Abstract

Former Surgeon General David Satcher has described oral and dental disease as a persistent but silent epidemic. While access, coverage and affordability issues in health care are well-documented and discussed, oral health issues are not as common in the public policy dialogue on health care reform.

The 2011 Colorado Health Access Survey (CHAS) provides detailed information about the growing problem of oral health insurance coverage and access in Colorado. These data show the affordability challenge of accessing needed dental care. CHAS uncovers the reasons for lacking dental insurance and presents a demographic portrait of Coloradans without dental insurance. It also provides insights concerning trends among different populations.

Much of this information is compared and tracked with baseline data gathered in the 2008-2009 Colorado Household Survey (COHS).

These are the key findings:

- The number of Coloradans without dental insurance increased 17 percent to 2.1 million in 2011 from 1.8 million in 2008-2009.
- Nearly four in 10 Coloradans, or 39.9 percent, lacked dental insurance in 2011. This compares with 37.0 percent in the earlier survey.
- Coloradans were 2.5 times more likely to be without dental insurance than without health insurance (15.8 percent).
- Nearly one in four Coloradans (22.9 percent or approximately 1.2 million) did not get needed dental care in the 12 months before the survey, citing cost.
- More than a third (36.6 percent) of those Coloradans who said they didn’t get needed dental care because of cost had dental insurance.
- Coloradans were more likely to forego dental care due to cost than all other types of care.
- Seniors 65 and older had the highest rate of dental uninsurance among the age groups (60.6 percent or about 324,000).
- Although lower-income Coloradans are more likely to be uninsured – 54.2 percent of those under the Federal Poverty Level (FPL) did not have dental insurance – nearly one in four Coloradans with incomes above 400 percent of FPL did not have dental insurance.
- More than half (52.8 percent) of Hispanic Coloradans did not have dental insurance in 2011, an 11 percent increase from 2008-2009 when 47.6 percent of Hispanics lacked dental insurance.
- An additional 66,300 children ages 0-18 had dental insurance in 2011 compared to 2008-2009. Even so, the number of children who visited a dental professional saw a statistically significant decline of nearly 41,500 during the same time period.
- Twice as many Coloradans with a usual source of medical care reported seeing a dental professional compared to those without a usual source of care.
- The highest percentages of Coloradans who did not visit a dental professional lived in rural regions.

NOTE: Unless otherwise noted, the data and analyses presented in all tables and graphs in this brief come from the 2011 Colorado Health Access Survey and/or the 2008-2009 Colorado Household Survey.
Introduction

Problems with access, coverage and affordability in health care are well documented, but these same issues for oral health are not always included in the public policy dialogue on health care reform. Yet good oral health is strongly tied to an individual’s overall health.

Oral disease can cause pain and speech problems in children. Poor oral health can be a complication of diabetes, and may be linked to other chronic diseases as well. In addition, the mouth often reveals problems that affect other areas of the body. Despite these links between oral and systemic health, dental care remains largely separate from health care in financing and insurance. Insurance is important. People are more likely to seek dental services if they have dental insurance, and preventive dental care can result in lower overall costs. When people do not have dental coverage or are unable to receive cost-effective preventive care, they may use costlier care settings for dental problems. A recent national study estimated that preventable dental conditions were the primary diagnosis in approximately 830,600 visits to emergency rooms in 2009 – up 16 percent from 2000. Dental disease is not reversible, but it is preventable. Regular preventive care helps people avoid the pain and cost associated with more invasive acute dental care. The Colorado Department of Public Health and Environment has identified oral health as one of its 10 Winnable Battles, aiming to increase the percentage of the population with fluoridated water, of infants who get a dental checkup by age one and of third-graders with dental sealants. Foundations and provider groups are working to increase awareness and use of dental services, and communities are starting to understand the importance of access to oral health. The CHAS data provide insight into Coloradans’ access to oral health care, and a baseline from which to track the progress of strategies designed to improve access.

Access to Oral Health Care: Identifying Barriers

In 2011, 63.4 percent of Coloradans visited a dental professional, down from the 66.3 percent with a visit in 2008-2009 – a marked decrease in the use of dental services. Oral health care is influenced by many factors, including social and cultural influences, personal preferences, geography, provider availability and affordability of care. The traditional separation of the dental and medical delivery systems can also limit access to oral health care, because more Coloradans have access to health insurance than dental insurance. If they were integrated, more people might have dental coverage.

This brief provides insight into three factors that affect oral health care: access to dental insurance, the cost of dental care and residence in a rural area.

Dental Insurance

Despite the coverage limitations of many dental insurance plans, having dental insurance does affect access, especially for lower-income Coloradans. Use of dental services is strongly associated with having dental insurance, and the CHAS findings reflect this association (see Graph 1). Of Coloradans with dental insurance, 76.9 percent visited a dental professional. By comparison, 44.5 percent of Coloradans without dental insurance visited a dental professional.

Still, more than one-third of Coloradans who did not get needed dental care because of cost had dental insurance. So, although dental insurance coverage does not guarantee access, it may ameliorate some affordability concerns. Coloradans without dental insurance were twice as likely to skip needed dental care due to cost as Coloradans with dental insurance.

The number of Coloradans without dental insurance grew to 2.1 million in 2011 from 1.8 million in 2008-2009. This was a statistically significant increase in the rate, to 39.9 percent without dental insurance in 2011 from 37.0 percent without dental insurance in 2008-2009. CHAS findings show that 36.3 percent of employed working-age adults lacked dental insurance in 2011, up from the 33.2 percent without dental insurance in 2008-2009. By comparison, 18.6 percent of employed working-age adults lacked health insurance in 2011.
More than 2.5 times the number of Coloradans were without dental insurance in 2011 (39.9 percent) than were without health insurance (15.8 percent) (see Graph 2). This is a difference of 1.2 million Coloradans.

During the same period, there was a decrease in the number of Coloradans who used dental services. The percentage of Coloradans who visited a dental professional in the 12 months before the survey fell from 66.3 percent in 2008-2009 to 63.4 percent in 2011, a statistically significant decrease of 2.9 percentage points, or 10,500 Coloradans. Given the connection between dental insurance and use, this trend is concerning but not surprising.

Coloradans with dental insurance were more likely to use dental services than uninsured Coloradans, especially among those with lower incomes (see Graph 4).

CHAS also provides insight into how the lack of dental benefits in public health insurance might impact use of dental services. Coloradans covered under Medicare (no dental benefit) and Medicaid (no benefit for enrollees over age 20) had lower rates of visits to a dental provider than Coloradans covered by employer-sponsored insurance, private insurance or Child Health Plan Plus (CHP+).

Even among Coloradans with dental insurance, fewer used dental services in 2011 than in 2008-2009, suggesting that there are other barriers to receiving dental care, including the cost of care and availability of dental providers.

Cost of Oral Health Care

Individuals with dental insurance are often responsible for significant out-of-pocket expenditures due to the limits and caps commonly found in dental insurance plans. The CHAS highlights the affordability challenge of dental care. Coloradans were more likely to forego dental care due to cost than any other type of care (see Graph 3 on page 4).

Approximately 1.2 million Coloradans, or 22.9 percent, did not receive needed dental care due to cost. The Coloradans who did not receive needed dental care were more likely to have incomes below 250 percent of the Federal Poverty Level (FPL). Also, about a third (36.6 percent) of the Coloradans who did not receive needed dental care because of cost had dental insurance. This may reflect the cost of dental care and the limitations of dental coverage.

Nationally, 41.6 percent of the $102.2 billion in total expenses for dental services in 2009 were paid by the patient, not by a public or private insurer. The Colorado Department of Public Health and Environment estimates that more than $1 billion is spent on dental services in Colorado each year.

The CHAS asked how much was spent on out-of-pocket dental and vision care. The percentage of Coloradans with out-of-pocket expenses for these types of care decreased from 72.4 percent in 2008-2009 to 70.2 percent in 2011. This may mean that more people are foregoing dental and vision care, finding it unaffordable.
Cost of care does not always prevent an individual from seeing a dental professional. Some may visit a dental professional and then decide to forego additional needed high-cost care such as permanent crowns or prosthetics for extracted teeth. These services are often not covered by dental insurance. In 2011, 15.2 percent of Coloradans who visited a dental professional did not receive additional needed dental care because of cost.

**Graph 3.** Percentage of Coloradans Who Did Not Receive Needed Care Because of Cost, Colorado, 2011

<table>
<thead>
<tr>
<th>Percent of Coloradans</th>
<th>No Necessary Care Due to Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>Did not fill a needed</td>
</tr>
<tr>
<td></td>
<td>prescription for medicine</td>
</tr>
<tr>
<td>6.6%</td>
<td>Did not get needed</td>
</tr>
<tr>
<td></td>
<td>mental health care</td>
</tr>
<tr>
<td>12.0%</td>
<td>Did not get needed</td>
</tr>
<tr>
<td></td>
<td>specialist care</td>
</tr>
<tr>
<td>12.5%</td>
<td>Did not get needed</td>
</tr>
<tr>
<td></td>
<td>doctor care</td>
</tr>
<tr>
<td>13.3%</td>
<td>Did not get needed</td>
</tr>
<tr>
<td></td>
<td>dental care</td>
</tr>
<tr>
<td>22.9%</td>
<td>Did not get needed</td>
</tr>
<tr>
<td></td>
<td>mental health care</td>
</tr>
<tr>
<td>71.0%</td>
<td>Had incomes below 250% FPL</td>
</tr>
<tr>
<td>36.6%</td>
<td>Had dental insurance</td>
</tr>
</tbody>
</table>

**UNDERSTANDING DENTAL INSURANCE**

Dental insurance coverage purchased through the commercial market can be employer-sponsored or individual.

The prevalence of employer-sponsored dental insurance has been diminishing, peaking in 1984 with 77 percent of full-time private U.S. workers having dental coverage to 57 percent of full-time private workers in 2011.\(^1^2\)

Private health insurance plans often exclude dental coverage. Approximately 98 percent of Americans with dental coverage have a policy separate from their medical insurance policy.\(^1^3,1^4\)

Dental insurance typically costs less per month than health insurance but may have high levels of cost-sharing and maximum benefit caps.

The relatively limited nature of dental benefits and the potential for significant out-of-pocket expenditures even with dental coverage may influence the decision to obtain dental insurance. While lack of dental insurance is more common among lower-income individuals, 22.8 percent of Coloradans with incomes above 400 percent FPL did not have dental insurance.

**Gaps in Dental Coverage under Publicly Financed Health Insurance Programs**

- Traditional Medicare does not provide a dental benefit, although some Medicare Advantage plans may include a benefit.
- Colorado Medicaid limits dental benefits to enrollees ages 20 and younger.
- CHP+ provides a capped dental benefit for children under the age of 18 who do not qualify for Medicaid but who live in families with incomes at or below 250 percent FPL. The annual maximum benefit is $600.
Graph 4. Visit to a Dental Professional by Income and Insurance Status, Colorado, 2011

<table>
<thead>
<tr>
<th>Income and Insurance Status</th>
<th>Had dental insurance and visited a dental professional</th>
<th>No dental insurance and visited a dental professional</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%-133% FPL</td>
<td>72.2%</td>
<td>35.1%</td>
</tr>
<tr>
<td>134%-250% FPL</td>
<td>70.2%</td>
<td>45.9%</td>
</tr>
<tr>
<td>251%-400% FPL</td>
<td>77.4%</td>
<td>50.5%</td>
</tr>
<tr>
<td>&gt; 400% FPL</td>
<td>84.4%</td>
<td>64.1%</td>
</tr>
</tbody>
</table>

Map 1. Percentage of Coloradans Who Reported Not Visiting a Dental Health Professional, by Health Statistics Region, Colorado, 2011

Location and Workforce

The decision to access dental services can be influenced by the availability of oral health providers. The distribution of Colorado’s dental workforce varies across the state. Twenty two counties are either fully or partially designated as a geographic Dental Health Professional Shortage Area (DHPSA) and twenty seven counties have full or partial designation as a low income DHPSA.15

CHAS findings show that Coloradans living in rural communities did not visit a dental health professional in the last 12 months as often as those in urban areas (see Map 1). Many of these counties are designated as DHPSAs, and many are the same places that have a shortage of other health care professionals.

Coloradans in these areas have difficulty getting access to dental care not only because of cost but because there are not enough professionals to provide the services. This may be one reason that
Coloradans of all income levels with a usual source of medical care more often reported seeing a dentist than those who did not have a usual source of care; areas with more health professionals also tend to be the areas with more dental professionals. Overall, twice as many Coloradans with a usual source of medical care reported seeing a dental professional as those without a usual source of care. Other possible reasons for this are that those who seek regular medical care may be more likely to seek regular dental care as well, or that the “usual source of care” provider encourages patients to have dental care and refers their patients to a dentist.

CHAS identified regional variations in dental insurance across Colorado, with the highest concentration of people without dental insurance in the southwest (see Map 2).

The higher rate of Coloradans without dental insurance in the western part of the state aligns with the higher percentages of health uninsurance rates in these communities, possibly due to the number of small employers and seasonal or lower-wage workers in these areas.

The regions along the Eastern Plains have some of the higher rates of health insurance, but the rate of dental uninsurance exceeds 50 percent. It is possible that many in this area are covered by Medicare, which does not cover dental services. This finding may also be due to the types of employment available in these areas such as self-employed farmers, ranchers, small business owners and low-wage positions.

Colorado’s Dental Uninsured: A Portrait

CHAS findings illustrate the dental uninsured rate in Colorado, including demographic and geographic characteristics. These data can inform program and policy decisions to help increase access to dental care for Coloradans.

**Age**
Rates of dental insurance decreased for all age groups except children 18 and under from 2008-2009 to 2011 (see Graph 5).

Seniors in the 65+ age group had the greatest percentage of dental uninsurance of all age groups, with 60.6 percent, or approximately 324,000, without dental insurance. This is important because Colorado’s senior population is projected to increase by 125 percent from 555,000 in 2010 to 1.2 million in 2030. In addition, as oral health continues to improve and more people retain their natural teeth, greater numbers of older adults will need dental care. Young working-age adults between 19 and 34 have the highest rates of health uninsurance among all age groups. This high rate of uninsurance extends to dental coverage for this age group, with nearly 50 percent lacking dental insurance, second only to seniors.

**Income**
The increase in dental uninsurance from 2008-2009 to 2011 was concentrated among lower-income Coloradans.

More than half of Coloradans with incomes below 200 percent FPL did not have dental insurance in 2011, slightly lower than the estimated 59 percent of this group nationally (see Graph 6). Coloradans may be choosing to forego dental coverage or they may not have access to employer-sponsored dental coverage. Nearly one in four (22.8 percent) of higher-income Coloradans (above 400 percent FPL) said they did not have dental insurance. Only 3.7 percent of the same Coloradans said they did not have health insurance.

**Race and Ethnicity**
Most races and ethnic groups showed an increase in the number of dental uninsured from 2008-2009 to 2011. Still, a majority of most racial/ethnic groups had dental insurance (see Graph 7).

**Graph 5.** Dental Uninsured Rates by Age, Colorado, 2008-2009 and 2011

**Graph 6.** Dental Uninsured Rates by Income as a Percentage of Federal Poverty Level, Colorado, 2008-2009 and 2011

**Graph 7.** Dental Uninsured Rates by Race/Ethnicity, Colorado, 2008-2009 and 2011
The majority of Hispanics, however, did not have dental insurance, moving from below 50 percent in 2008-2009 to above 50 percent in 2011.

Among both kindergarten and third grade children, there were more Hispanic children with at least one cavity compared to black or white children. Among children in kindergarten, 55 percent of Hispanic children had one or more cavities, compared to 38 percent of black children and 31.9 percent of white children. Among children in kindergarten, the prevalence of untreated tooth decay was higher among Hispanic children (18.5 percent) compared with Black (16.8 percent) or White (11.4 percent) children.9

Children’s Oral Health

Tooth decay is the most common chronic disease of childhood. Preventive dental care, including annual dental visits, is essential for optimal oral health. Colorado children needlessly miss hours of school due to mouth pain. CHAS findings show that approximately 66,300 additional children had dental insurance in 2011 than 2008-2009. Even so, approximately 41,500 fewer children accessed dental services. This suggests that dental insurance, while important, is just one factor affecting children’s access to oral health care.

The percentage of Colorado children living at the lowest level of income and without dental insurance decreased from 31.6 percent in 2009 to 24 percent in 2011, a decline of approximately 20,400 children (see Graph 8). This may be due to efforts to increase enrollment in public programs for eligible children.

Although coverage increased, the percentage of Colorado children who visited a dental professional saw a statistically significant decrease from 75.9 percent in 2008-2009 to 70.9 percent in 2011 (see Graph 9).

According to the Colorado Department of Health Care Policy and Financing, 45 percent of children covered by Medicaid received preventive dental services.17 Many factors may influence utilization of dental care by children, including parental use of dental services and oral health literacy as well as availability of dental providers who accept public insurance or render affordable services. Only one in four practicing dentists in Colorado accepts Medicaid.18
Policy Implications and Opportunities

**Integrating Dental and Health Insurance**

Integrating dental and health insurance may increase access to dental care. CHAS data show that more people have health insurance than dental insurance, so making them one integrated package may increase access. However, bringing separate dental and medical insurance plans together poses a challenge for commercial health insurers. Insurers have different claims payment processes, provider networks and benefit structures such as deductibles, cost-sharing and benefit maximums.\(^\text{15}\) Beginning in 2014, the Affordable Care Act requires that individual and small group insurance plans offer a package of health care services, including pediatric dental care. These oral health services may be offered through a medical plan or in a separate dental policy.

**Expanding Coverage to Address Cost**

Dental insurance coverage in its current form does not cover the costs of dental care, but it is a start. CHAS findings point to the cost barrier facing all Coloradans in accessing dental coverage and care – a barrier that can be unsurmountable for those with lower incomes. Although not a guarantee of access, dental insurance coverage is an opportunity to address cost concerns.

While the majority of state Medicaid programs provide coverage for emergency dental services, there is wide variation among states in the types of dental services and degree of coverage offered to adults under Medicaid, with fewer than half of states providing coverage for non-emergency dental care.\(^\text{19,20}\) Colorado currently provides no dental benefit for adults enrolled in Medicaid or pregnant women covered by CHP+, creating an opportunity for the state and stakeholders to develop a meaningful, cost-effective benefit. This would increase short-term costs to the state, but providing coverage for specific populations, including pregnant women and low income parents, may yield downstream savings through improved oral health status among children. Efforts that expand public dental coverage should assess the long-term impact in the overall health of beneficiaries and the potential for cost savings to the state.

For people who do not receive dental benefits under Medicaid or CHP+, there may be opportunities to increase access to dental coverage through the Colorado Health Benefit Exchange (COHBE). Families with incomes up to 400 percent FPL will be eligible for subsidies to purchase oral health coverage for their children through COHBE. In addition, supplemental dental insurance for adults and non-essential pediatric oral services for children may be included among COHBE’s coverage options for the individual and small employer markets.\(^\text{21}\)

**Developing an Accessible and Integrated Oral Health Workforce**

Colorado’s dental workforce may be unable to meet the oral health needs of Coloradans. Colorado’s DHPSAs have some of the highest rates of Coloradans who did not visit a dental health professional. Low-income Coloradans face additional challenges, not only in locating a dental provider but finding affordable care.

There are public and private initiatives underway with the health care workforce in Colorado to improve access to oral health care for underserved communities. Many of these efforts could be expanded or brought to scale to increase their reach. Examples include:

- The Colorado Health Service Corps loan repayment program provides incentives for qualified dentists and dental hygienists to practice in underserved communities.
- Safety net clinics, including community-funded clinics, school-based health centers and Federally Qualified Health Centers, are providing dental care for low-income and uninsured Coloradans.
- Cavity Free at Three, a partnership between state agencies and private foundation and education partners, trains physicians, nurses, physician assistants and dental professionals about the oral health needs of children ages 0-3. This training, designed to increase the number of children ages 0-3 who have a “dental home,” is also extended to medical, dental and nursing students.
- Supporting medical practices in their transition to becoming medical homes may make dental care more accessible. Medical home recognition and accreditation programs include requirements to provide resource lists that include dental services\(^\text{22}\) or to facilitate patient access to care, treatment or services for oral health care.\(^\text{23}\) While there are few medical or health home models that fully integrate dental care, a variety of approaches – from full integration or co-location of providers to virtual linkages or facilitated referral – can make dental care more easily accessible.
Conclusion

More than two million Coloradans lack dental insurance, a CHAS finding that has serious consequences for Coloradans’ oral health. CHAS results show that dental insurance coverage is associated with utilization of dental services. There are many opportunities and policy options to increase access to dental coverage and care.

The CHAS results also tell us that dental insurance coverage alone does not guarantee that people will receive dental care. Coloradans both with and without dental insurance are putting off needed dental care due to cost. Dental coverage must continue to be affordable but must be more substantive in order to protect subscribers from high out-of-pocket expenses. Balancing these competing issues will be challenging, especially with the current structure of dental benefits. Additionally, dental providers must be willing to accept public and private dental insurance. Colorado could address options to make Medicaid viable for providers by looking at reimbursement rates and also supporting safety net providers already providing dental services to vulnerable populations.

State leaders and health care providers could also examine whether the distribution of the existing oral health workforce in Colorado is adequate. Increasing access to dental care may require new models of care. Supporting efforts to integrate dental care with medical care can be coupled with addressing potential payment barriers and regulations that limit providers in the types of care and services they are able to offer.

The success of initiatives intended to improve Coloradans’ oral health status depends on increasing public understanding that preventive care begins at birth, and helping people navigate the oral health care system. Information on the safety, efficacy and cost savings of water fluoridation can inform community-level decisions about oral health. Health care providers understand the impact of poor oral health and should be encouraged and supported in their efforts to incorporate education, prevention, detection and referral to an appropriate, affordable source for dental treatment into their patient-centered practices.

Methodology

The 2011 Colorado Health Access Survey (CHAS) is a program of The Colorado Trust. The Colorado Health Institute (CHI) manages the data collection and analysis of the CHAS.

The survey was conducted via a random-digit-dialing, computer-assisted telephone interview by Social Science Research Solutions, an independent research company between May 10 and August 14. A representative sample of 10,352 households participated in the survey.

Of the 10,352 interviews, 1,214 were conducted with respondents who owned only a cell phone. This compares with a representative sample of 10,090 households surveyed from November 12, 2008, through March 13, 2009, for the 2008-09 COHS. (Note: The name of the survey was changed for the 2011 version and will remain the Colorado Health Access Survey in future surveys.) In the 2008-09 survey, 400 interviews were conducted with respondents who owned only a cell phone.

Interviews were stratified by 21 Health Statistics Regions in Colorado to ensure adequate representation within each of them. These are the 21 health statistics regions developed by the Colorado Department of Public Health and Environment (CDPHE) for public health planning purposes. Regions with sufficient numbers of African American households were oversampled to ensure an adequate sample of African Americans comparable to their proportion in the Colorado population.

Survey data were weighted to 1) adjust for the fact that not all survey respondents were selected with the same probability, and to 2) account for gaps in coverage in the survey frame. Because of this weighting process, CHI refers to the people who answered the questions as “respondents.” But when discussing results, which have been weighted to the Colorado population, CHI refers to “Coloradans.”

All statistical significance tests were run using an alpha of 0.05. Tests that resulted in a p-value of less than 0.05 were considered to be statistically significant findings. If a difference is found to be statistically significant, it is unlikely that the change occurred by chance or sample selection. Statistical significance tests were not run on all findings cited in the brief.
Endnotes


