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Authors

Pourat, Nadereh
Nicholson, Gina

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Unaffordable Dental Care Is Linked to Frequent School Absences

Nadereh Pourat and Gina Nicholson

Children often miss school in order to receive dental care, including both routine preventive care (checkups and cleaning) and treatment for dental problems. A day of absence to receive preventive care may be appropriate and/or unavoidable; however, frequent absences may have significant negative societal and economic consequences. Tooth decay (dental caries) is the single most common chronic disease of childhood and affects nearly 60% of children in the United States.¹ Significant consequences of tooth decay including pain, chewing difficulties and lack of sleep can impact learning and growth.

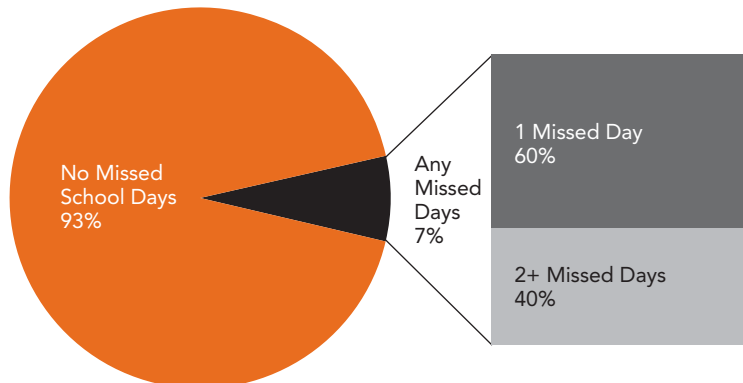
Of the 7,240,000 school age children ages 5-17 in California, an estimated 504,000 (7%) missed at least one day of school due to a dental problem in the past year (Exhibit 1). The majority of these children (60%) report one missed day of school due to a dental problem, while the remaining 40% report missing two or more days (including 25% with two, 8% with three, and 7% with four or more days). In total, California children

report missing an estimated 874,000 school days due to dental problems.

The ability to afford needed dental care is the key difference between those children who miss school due to a dental problem and those who do not. Among all school age children, those who need dental care but cannot afford it are more likely to miss one or more school days due to dental problems

Exhibit 1

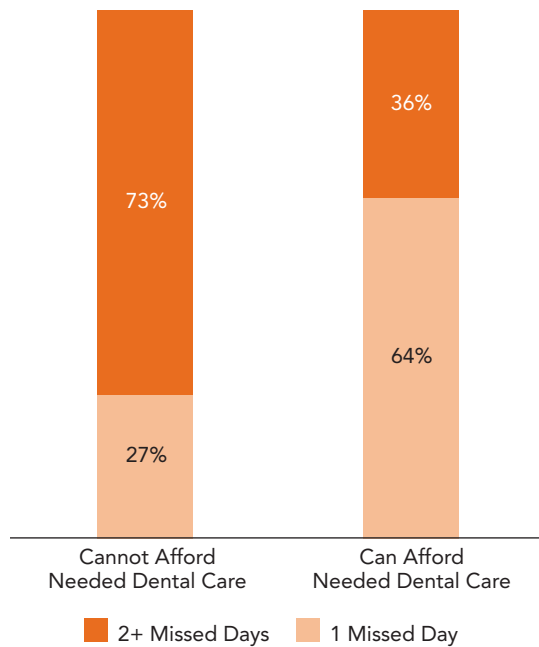
Number of Days Children Ages 5-17 Missed School Due to a Dental Problem, California, 2007



Source: 2007 California Health Interview Survey

Exhibit 2

Number of Missed School Days Due to a Dental Problem in the Past Year by Needed Dental Care and Affordability, Ages 5-17, California, 2007



Note: Children without a missed school day are excluded.
Source: 2007 California Health Interview Survey

(11%) than those who can afford such care (7%); but children with missed school days are similar to children with no missed school days in other characteristics examined in this brief.

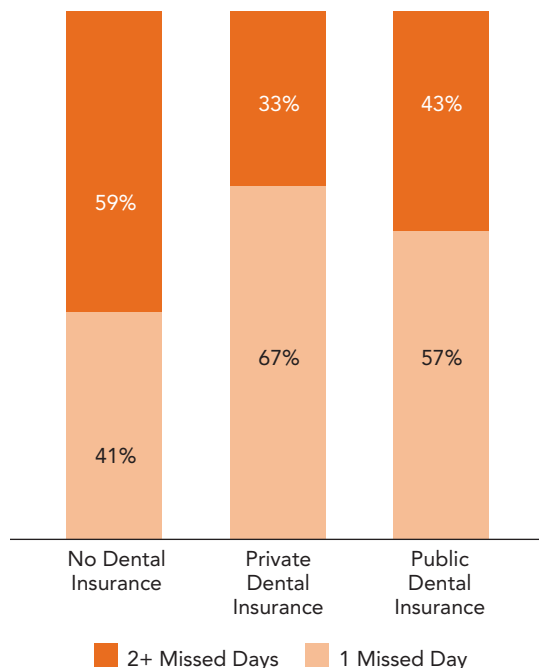
A closer examination reveals additional significant differences in frequency of missed school days, particularly when comparing children who miss only one day of school to those who miss two or more days. In other words, two or more missed school days are more common among certain populations of children than others.

Uneven Distribution of Frequent Missed School Days

Children who cannot afford needed dental care miss more school days. School absences increase when families cannot afford dental care: 73% of children who report needing dental care but who cannot afford it report two or more missed school days due to dental problems. In contrast, only 36% of children who can afford needed dental care report two or more missed school days.

Exhibit 3

Number of Missed School Days Due to a Dental Problem in the Past Year by Dental Insurance, Ages 5-17, California, 2007



Note: Children without a missed school day are excluded.
Source: 2007 California Health Interview Survey

Children without dental insurance report more missed school days than children with private dental insurance. Children without dental insurance (59%) are significantly more likely to report two or more missed school days due to a dental problem than children with private dental insurance (33%; Exhibit 3). Differences between publicly-insured and either uninsured or privately-insured children are not statistically significant.

Lower income children report more missed school days. Significantly more children with family incomes under 100% of the federal poverty level (FPL) guidelines (53%) and between 100-199% FPL (50%) report two or more missed school days due to dental problems than do children with family incomes at 300% FPL or higher (Exhibit 4).

Children with poorer oral health have more missed school days. More days of school missed due to dental problems is significantly correlated with poorer dental health status. More teens

ages 12 -17 who report fair or poor dental health (59%) also report having missed two or more school days compared to teens who report excellent, very good or good dental health (39%; Exhibit 5).

Asian-American children are more likely to miss two or more days of school. More Asian-American children report two or more missed school days than whites (62% vs. 33%; Exhibit 6). Differences between whites and either Latino or African-American children are not statistically significant.

Limited English-proficient speakers report more missed school days. Adult respondents who are not fluent or do not speak English at all (52%) more frequently have children in their household who missed two or more school days, compared to Native English speakers or those who speak fluently (30%; Exhibit 7).

Indicators of more missed school days were further examined in multivariate analysis including affordability of needed dental care, dental insurance coverage, poverty level, race/ethnicity, English proficiency and dental health status. The results indicate that affordability of needed dental care is the leading indicator of more frequent missed school days independent of dental insurance, poverty and other examined characteristics.

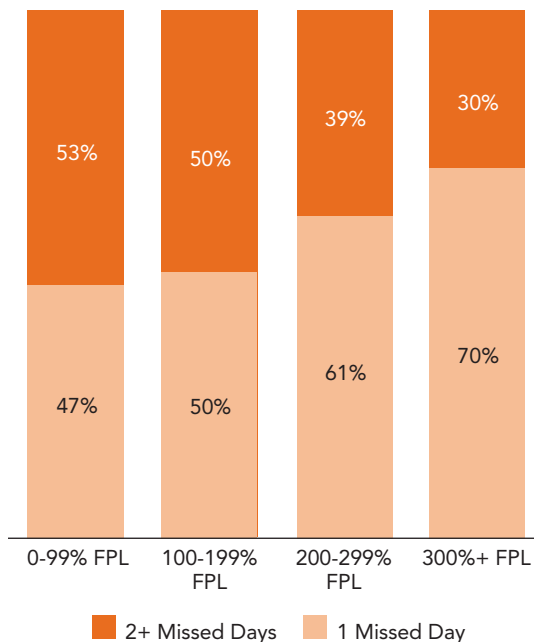
Financial and Societal Costs of Missed School Days Are High

Missed school days due to dental problems have implications for California school children and for their schools. School absences mean missed opportunities for learning and academic advancement. Furthermore, children experiencing pain are more likely to be distracted and unable to concentrate on schoolwork.^{2,3} In addition, chewing difficulties due to dental problems often lead to limited choice of foods and poor nutrition with further impact on school performance.⁴

Missed school days are likely to be correlated with missed days of work for parents who have to take children for treatment or take care of them at home. The extent of losses

Number of Missed School Days Due to a Dental Problem in the Past Year by Family Income Based on Federal Poverty Guidelines, Ages 5-17, California, 2007

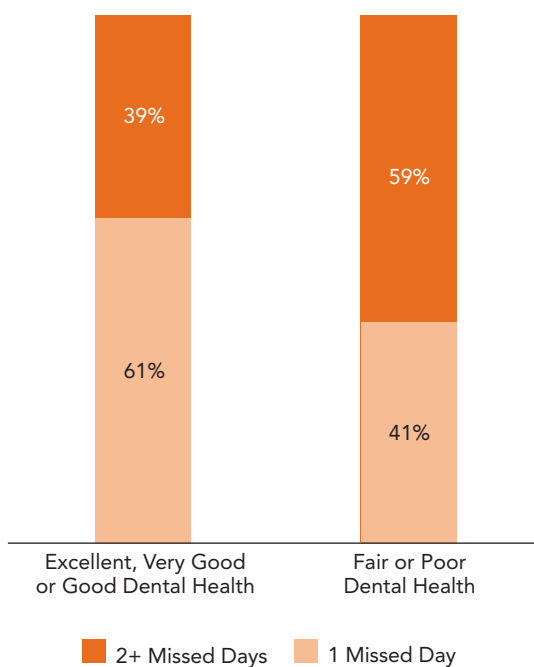
Exhibit 4



Note: Children without a missed school day are excluded.
Source: 2007 California Health Interview Survey

Number of Missed School Days Due to a Dental Problem in the Past Year by Dental Health Status, Ages 12-17, California, 2007

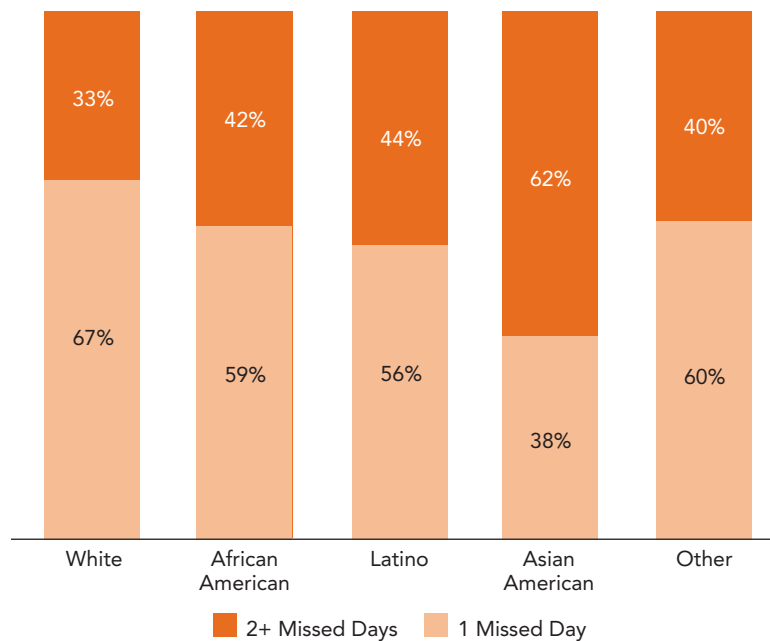
Exhibit 5



Note: Children without a missed school day are excluded.
Source: 2007 California Health Interview Survey

Number of Missed School Days Due to a Dental Problem in the Past Year by Race/Ethnicity, Ages 5-17, California, 2007

Exhibit 6



Note: Children without a missed school day are excluded.

Source: 2007 California Health Interview Survey

in productivity due to this problem is currently unknown.

Missed school days also mean lost funding for school districts. The single largest source of public school funding is school district revenue limits, which are paid to districts by the state based on student attendance. Revenue limits are automatically adjusted up or down if attendance is different from estimates, such that when students are absent, schools lose these funds. In 2007-08, the statewide average for revenue limits was approximately \$34 per student per day.⁵ Using that estimate, the cost to school districts of students' absences due to dental problems is approximately \$29.7 million (\$34 x 874,000 missed school days).

Policy Options to Reduce Missed School Days

The analyses presented in this brief indicate that frequent missed school days are an issue of concern, with individual, financial and

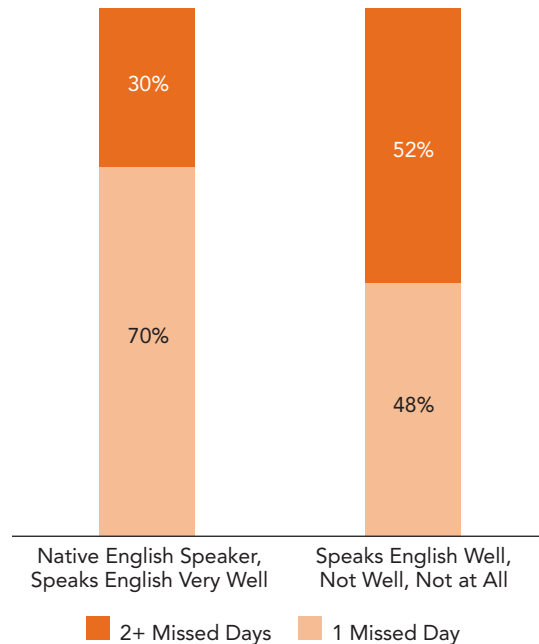
societal consequences. Missed school days are unevenly distributed, with more absentee days for children who need dental care but cannot afford it. Among those who miss any school due to dental problems, children who are uninsured, lower-income, limited English-proficient, Asian American, and who have poor oral health have more frequent school absences.

Identifying children with more frequent absences is an essential first step towards designing effective interventions to reduce those absences. Reduction of frequent missed school days due to dental problems can be achieved through a number of mechanisms:

- 1) Lack of dental coverage, gaps in coverage of dental benefits and caps on covered benefits lead to more out of pocket expenditures for dental care. These expenses are unaffordable to some families and may result in more frequent missed school days.

Exhibit 7

Number of Missed School Days Due to a Dental Problem in the Past Year by English Fluency of Adult Respondent, Ages 5-11, California, 2007



Note: Children without a missed school day are excluded.

Source: 2007 California Health Interview Survey

Suggested solutions include:

- Provide dental insurance to lower income children to reduce financial barriers to receipt of dental care. Include dental benefits in health care reform proposals.
- Address gaps in dental insurance coverage and limits on covered benefits.
- Provide school-based dental services to prevent dental problems, and identify and treat problems early.

2) The more frequent missed school days among limited English-proficient and Asian-American children may indicate language barriers or differences in understanding about the importance of preventive dental care and early interventions. Solutions include:

- Closely scrutinize the reasons for missed school days among specific populations of children.

- Address reasons for missed school days that are due to language barriers, and stress the importance of preventive care by targeting delivery of oral health education and prevention to children in higher need of such services.

About CHIS/Data Source

The California Health Interview Survey is a collaboration of the UCLA Center for Health Policy Research, the California Department of Public Health, the Department of Health Care Services and the Public Health Institute. For additional information on CHIS, visit www.chis.ucla.edu. CHIS 2007 completed interviews with nearly 10,000 children (over 5,700 ages 5-11), over 13,000 adolescents and over 51,000 adults in English, Spanish, Chinese (both Mandarin and Cantonese), Korean and Vietnamese.

Teens ages 12-17 and parents of children ages 5-11 were asked about school absences due to dental problems in CHIS 2007. Individuals were asked: During the past 12 months, did you (he/she) miss any time from school because of a dental problem? Do not count time missed for cleaning or a check-up. Those who reported any missed days were asked: How many days of school did you (he/she) miss because of dental problems? Statistical differences significant at $p < 0.05$ or smaller are reported in this brief.

Estimated Loss of School Funds Due to Student Absences

The estimated amount of school funding lost per day of student absence was derived as follows: the total amount provided by the state to school districts under the base revenue-limit program (\$36.166 billion in 2007-08) was divided by 2007-08 average daily attendance (ADA) of 5,947,758, for a per-ADA amount of \$6,081 for that year. This amount was further divided by the 180-day school year to obtain an estimate of \$34 per day (communication with Edgar Cabral and Stefanie Fricano at Legislative Analyst's Office, July 22, 2009).

This estimate has the following caveats. California public school districts do not receive uniform revenue-limit funding, so this figure is a statewide average. Furthermore, schools lose ADA dollars only if a student is counted as absent. If students are present when attendance is taken but are absent later for part of the day, the district may not lose any funds. Finally, additional sources of funds may be implicated when students do not attend school in some districts. However, the base revenue-limit



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Phone: 310-794-0909
Fax: 310-794-2686
Email: chpr@ucla.edu
Web Site: www.healthpolicy.ucla.edu

program is the largest amount of funding that the state provides to districts; and, although the state does make annual adjustments to other programs based on ADA estimates, the funding levels for these programs do not fluctuate based on actual attendance as revenue-limit funds do.

Author Information

Nadereh Pourat, PhD, is associate professor at the UCLA School of Public Health and director of research planning at the UCLA Center for Health Policy Research. Gina Nicholson, MPH, is a senior research associate at the UCLA Center for Health Policy Research.

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Endnotes

- 1 U.S. Department of Health and Human Services. *Oral Health in America: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, National Institute of Dental and Craniofacial Research, National Institutes of Health, 2000.
- 2 U.S. General Accounting Office. 2000. *Oral Health: Dental Disease is a Chronic Problem Among Low-Income and Vulnerable Populations*. Washington DC: U.S. General Accounting Office.
- 3 Schechter N. 2000. The impact of acute and chronic dental pain on child development. *Journal of the Southeastern Society of Pediatric Dentistry* 6(2): 16.
- 4 National Center for Chronic Disease Prevention and Health Promotion. 2000. Oral health and quality of life. Available at http://www.cdc.gov/OralHealth/publications/factsheets/sgr2000_fs5.htm (visited July 21, 2009).
- 5 See "Estimated Loss of School Funds Due to Student Absences" in this brief for the calculation of this estimate.