COLORADO HEALTH INSTITUTE

COLORADO Department of Public Health & Environment

Family Matters in Oral Health

CONNECTING CHILDREN'S AND CAREGIVERS' DENTAL HEALTH HABITS

FEBRUARY 2018

When parents or other caregivers receive dental care, it's good for more than just their own health. It helps their kids as well.

A first-of-its-kind analysis by the Colorado Department of Public Health and Environment (CDPHE) and the Colorado Health Institute (CHI) provides evidence that a state policy allowing more Colorado parents and caregivers to access dental care is positively affecting their children.

The analysis compares data for children between the ages of one and 14 whose parents or caregivers had a dental visit with children whose parents or caregivers didn't see a dental provider. (See Figure 1.)

It found that the children whose parents or caregivers received oral health care:

- Are more likely to have excellent, very good or good teeth.
- Are more likely to have seen a dentist for preventive care in the past year.
- Are less likely to delay or go without needed dental care.

This is good news because oral health matters throughout a child's life. There is a strong connection between oral health and overall health, as well as academic achievement.

Good oral health supports children's readiness to learn and sets them up for lifelong achievement by avoiding missed school hours.[1] The chronic and acute pain of untreated cavities can make it difficult for children to sleep and lead to poor nutrition, socio-emotional health concerns and lifelong health disparities.

Figure 1. Groupings Used in This Analysis

Two Groups of Kids

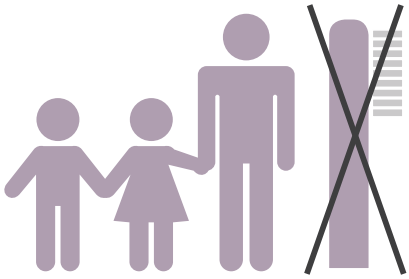
This analysis placed Colorado children between ages one to 14 into two categories.

Group A

Children whose parents or other caregivers received dental services in the past year.

Group B

Children whose parents or other caregivers did **not** get dental care in the past year.



Regular dental care, especially evidence-based preventive services such as sealants and fluoride varnish, sets a child up for a lifetime of good health.[2]

The Colorado legislature added an optional adult dental benefit to Medicaid in 2014, becoming one of 34 states that cover dental services in addition to emergency care for adults.[3]

Colorado also expanded access to public and private insurance for adults and children under the Affordable Care Act, resulting in historically high rates of Coloradans with both medical and dental insurance.

In 2017:

- More than two of three Coloradans (70.2 percent) had dental insurance, up from a low of 60.1 percent in 2011.
- Children are more likely to have dental coverage than adults (85.3 percent of children compared with 65.2 percent of adults).
- One of five Coloradans enrolled are in Health First Colorado, or Medicaid, and have dental benefits.

With that in mind, CDPHE and CHI teamed up to explore how this higher level of access to dental care for parents and caregivers affects their children.

Dental insurance increases the likelihood of getting dental care. More two of three Coloradans with dental insurance (76.1 percent) go to a dentist compared with less than half (44.9 percent) of those without insurance.

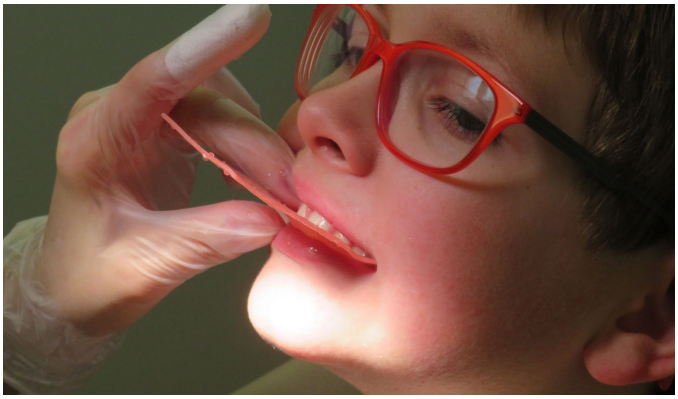
This analysis provides important insights into the role of expanding access to care for parents and caregivers as a way of boosting children's oral health.

Findings

Adult Utilization Matters

The analysis shows that the use of dental care by parents or caregivers affects their children's oral health outcomes.

For this analysis, we placed children between the ages of one and 14 into two groups. In Group A, the children's parents or caregivers had seen a dentist in the past year. In Group B, the children's parents or caregivers had not received dental care in the previous year.



This report is a collaborative effort of CHI and CDPHE.

The Colorado Department of Public Health and Environment acknowledges that social, economic and environmental inequities result in adverse health outcomes and have a greater impact than individual choices. Reducing health disparities through policies, practices and organizational systems can help improve opportunities for all Coloradans.

More than 96 percent of children in Group A had excellent, very good or good teeth, compared with 89 percent in Group B — a statistically significant difference. (See Table 1.) Values are statistically significant when there less than a five percent chance the results are coincidental.

Children in Group A also received important preventive dental care at a higher rate than children in Group B. Nine of 10 children (90 percent) in Group A received preventive dental care at least once during the same year, compared with 81 percent of children in Group B.

This difference is critically important because preventive dental care for children heads off decay. Children with dental problems miss school more frequently and have worse academic performance than those with good oral health.[4]

Children in Group A were significantly less likely to have delayed or gone without needed dental care than those in Group B.

Lastly, children in Group A were less likely to drink sugary beverages compared with those in Group B. Nearly nine of 10 kids in Group A consumed less than one sugar-sweetened beverage per day, compared with eight out of 10 children in Group B.

Table 1. Differing Outcomes Among Colorado Children Based on Caregivers' Oral Health Habits

Child Outcomes	Group A	Group B
Good, very good or excellent dental health	96.2 percent	88.8 percent
Got all needed dental care without delay	94.2 percent	88.7 percent
Has less than one sugar-sweetened beverage daily	88.3 percent	79.8 percent
Had a preventive dental visit in the past year	90.1 percent	80.7 percent

All differences from Groups A to B are statistically significant at the 95 percent confidence level.

Geographic Disparities Persist

The positive effects of adult dental care on kids happen in rural and urban areas but are more pronounced in rural areas. (See Figure 2.)

In rural areas, 99 percent of children in Group A reported good dental health. By contrast, 96 percent of Group A children living in urban areas said the same.

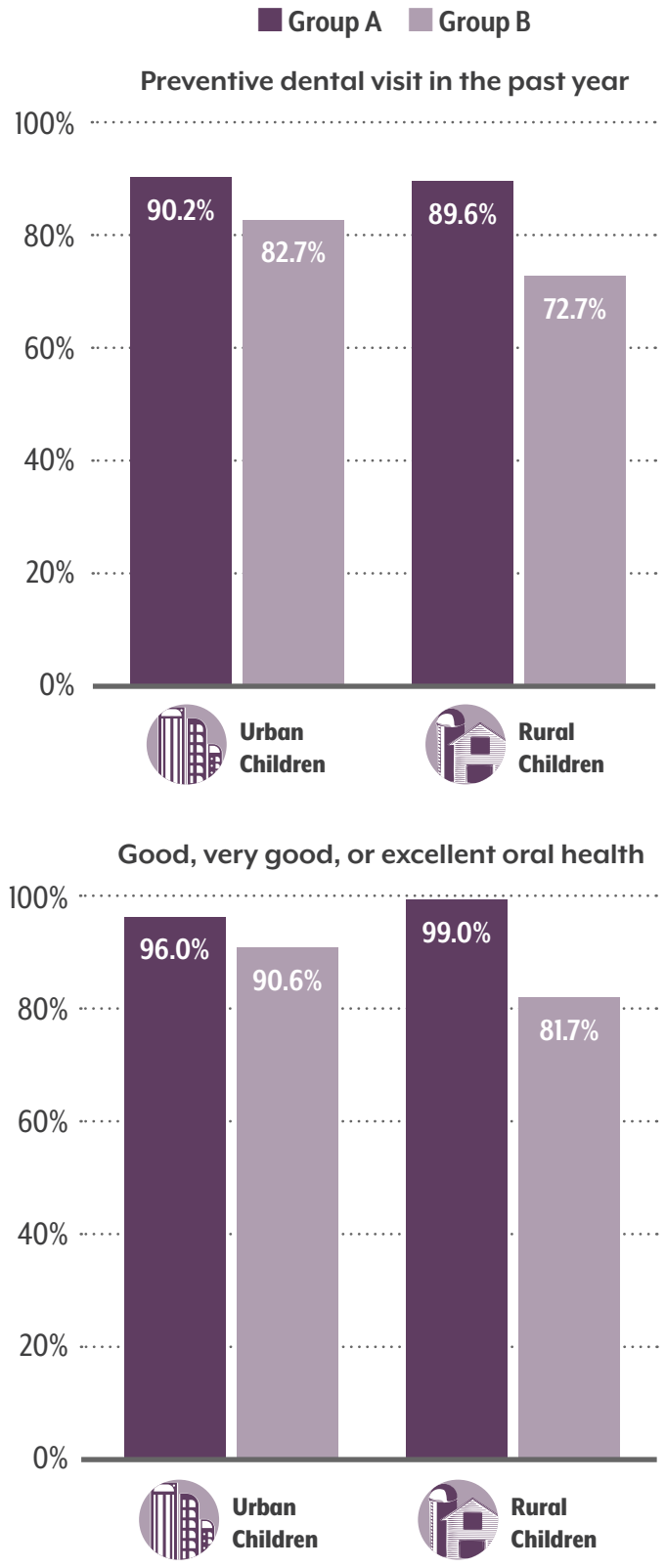
In rural communities, nine of 10 (89.6 percent) children in Group A received preventive care, compared with roughly seven of 10 (72.7 percent) in Group B, a 16.9 percentage point difference.

This gap is much smaller among urban families, 7.5 percentage points, suggesting that some rural families may have little or no access to dental providers and care.

Both rural and urban children in Group A are more likely to have good to excellent oral health than children in Group B.

But again, the gap between the two groups is much larger among rural children. It's 5.4 percentage points for urban children and 17.3 percentage points for rural children.

Figure 2. Urban and Rural Differences in Childhood Oral Health Outcomes



All differences from Groups A to B are statistically significant at the 95 percent confidence level.

Steps Toward Improving Children's Oral Health

Children whose parents or caregivers receive dental care are more likely to get care themselves, especially preventive dental care. This may be especially true in rural areas. However, access to dental providers — a first step to improving oral health — is uneven across the state.

Of Colorado's 64 counties, 57 are designated a Dental Health Professional Shortage Area by the U.S. Health Resources & Services Administration.[5] Loan repayment programs for providers, including CDPHE's Colorado Health Service Corps and its Dental Loan Repayment Program, encourage dentists and hygienists to work in underserved areas in an effort to help address existing workforce shortages.

Access to dental insurance is another important factor when it comes to seeking care.

An adult dental benefit in Medicaid introduced in 2014 provides greater access to care for low-income families. More than 90,000 parents and caregivers covered by Medicaid had a dental benefit in 2017. Medicaid's dental benefit covers 19.3 percent of parents and caregivers in rural areas and 14.7 percent in urban areas.

Medicaid data show that enrollees are taking advantage of the adult dental benefit. More than 260,000 adult enrollees age 21 and over received dental care in the second quarter of 2016, according to the Department of Health Care Policy and Financing Dental Benefits Management Reports. This is a tenfold increase from the same time period in 2013 before the adult benefit was in place.

These data provide further evidence that expanding adult dental care leads to more children's dental care. Nearly three-quarter of eligible enrollees up to age 21 (72 percent) received dental care in 2016 compared with 51 percent in 2013.

An upcoming change to payment models in Medicaid may answer key questions — whether medical providers can fill gaps in access to preventive careand whether there are adequate numbers of dental providers to care for Medicaid enrollees. Beginning in 2018, the Medicaid Regional Accountable Entities, an organization responsible for connecting Medicaid enrollees in a specified region with both primary care and behavioral health, will have a portion of their financial incentives determined by improvement on the number of enrollees with an annual dental visit.

Progress is being made already. The number of dental providers who rendered services for Medicaid enrollees grew by 78 percent, from 1,790 during the second quarter of 2013 to 3,180 during the second quarter of 2016.

However, children on Medicaid are less likely to see a dentist than those with commercial or private insurance. About three of four Medicaid enrollees younger than 19 (73.3 percent) saw a dentist in 2017 compared with 80.4 percent with private coverage.

Communities are working to expand access to care outside the dental office. School oral health programs, including school-based health centers, provide preventive services such as dental hygiene education, fluoride varnish and sealants.

Colorado's Cavity Free At Three program trains medical and dental professionals to provide preventive oral health services for young children and

Understanding the Linked Family Analysis Method

Data are from the 2014 and 2016 Behavioral Risk Factor Surveillance System (BRFSS) and Colorado Child Health Survey (CHS).

The CHS is a call-back survey to the BRFSS where participants in households with a child between ages one and 14 can opt to participate in a follow-up survey asking about the child's health.

This call-back survey methodology allows for linked analysis demonstrating how caregiver behaviors affect childhood health outcomes.

Data were collected and linked by CDPHE.

This report also used data from the 2015 Healthy Kids Colorado Survey (a survey of Colorado high schoolers), the Colorado Health Access Survey and the Department of Health Care Policy and Financing Dental Benefits Management Reports.

pregnant women. The program also encourages dental providers to care for infants, toddlers and pregnant patients. Colorado adopted Medicaid policies allowing youth under age 21 to receive Cavity Free At Three services by making it possible for medical professionals to provide and bill for oral health preventive services. These preventive services, delivered in medical or community-based settings, have been shown to improve the oral health of children and decrease the need for costly dental treatment.[6]

Colorado is the second state in the nation with teledental programs and expanded scopes of practice for dental hygienists to allow for more dental care in communities that typically don't have access to the traditional dental care system. Teledental services allow hygienists to prevent and manage oral diseases outside of a clinic setting. Co-locating hygienists in medical practices is also providing Colorado communities more opportunities to access care.

Promoting a Lifetime of Good Oral Health

This analysis shows that the oral health habits of parents and caregivers affect their children's oral health outcomes.

Colorado's adolescents, however, may have unique oral health needs. Adolescents are less likely to visit a dentist as they get older. In 2015, one of five high schoolers under 18 had not visited the dentist during the past 12 months. This rose to one of three for high school students aged 18 and over.

It's crucial to understand and address unique barriers to care among youth as they transition to adulthood, because access to dental care has implications for young adults and their future children. CHI and CDPHE will be looking at this critical issue of how utilization in services changes across the lifespan in future analyses.

Making dental care accessible, convenient and affordable for Colorado's families is an important step toward a healthier state.

Endnotes

[1] National Maternal and Child Oral Health Resource Center. 2003. A Health Professional's Guide to Pediatric Oral Health Management. Washington, DC: National Maternal and Child Oral Health Resource Center.

[2] Centers for Disease Control and Prevention. Implementation of Evidence-Based Preventive Interventions. https://www.cdc.gov/oralhealth/state_programs/preventive-interventions/index.html.

[3] Center for Health Care Strategies, Inc. Medicaid Adult Dental Benefits: An Overview. January 2018.

[4] Seirawan, H., Faust, S., Mulligan, R. 2012. American Journal of Public Health. 102(9): 1729-1734.

[5] HRSA Data Warehouse. HPSA Dental Health. Accessed January 26, 2018.

[6] Braun, P. et al. 2017. American Journal of Public Health. 107 (S1): S97-S103.

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