases, the fees reported are those paid by the state's fee-for-service program. In many states, a portion of enrollees receive their dental benefits through managed care contractors, but states are either unable to report on their contractors' proprietary fee schedules, or report that managed care pays rates very similar to the fee-for-service rate schedule. Medicaid reimbursement rates for Michigan, New Jersey, and Rhode Island, which provided their fee-for-service payment rates—as well as the rates paid by managed care contractors in each state—are weighted averages of the fees paid in the state. The weighted averages were calculated by multiplying the fee-for-service payment rate for each procedure by the percentage of children with a fee-for-service benefit, and adding that to the product of the managed care payment rate and the percentage of children enrolled in managed care.

Surveys were not received from Idaho, Kansas, Tennessee, Wisconsin, or Wyoming. In those cases, fee-for-service payment rates were obtained from state agency websites. We have no information about the rates paid by managed care contractors, if any.

The benchmark for this indicator was the 2008 average Medicaid payment rate of 60.5 percent that was presented in *The Cost of Delay*. States meeting or exceeding this level were awarded a point. Achieving this threshold shows states' progress toward a goal. It also coincides with a widely quoted figure for dentists' overhead costs.

## 6. Reimbursing Medical Providers for Basic Preventive Care

*Benchmark: State Medicaid program reimburses medical care provider for preventive dental health services.*

The MSDA survey of states also collected data from state Medicaid agencies about state policies on the reimbursement of medical care providers for preventive dental health in 2010. This data was verified and supplemented with data from the American Academy of Pediatrics. States reimbursing medical care providers for these services were awarded a point. Credit was not given to states that have authorized this reimbursement but have not yet funded it within their Medicaid programs.

#### 7. Authorizing New Primary Care Dental Providers

*Benchmark: State has authorized a new primary care dental provider.*

States were awarded a point if they have authorized a new primary care dental provider who can provide basic preventive and restorative dental services.

As of 2010, Minnesota is the only state that has authorized a new primary care dental provider. The Dental Health Aide Therapist program in Alaska is authorized by the Alaska Native Tribal Health Consortium, not the state. The report and factsheets also discuss other states where workforce innovations have been proposed, or which are home to pilot projects, such as the ADA's Community Dental Health Coordinator.

#### 8. Tracking Basic Data on Children's Dental Health

*Benchmark: State submits basic screening data to the National Oral Health Surveillance System.*

The National Oral Health Surveillance System (NOHSS) is a national database of nine key oral health indicators maintained by the CDC, in collaboration with the ASTDD.<sup>12</sup> Three of those indicators—the rate of children who have ever had a cavity, the rate of untreated tooth decay and overall sealant prevalence—come from statewide surveys of third graders.<sup>13</sup> As of January 2011, only 42 states have ever submitted data on these indicators to NOHSS. NOHSS data are submitted individually by states, and the time period of the data reported varies by state; some of the data is more than five years old. Eight states and the District of Columbia have never submitted data to NOHSS.

We awarded a point to each state that has submitted data to NOHSS.<sup>14</sup>

#### **Dental Health Professional Shortage Areas**

The report also includes non-graded data on Dental Health Professional Shortage Areas. We conservatively estimated the percentage of the population in each state and the nation that is unserved for dental care by comparing data for total state population to estimates of dentist shortages made by the federal Health Resources and Services Administration (HRSA).<sup>15</sup> Localities may apply to HRSA for designation as a Dental Health Professional Shortage Area.

For areas that are granted this designation, HRSA determines both the number of people who are unserved for dental care and the number of dentists that would be needed to meet the shortage. We divided the unserved population in each state by the total population to arrive at the percentage of each state's population estimated to be unserved for dental care.

This is a voluntary designation for which localities or states have to apply. This figure only counts those localities that have applied for and received designations, and is likely to be an undercount.

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<sup>1</sup> Pew Center on the States. *The Cost of Delay: State Dental Policies Fail One in Five Children* (February 2010). [http://www.pewcenteronthestates.org/report\\_detail.aspx?id=56870](http://www.pewcenteronthestates.org/report_detail.aspx?id=56870) (accessed February 16, 2011).

<sup>2</sup> "High-risk" schools were defined as those with 50 percent or more of their students participating in the federal Free and Reduced Lunch Program (FRL). This is in keeping with the recommendations of the U.S. Task Force on Community Preventive Services, and the recently published recommendations of the CDC (see endnotes 3 and 4). Note that some states may choose to use different criteria for high need when designing their own sealant programs, but the 50 percent FRL threshold is a reasonable standard to gauge performance across states.

<sup>3</sup> Task Force on Community Preventive Services, "Recommendations on Selected Interventions to Prevent Dental Caries, Oral and Pharyngeal Cancers, and Sports-Related Craniofacial Injuries," *American Journal of Preventive Medicine*, 23 (2002):16-20. <http://www.thecommunityguide.org/oral/oral-ajpm-recs.pdf> (accessed February 16, 2011).

<sup>4</sup> 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. <http://jada.ada.org/cgi/reprint/139/3/257> (accessed February 16, 2011). See also B. Gooch et.al. "Preventing Dental Caries Through School-Based Sealant Programs: Updated Recommendations and Review of Evidence," *Journal of the American Dental Association* 140 (2009): 1356-1365. <http://jada.ada.org/cgi/content/abstract/140/11/1356> (accessed March 3, 2011).

<sup>5</sup> Centers for Disease Control and Prevention, "2008 Water Fluoridation Statistics," <http://www.cdc.gov/fluoridation/statistics/2008stats.htm> (accessed September 29, 2010). CDC reports that there are 270 million people on community water systems, out of 304 million total people (88.7%).

<sup>6</sup> Since the publication of *The Cost of Delay*, new national objectives have been set in Healthy People 2020, including a new goal for fluoridation of reaching 79.6 percent of people on community water supplies. See the Healthy People 2020 oral health objectives at <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=32> (accessed February 16, 2011). As we did with the other indicators, however, we measured state progress against the benchmark set in *Cost of Delay*.

<sup>7</sup> Data are drawn from lines 12a and 1 of the CMS-416 report. Note that the denominator (line 1) includes any child enrolled for one month or more during the year. Centers for Medicare and Medicaid Services. 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).

<sup>8</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*. Statistical Brief 221 (September 2008), Agency for Healthcare Research and Quality, [http://www.meps.ahrq.gov/mepsweb/data\\_files/publications/st221/stat221.pdf](http://www.meps.ahrq.gov/mepsweb/data_files/publications/st221/stat221.pdf). (accessed February 16, 2011).

<sup>9</sup> D0120, periodic oral evaluation; D1203, topical fluoride application, child; D1351, sealant; D2150, amalgam filling, 2 surfaces; D7140, single tooth extraction.

<sup>10</sup> American Dental Association Survey Center. *2009 Survey of Dental Fees*. American Dental Association (December 2009), <http://www.ada.org/1619.aspx> (accessed September 29, 2010).

<sup>11</sup> Kentucky and Mississippi were missing information for one of these five procedures; where that was the case, both the Medicaid payment and retail charge for that procedure were omitted from the calculation. Note that no

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calculation was performed for Delaware, since it has no set fee schedule and simply pays 80 percent of each dentist's billed charges.

<sup>12</sup> See the National Oral Health Surveillance System (NOHSS), <http://www.cdc.gov/nohss/index.htm>. The other six NOHSS indicators are: adults 18 and older who have had a dental visit in the last year; adults 18 and older who have had their teeth cleaned in the last year; adults 65 and older who have lost all of their natural teeth; adults 65 and older who have lost 6 or more teeth; fluoridation status; and data on oral cancer.

<sup>13</sup> Children in third grade are selected because it allows states to simultaneously collect surveillance information and also check the retention of dental sealants that were placed by school-based sealant programs, which target second-graders.

<sup>14</sup> To be included in the NOHSS, surveys must follow a particular sampling methodology that allows estimation of the dental health of all children in the state. We understand that some states may have collected other data on the dental health status of their children, but the importance of having nationally comparable data for all states supports this as a minimum benchmark.

<sup>15</sup> 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/hpsadetail.aspx> (Accessed December 9, 2010). Note that this report is updated weekly.