

# Children's Oral Health Fact Sheet



**FACIAL SWELLING  
RESULTING FROM TOOTH DECAY**

## Oral Health Disease & Need

- ▲ Tooth decay “dental caries” is the single most common chronic disease of childhood – 5-8 times more prevalent than asthma.<sup>1</sup>
- ▲ In the U.S., 25% of children and adolescents – typically, those from families with low incomes and from minority groups – experience 80% of all dental decay occurring in permanent teeth.<sup>2</sup>
- ▲ Early childhood caries dramatically increases a child’s risk of future dental caries.<sup>3</sup>
- ▲ Over 50% of Colorado adolescents have gum disease and nearly 20% have significant bone loss around at least one permanent tooth.<sup>4</sup>
- ▲ In Colorado, nearly 300,000 children need restorative care. This can be attributed to the inability to access dental services and to inadequate levels of fluoride in many community water supplies. Furthermore, approximately 75% of Medicaid eligible children in Colorado are not accessing dental care and over 50% of Colorado counties have no Medicaid dental provider.<sup>4</sup>
- ▲ Among parents reporting their children’s unmet health care needs, 57% reported unmet dental needs – nearly five times the number reporting the need for eyeglasses.<sup>5</sup> Twice as many parents claimed unmet desires for their children’s dental treatment as for their medical care.<sup>6</sup>

- ▲ Key children’s health indicators are slipping. The Healthy People 2000 oral health indicators show an increase in the percentage of children who have untreated cavities and a decrease in the percentage of children who see a dentist before Kindergarten.<sup>7</sup>

## Dental disease and utilization of dental services by income

Income category (% FPL)	Category (roughly)	Percentage of Children ages 2-5 <sup>8</sup>	Rate of dental disease ages 2-5 <sup>8</sup>	Percent utilization of dental services
<100%	“ <b>Poor</b> ”: generally Medicaid eligible	27.9%	4.8x	6% <sup>9</sup>
100-200	“ <b>Working poor</b> ”: generally CHIP (CHP+) eligible	25.5%	4.4x	No date yet, program just started
201-300	“ <b>Working families</b> ”: generally funded out of pocket	21.6%	1.8x	Unknown
>300	“ <b>Middle class and affluent</b> ”: generally dentally insured	24.9%	1.0x	60-70% <sup>10</sup>

From this table one can infer,

- ▲ There is increasing dental disease with lower income.
- ▲ There is increasing access with higher income.
- ▲ The greatest return on the dollar will result if dental benefits are provided to those with the greatest need (those below 200% FPL).

## Pain, Suffering & Health Consequences

- ▲ Children suffer significant morbidity from tooth decay – missed school days, bed days, low activity days. Almost 52 million school hours–equivalent to more than 850,000 school days–are missed each year because of dental concerns. U.S. children and adults from lower-income, less educated, and uninsured groups have experienced more than 41 million restricted-activity days annually because of dental problems.<sup>11</sup>
- ▲ Untreated tooth decay results in needless pain, infection, dysfunction, poor appearance, and low self esteem among affected children.<sup>12</sup>
- ▲ Chronically poor oral health is associated with failure to thrive in toddlers,<sup>13</sup> compromised nutrition in children,<sup>14</sup> and cardiac and obstetric dysfunction in adults.<sup>15</sup>
- ▲ Nationally, one out of every fifteen children suffers debilitating dental disease.<sup>8</sup>

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**EARLY  
CHILDHOOD  
CARIES  
BABY BOTTLE  
TOOTH DECAY**

## Cost of Care

- ▲ In the United States, 20-30% of all children's health expenditures are devoted to children's dental care<sup>16,17</sup> – a spending rate roughly 10 times the 2-3% expended by Medicaid in Colorado,<sup>18</sup> and nationally<sup>19</sup> for children's dental care.
- ▲ The cost to treat early childhood caries is strong – often in excess of \$1,000-2,000 per child. If hospitalization is necessary, this cost is doubled,<sup>20</sup> while preventive services are extremely low cost and highly beneficial for individual children.
- ▲ In 1997, an estimated \$50.6 billion was spent on dental services in the U.S. Of these expenditures, over 90% were paid out of pocket by dental consumers (47.2%) or through private insurance (48%), yet, only 4.5% came from government sources.<sup>21</sup>
- ▲ For more than one in four children, the trip to the emergency room is their first “dental visit.”<sup>22</sup> The emergency room visit is costly and the money is not well spent – as these children usually receive little more than an injection of antibiotics and a prescription for pain medication.<sup>23</sup> In one southwestern hospital alone, expenditures for “dental and oral disease except extractions and restorations” were among the top seven diagnoses for children under age 6, and accounted for \$548,557 in hospital billings.<sup>24</sup>

## Children's Health Insurance Program (CHIP)

- ▲ The new State Children's Health Insurance Program (CHIP) provides an opportunity to expand health services for children. Colorado is one of three (CO, DE, MT) remaining states that has not included dental care as a benefit in its CHIP program.<sup>25</sup>
- ▲ The American Academy of Pediatrics CHIP cost estimation model reveals that 20-25% of child health expenditures for CHIP populations need to be targeted to dental care.<sup>26</sup> When adjustments were made for enrollment and utilization projections, states such as Utah and Nevada targeted a range of 12-15% of total CHIP spending for dental care.
- ▲ In Western Pennsylvania, a children's health insurance program that included dental benefits had a positive impact on newly enrolled children. Access to dental services increased by 15% and the proportion of children reporting any unmet need or delayed care decreased from 57% at baseline to 16% at 12 months.<sup>27</sup>
- ▲ Some policy makers have asked, “How can we justify spending the same amount on dental services (\$8-10) as inpatient hospital services?” CHIP dental utilization is projected to be high based on high prevalence of decay due to the past neglect of a population that currently does not have dental insurance coverage.<sup>28</sup> Based on current Colorado CHIP experiences, utilization of inpatient hospital services is relatively low (61 admissions per 1,000 members per year) as compared with the Colorado average utilization for inpatient hospital services in 1996 (102 admissions per 1,000 members per year) for insured and uninsured populations of all ages.<sup>29</sup>

## REFERENCES

1. Edelstein, BL. 1998. Oral health services in the Child Health Insurance Program (CHIP). American Dental Association, Resource Packet on CHIP.
2. Kaste LM, Selwitz RH, Oldakowski RJ, Brunelle JA, Winn DM, Brown LJ. 1996. Coronal caries in the primary and permanent dentition of children and adolescents 1-17 years of age: United States: 1998-1991. *Journal of Dental Research* 75 (Special No.): 631-641.
3. O'Sullivan DM, Tinanoff N. 1993. Maxillary anterior caries associated with increased risk in other primary teeth. *Journal of Dental Research* 72(12): 1577-1580.
4. Colorado Department of Public Health and Environment, Oral Health Program; University of Colorado School of Dentistry, Department of Applied Dentistry. 1994. Oral Health of Coloradans 1994.
5. Simpson G, Bloom B, Cohen RA, Parsons PE. 1997. Access to health care. Part 1: Children. *Vital Health Statistics* 196:1-46.
6. Mueller CD, Schur CL, Paramore LC. 1998. Access to dental care in the United States, estimates from a 1994 survey. *Journal of the American Dental Association* 129:429-437.
7. U.S. Department of Health and Human Services, National Center for Health Statistics. 1997. *Healthy People 2000 Review 1997*. Hyattsville, MD: National Center for Health Statistics, U.S. Dept. of Health and Human Services.
8. Vargas CM, Crall JJ, Schneider DA. 1998. Sociodemographic distribution of pediatric dental caries: NHANES III, 1988-1994. *Journal of the American Dental Association* 129(9):1229-1238.
9. Health Care Financing Administration (HCFA) 416 data, as reported by the National Health Law Center.
10. Anecdotal reports from commercial dental insurers.
11. Gift HC; Recine ST, Larach DC. 1992. Social impact of dental problems and visits. *American Journal of Public Health* 82:1663-1668.
12. Edelstein, BL. May 1998. Crisis in care: the facts behind children's lack of access to Medicaid dental care. Policy Brief from the National center for Education in Maternal and Child Health.
13. Acs G, Lodolini G, Kaminsky S, Cisneros GJ. 1992. Effect of nursing caries on body weight in a pediatric population. *Pediatric Dentistry* 14(5):302-305.
14. Acs G, Shulman R, Ing MW, Chussid S. In press. The effect of dental rehabilitation on the body weight of children with early childhood caries. *Journal of Pediatric Dentistry*.
15. U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute of Dental Research. 1998. *The Oral-Systemic Health Connection*. Bethesda, MD: National Institute of Dental Research, U.S. Department of Health and Human Services.
16. Lewit EM, Monheit AC. 1992. Expenditures on health care for children and pregnant women. U.S. *Health Care for Children* 2(2):95-114.
17. Evans A, Friedland RB. 1994. *Financing and Delivery of Health Care for Children. Background paper for the Advisory Committee on Reforming American Health Care Financing*. Washington, DC: Policy and Administrative Choice National Academy of Social Insurance.
18. Colorado Department of Health Care Policy and Financing. FY 1998 Colorado Medicaid data.
19. Yudowsky BK, Tang SFS. 1997. *Medicaid State Reports – FY 1995*. Elk Grove Village, IL: American Academy of Pediatrics.
20. Bruerd B, Jones C, Krise D. 1997. Preventing baby bottle tooth decay and early childhood caries among AI/AN infants and children. *The HIS Primary Care Provider* 23(3):37-39.
21. Health Care Financing Administration (HCFA) web site ([www.hcfa.gov](http://www.hcfa.gov)). National Health Expenditures Tables, 1960-1997. Health Care Financing Administration, Office of the Actuary, National Health Statistics Group.
22. Sheller B, Williams BJ, Lombardi SM. Diagnosis and treatment of dental caries-related emergencies in a children's hospital. *Pediatric Dentistry* 19(7):70.
23. Mansky R, Cohen LA, Hooper FJ. 1998. Use of hospital emergency rooms for dental care. *General Dentistry* 46(1):44-47.
24. Freldman B. University of Nevada School of Medicine. February 1998. Preliminary analysis of the cost of DRG 186 for uninsured children in a public hospital. Personal communication with Burton Edelstein.
25. National Conference of State Legislatures web site ([www.ncsl.org](http://www.ncsl.org)).
26. American Academy of Pediatrics web site ([www.aap.org](http://www.aap.org)).
27. Lave JR, Keane CR, Lin CJ, Ricci EM, Amersbach G, La Valle CP. 1998. *Journal of the American Medical Association* 279(22):1820-5.
28. American Academy of Pediatrics. 1998. An analysis of the costs to provide health care coverage to the children and adolescents, ages 0-21, eligible for the CHIP program. Conducted by Towers Perrin.
29. Leif Associates, Inc. April 1999. Inpatient hospital utilization study of the Colorado Child Health Plan Plus for claims paid in December 1998 to February 1999 for incurred month of August 1998 to February 1999.