Dental Check-up of California's State Children's Health Insurance Program

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Abstract

Purpose: The purpose of this study was to compare dental utilization rates and related factors for children in California's State Children's Health Insurance dental program (SCHIP) to those for children with other types of dental insurance coverage or no coverage.

Methods: Data from the cross-sectional 2001 California Health Interview Survey for 10,454 children 2 to 11 years old were used. Data analyzed included: (1) the child's most recent dental visit; (2) dental insurance status; and (3) type of health insurance coverage.

Results: In 2001, 5% (±SE=0.3) of California children had SCHIP dental coverage, 19% had Medicaid dental insurance (Denti-CAL), and 52% had private dental insurance. Twenty-three percent (±0.5) of children, however, had no dental insurance. Dental utilization rates varied significantly according to type of dental insurance. Compared to uninsured children, SCHIP children were more likely to use dental services within the past year (58% vs 72%). Annual dental utilization rates were even higher for Denti-CAL and privately insured children (76% and 80%, respectively). Factors associated with disparities in dental utilization included lack of a usual source of health care and lack of continuous health insurance.

Conclusions: Significant disparities occurred by dental insurance status and type. Annual dental utilization rates for SCHIP children lagged behind those of children with Denti-CAL or private dental insurance. (Pediatr Dent 2006;28:316-324)

KEYWORDS: DENTAL UTILIZATION, CALIFORNIA, HEALTH SERVICES ACCESSIBILITY, DENTAL HEALTH SERVICES/UTILIZATION, STATE CHILDREN'S HEALTH INSURANCE PROGRAM, SCHIP, DENTAL INSURANCE

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The State Children's Health Insurance Program (SCHIP) was established in 1997 under Title XXI of the Social Security Act to provide health insurance coverage for the nation's uninsured, low-income children. The program targets uninsured children from families with incomes up to 200% of the federal poverty level (FPL), but too high to qualify for Medicaid.[1] States are given flexibility in designing their individual programs, including eligibility requirements, cost-sharing provisions, and payment arrangements. The implementation approach that is selected may affect the program's ability to enroll and retain eligible children and also affects which benefits can be offered to program beneficiaries, thereby significantly affecting access to care.[1-5]

Three implementation approaches are available: (1) Medicaid expansion; (2) a stand-alone program; or (3) a combination of the two approaches.[1] States choosing Medicaid expansion are required to offer dental services mandated under the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) program to existing Medicaid beneficiaries and to all newly eligible beneficiaries.[6] States with stand-alone programs may choose whether or not to offer dental benefits to their SCHIP beneficiaries, because these benefits are optional under SCHIP.[6] Finally, states using the combined approach are only required to offer dental benefits to Medicaid beneficiaries, not SCHIP beneficiaries.[1] Thus, the implementation approach and design options selected by the state could have major implications for access to dental care. Each state is required to submit annual evaluations of its SCHIP program to help document the program's effectiveness and achievements.

One of the recommended performance measures is access to dental care.[6] In California, this measure is especially pertinent because dental disparities are the most significant disparities reported among the state's SCHIP target population.[7] Unfortunately, a 2000 white paper from the General Accounting Office indicates that most states have not conducted comprehensive evaluations of their SCHIP dental programs.[6]

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California employs a combined approach for its SCHIP, expanding eligibility in its Medicaid program and establishing a separate SCHIP component known as the Healthy Families Program.[8] The state offers a comprehensive package of medical, dental, and vision benefits to SCHIP beneficiaries.[9] California has conducted annual evaluations of its overall SCHIP program, but only limited evaluations of its SCHIP dental program.[10,11] The SCHIP dental program's performance has also not been compared to that of other dental insurance programs.

Therefore, the purpose of the current study was to evaluate the performance of California's State Children's Health Insurance Program (SCHIP) dental program and to compare the dental utilization rate of the state's SCHIP children 2 to 11 years old to that of their uninsured, Denti-CAL, and privately insured peers.

Methods

Data source

Data from the 2001 California Health Interview Survey (CHIS) were used in this study. The 2001 CHIS was the largest state health survey ever conducted in the United States.[12] Its purpose was to provide reliable population-based estimates for various health-related indicators in the state, with an emphasis on access to care and health insurance. CHIS 2001 was undertaken as 3 separate surveys: (1) adult survey; (2) adolescent survey; and (3) child survey. The data in this study were derived from the CHIS children's survey (children under age 12). A total of 12,592 children 0 to 12 years old were selected for the CHIS children's sample. This sample was representative of California's noninstitutionalized population living in households with telephones.[12] Additional details regarding the CHIS design are described elsewhere.[12] Approval for this study was obtained from the Institutional Review Board at the University of California, San Francisco, Calif.

Survey instrument

The survey instrument covered a wide range of topics, including: (1) health-related behavior; (2) access to care; (3) use of health services; and (4) health insurance.[13] Survey instruments were administered via telephone interviews conducted with an adult proxy respondent. This respondent was the adult within the household who was most knowledgeable about the sampled child's health status and health care. In most cases, this respondent was either the child's parent or guardian.[13] Telephone interviews were conducted using computer-assisted telephone interviewing (CATI) technology.[13] Interviews were conducted in 6 languages to capture the rich diversity of the California population. CATI range and logic edits were used to help ensure the integrity and quality of the data collected.[14]

Description of variables

The main outcome variable was having a dental visit during the 12-month period preceding the CHIS interview (past-year dental visit). Adult proxy respondents (hereafter referred to as parents) were asked, "About how long has it been since (child's name) last visited a dentist, dental hygienist or orthodontist?" Responses to this question were used to identify children who had a dental visit during the preceding 12 months. Preventive visits occurring within the last twelve months were identified by combining responses to the question "Did (child's name) go for a routine check-up or cleaning or was it for a specific problem?" with information on the interval since their last dental visit. A past-year preventive dental visit was defined as a dental visit for a routine check-up or cleaning that occurred within the 12-month period preceding the CHIS interview.

Health insurance coverage and the number of months with coverage during the past year were also determined. Health insurance categories included:

1. uninsured (no health insurance);
2. Medi-CAL (Medicaid insurance);
3. SCHIP (Healthy Families insurance);
4. private insurance (employer or union-sponsored insurance or other privately purchased health plan); or
5. other public insurance (other local or community plan).

The number of months with health insurance coverage during the previous year was determined by asking, "For how many of the last 12 months did (he or she) have health insurance?" Potential responses ranged from 0 to 12 months. Continuous insurance coverage was defined as having insurance coverage for 12 months during the previous year. The child's eligibility for coverage through the government-sponsored insurance programs was also determined, and each child was classified as either: (1) Medi-CAL-eligible; (2) SCHIP-eligible; or (3) not eligible.

The child's dental insurance status was determined by their parent's response to the question "Do you have any kind of dental insurance for (child's name)?" The type of dental insurance coverage was determined by cross-classifying the responses for the dental insurance status with those for the type of health insurance. Thus, the type of dental insurance coverage was classified as either: (1) uninsured (no dental insurance); (2) Denti-CAL (Medicaid dental insurance); (3) SCHIP (Healthy Families dental insurance); (4) private (employer- or union-sponsored dental insurance or other private plan); or (5) other public insurance (other local or community dental insurance).

Potential confounding or modifying variables were also assessed, such as: (1) the child's age; (2) the child's poverty level; and (3) having a usual source of health care (USC). A USC was defined as a place where the parent usually takes the child when the child is sick or when health advice is needed.[13]

Data analyses

Children with missing data on the time since their last dental visit and/or on their dental insurance (N=2,138) were excluded from analyses. Consequently, all children under age 2 were excluded because information on dental

visits was not collected on these children. Thus, the final sample size for this study was 10,454 children. During analysis, the child's age was stratified into categories representative of those used in establishing SCHIP eligibility requirements.[9] Data were analyzed using SAS 8.02 statistical software (SAS Institute, Cary, NC).[15] SUDAAN 8.0 (Research Triangle Institute, Research Triangle Park, NC) was used to account for the complex sampling techniques employed in CHIS.[16] Sample weights were used to derive unbiased population estimates.[12] The distribution of key variables was examined using univariate analyses, and descriptive statistics were obtained. Bivariate associations were tested using chi-squared analyses, and crude odds ratios with 95% confidence intervals (95% CIs) were calculated.[17]

Variables significantly associated with the outcome variable on bivariate analyses (P<.05) became candidates for multivariate analyses. Multivariate modeling was used to account for the effect of confounding variables. Separate logistic regression models were fit for each study outcome (ie, past-year dental visits and past-year preventive dental visits). Nonautomated backward elimination was used to select variables for the final model, with the criterion for variable removal set at 0.05 significance on the Wald chi-square test. Adjusted odds ratios and 95% CIs were reported for variables in the final model.[17]

Results

Descriptive analyses

During 2001, 20% of California children 2 to 11 years old were eligible for SCHIP insurance and 31% for Medi-CAL. Only 5% (±0.6) of children, however, were actually enrolled in the SCHIP program. Approximately 18% (±1.2) of SCHIP-eligible children were enrolled for SCHIP dental benefits in 2001, while 56% (±1.2) of Medi-CAL-eligible children were

Table 1. Sociodemographic Characteristics of Children Within Each Dental Insurance Category, 2001*

Characteristic	Denti-CAL %±(SE)†	Private %±(SE)	SCHIP %±(SE)	Uninsured %±(SE)
Total	**19±0.5**	**52±0.6**	**5±0.3**	**23±0.6**
Child's age (ys)				
2-6	54±2.0	47±0.7	48±3.2	48±1.4
7-11	46±2.0	53±0.7	52±3.2	52±1.4
Child's race/ethnicity				
American Indian Alaska Native	0.5±0.1	0.4±0.1	0.3±0.1	0.3±0.1
Asian American	6±0.7	11±0.5	13±2.0	7±0.7
African American	12±1.1	7±0.4	4±1.2	4±0.6
Latino	58±1.3	22±0.6	61±2.4	50±1.3
Caucasian	21±1.3	57±0.7	20±1.8	37±1.2
Other single/multiple	3±0.6	3±0.3	2±0.8	2±0.3
Child's citizenship				
US citizen	98±0.6	98±0.2	96±1.0	87±1.0
Non-US citizen	2±0.6	2±0.2	4±1.0	13±1.0
% of federal poverty level				
0-99%	65±1.6	4±0.4	12±2.2	33±1.5
100-199%	24±1.4	16±0.8	63±2.8	26±1.5
200-299%	6±0.8	19±0.7	20±2.0	14±0.9
≥300%	5±0.8	61±0.9	6±1.1	28±1.1
Parent's education				
Less than high school	44±1.8	7±0.5	39±2.8	35±1.4
High school graduate	30±1.7	25±0.8	33±3.0	23±1.3
Some college	25±1.4	68±0.8	28±2.7	42±1.4
Parent's age (ys)				
<30	32±1.7	12±0.6	24±2.7	23±1.4
30-39	50±1.9	54±1.1	58±3.0	49±1.5
≥40	19±1.2	34±1.0	19±1.9	28±1.4
Language spoken at home				
English only	36±1.5	65±0.8	26±2.4	39±1.4
English and other language	44±1.7	30±0.8	52±3.0	42±1.6
Other language only	20±1.4	5±0.3	22±2.6	20±1.3
Geographic residence				
Rural	11±0.9	8±0.4	11±1.4	10±0.7
Urban	90±0.9	92±0.4	89±1.4	90±0.7
Usual source of care (USC)				
Has no USC	1±0.3	1±0.2	3±0.8	10±1.0
Has a USC	99±0.3	99±0.2	98±0.8	90±1.0
Length of insurance coverage (mos)‡				
0	N/A§	N/A	N/A	29±1.4‖
1-11	6±0.7	3±0.3	13±2.0	13±0.8
12	94±0.7	97±0.3	87±2.0	58±1.3

*N=10,454
†Percentages may not add up to 100% within each category due to rounding error; SE= standard error
‡Length of health insurance coverage within the past year
§N/A=not applicable
‖Children without dental insurance who also lacked health insurance coverage

Table 2. Key Predictors of Dental Utilization Among 2- to 11-year-old California Children, 2001*

Variable	Dental visit %±(SE)†	Preventive visit %±(SE)
Overall total	**74±0.6**	**58±0.6**
Type of dental insurance		
Uninsured	58±1.4	45±1.4
Denti-CAL	76±1.7	56±1.9
Private dental insurance	80±0.7	66±0.8
SCHIP	72±2.6	52±2.8
Length of insurance coverage (mos)		
0	50±3.2	37±2.7
1-11	63±2.4	48±2.5
12	76±0.6	61±0.6
Parent's age (ys)		
<30	62±1.6	46±1.8
30-39	72±0.9	58±1.0
≥40	82±1.0	67±1.0
Parent's education		
Less than high school	63±1.6	45±1.7
High school graduate	73±1.2	57±1.3
College	79±0.8	65±0.9
Geographic residence		
Rural	71±1.6	54±1.6
Urban	74±0.6	59±0.7
Child's age (ys)		
2-6	62±0.9	50±1.0
7-11	85±0.8	67±0.9
Child's race/ethnicity		
American Indian Alaska Native	74±4.8	58±5.6
Asian American	74±2.3	59±2.2
African American	79±2.3	66±2.8
Latino	67±1.2	50±1.2
Caucasian	79±0.7	65±0.7
Other race	65±4.8	48±4.2
Child's citizenship		
Non-US citizen	60±3.8	38±2.8
US citizen	74±0.6	59±0.6
% of federal poverty level		
0-99%	66±1.8	48±1.8
100-199%	70±1.4	53±1.5
200-299%	75±1.3	61±1.4
≥300%	80±0.7	66±0.9
Usual source of care (USC)		
None	49±4.0	31±3.6
Has a USC	75±0.6	59±0.6

*N=10,454
†SE=standard error

enrolled in Denti-CAL. Overall, 5% (±0.3) of all children had SCHIP dental insurance. Children were more likely to have Denti-CAL (19%) or private dental insurance (52%) than SCHIP dental insurance. Less than 1% of children had dental insurance from other local or community sources. Nearly 1 in 4 children (23%) lacked dental insurance at their CHIS interview. More than one half of these uninsured children (57%) were eligible for either SCHIP or Denti-CAL insurance.

The sociodemographic characteristics of children within each dental insurance category are presented in Table 1, and striking differences are readily apparent. SCHIP-enrolled children were predominantly Latino and nearly poor (ie, 100%-199% of FPL); about one fifth of SCHIP children were from middle-income households (ie, 200%-299% of FPL). SCHIP children were:

1. more likely to be insured for less than 12 months than other insured children; and
2. the least likely to be from English-only speaking households of all insured children.

Like SCHIP children, children enrolled in Denti-CAL were also mostly Latino or white. Unlike SCHIP children however, Denti-CAL children were most likely to be from poor households (ie, <99% of FPL). In addition, Denti-CAL children were more likely to be African American and less likely to be Asian American than SCHIP children. The characteristics of children with private dental insurance were quite different from children enrolled in either public insurance program. Compared to children with public dental insurance, children with private dental insurance were more likely to: (1) be white; (2) be from high-income households (ie, 300+% of FPL); and (3) have college-educated parents.

In contrast, children with no dental insurance were: (1) predominantly Latino; and (2) most likely to be non-US citizens and have no USC.

Within the previous year, 74% (±0.6) of California children 2 to 11 years old had dental visits, while 58% (±0.4) had preventive dental visits. Dental utilization rates among various population subgroups are shown in Table 2. These utilization rates vary across dental insurance categories. SCHIP children were somewhat less likely to use any dental services and preventive dental services than Denti-CAL children, although these differences were relatively minor. Greater disparities were observed when the dental utilization rates of privately insured children were compared to those of publicly insured children.

Bivariate and multivariate analyses

Bivariate analyses revealed that the type of dental insurance was a significant predictor of utilization of any dental services and of preventive dental services. Compared to SCHIP children, uninsured children were 0.5 times (95% CI=.4-.7) as likely to use dental services and 0.7 times (95% CI=.6-.9) as likely to use preventive dental services. Conversely, privately insured children were 1.6 times (95% CI=1.2-2.1) as likely to have dental visits and 1.8 times (95% CI=1.5-2.3) as likely to have preventive dental visits as children with SCHIP dental insurance. No significant differences in dental utilization occurred between SCHIP children and Denti-CAL children. Other factors associated with dental utilization included:

1. the child's age;
2. having a USC; and
3. the continuity of health insurance coverage within the past year (results not shown).

Multivariate analyses were used to account for the effect of confounding factors, and the results of these analyses are shown in Table 3. The type of dental insurance remained a significant predictor of dental utilization even after accounting for the effect of other variables in the model. In fact, the disparity in dental utilization between uninsured and insured children increased. Uninsured children were even less likely to have dental visits (odds ratio [OR]=0.5) or preventive dental visits (OR=0.7) than SCHIP children. By comparison, privately insured children were 1.3 times as likely to have preventive dental visits as children with SCHIP dental insurance (95% CI=1.0-1.7; P<.05). Again, no significant differences in dental utilization were found between SCHIP and Denti-CAL children (P>.05). Significant disparities in dental utilization emerged between SCHIP and Denti-CAL children, however, when analyses were limited to children who were continuously insured over the past 12 months. Dental disparities between continuously insured SCHIP children vs their privately insured peers also were more substantial (Table 4).

Discussion

The SCHIP legislation and ensuing welfare reform have resulted in a major decrease in the prevalence of uninsurance among children under the age of 18. The prevalence of uninsurance among US children fell to 12% in 2000, while 4% to 5% of children nationally had SCHIP insurance.[5] These figures are remarkably similar to the 5% SCHIP insurance rate observed among 2- to 11-year-old California children in 2001; 9% of California children were medically uninsured. Less than 20% of SCHIP-eligible children in California were enrolled in the SCHIP dental program, whereas more than half of Medi-CAL-eligible children were enrolled in Denti-CAL. These results suggest that the long-standing Medicaid program has been more successful at enrolling eligible children and informing them of their dental benefits than SCHIP has been. Clearly, most families with SCHIP-eligible children are unaware of the program, while some families with SCHIP enrolled children do not know about the availability of dental benefits. Outreach efforts should be intensified to enroll eligible children in SCHIP and inform them of their dental benefits.

SCHIP-enrolled children are less likely to be continuously insured within the past year, and less likely to have a USC than other insured children. Continuous insurance coverage and having a USC increase dental utilization by ensuring access to dental care.[18-21] Furthermore, having a USC specifically facilitates the use of clinical preventive services by ensuring the continuity of care.[21,22] Children are more likely to report having a USC after they become enrolled

Table 3. Multivariate Analyses of Use of Dental Services by 2- to 11-year-old California Children in 2001 (N=10,408)[8]

Variables	Dental visits OR (95% CI)†	Variables	Preventive visits OR (95% CI)†
Parent's age (ys)‡		Parent's age (ys)‡	
<30	1	<30	1
30-39	1.1 (.9-1.3)	30-39	1.2 (1.0-1.4)
≥40	1.5 (1.2-1.8)	≥40	1.4 (1.2-1.7)
Parent's education§		Parent's education§	
Less than high school	1	Less than high school	1
High school graduate	1.2 (1.0-1.5)	High school graduate	1.2 (1.0-1.5)
College	1.5 (1.2-2.0)	College	1.5 (1.2-1.9)
Child's age (ys)‡		Child's age (ys)‡	
2-6	1	2-6	1
7-11	3.7 (3.1-4.3)	7-11	2.1 (1.8-2.4)
Child's race/ethnicity§		Child's race/ethnicity§	
Caucasian	1	Caucasian	1
American Indian Alaska Native	.9 (.5-1.5)	American Indian Alaska Native	.9 (.5-1.5)
Asian American	.7 (.6-1.0)	Asian American	.8 (.7-1.0)
African American	.9 (.6-1.2)	African American	1.0 (.8-1.3)
Latino	.9 (.7-1.1)	Latino	.9 (.7-1.0)
Other race	.5 (.3-.8)	Other race	.5 (.4-.7)
% of federal poverty level‖		Child's general health§	
0-99%	1	Poor/fair	1
100-199%	1.1 (.8-1.4)	Good	.9 (.7-1.3)
200-299%	1.2 (.9-1.5)	Very good	1.2 (.9-1.7)
≥300%	1.4 (1.1-1.8)	Excellent	1.3 (1.0-1.7)
Dental insurance type‡		Dental insurance type‡	
SCHIP	1	SCHIP	1
Uninsured	.5 (.4-.7)	Uninsured	.7 (.5-.9)
Denti-CAL	1.4 (.9-2.0)	Denti-CAL	1.2 (.9-1.7)
Private dental insurance	1.1 (.8-1.5)	Private dental insurance	1.3 (1.0-1.7)
Length of insurance coverage (mos)§		Geographic residence§	
0	1	Rural	1
1-11	1.3 (.9-1.8)	Urban	1.3 (1.1-1.5)
12	1.6 (1.2-2.2)		
		Child's citizenship§	
		Non-US citizen	1
		US citizen	1.5 (1.2-2.0)
		Usual source of care (USC)‡	
		None	1
		Has a USC	1.9 (1.4-2.8)

*Excludes children with other public insurance.
†Odds ratio and 95% confidence interval
‡P<.001; Wald chi-squared test
§ P<.01; Wald chi-squared test
‖P<.05; Wald chi-squared test

in SCHIP.[23] The authors' findings, however, suggest that SCHIP children are still less likely to have a USC than either Denti-CAL or privately insured children. The lower likelihood of continuous insurance coverage among SCHIP children may be as much a problem of SCHIP enrollment as retention.

Eligibility does not necessarily guarantee enrollment in the program.[1,24] For example, not all children who are eligible for Medicaid become enrolled in the program, due to the: (1) stigma associated with public insurance; (2) lack of awareness of benefits; or (3) concerns about losing immigration benefits among immigrants.[6,25]

These factors are also expected to affect enrollment efforts among SCHIP-eligible children.[2] Recent figures indicate that take-up rates of SCHIP have improved over time as more families become aware of the program.[4] Unfortunately, the rate of disenrollment of children from SCHIP is still a source of concern.[26]

Because SCHIP is targeted towards children from working poor families, its cost-sharing requirements can be particularly burdensome.[7] Financial barriers such as cost-sharing requirements and nonfinancial barriers such as waiting periods have a negative impact on SCHIP take-up and retention.[27-29] In California, SCHIP enrollees are required to pay a monthly premium for dental benefits ranging from $4 to $9 per child, depending on family income, with a maximum of $27 per family. A copayment of $5 is required for selected dental procedures. Preventive, restorative, and selected endodontic procedures are exempt from this copayment.[30] Enrollees are also required to pay a $5 penalty if they fail to provide at least a 24-hour notice of their inability to make a dental appointment.[30] The inability to consistently pay monthly premiums is an important disruptor of coverage for SCHIP enrollees.[27] California children who miss their premium payments for 2 consecutive months lose their benefits.[30] Children may also lose their eligibility if their family income becomes either too high or too low. Once this coverage is lost, the child must undergo eligibility redetermination to have their coverage reinstated.[30] California has a 90-day waiting period before children who lose their commercial insurance can become eligible for SCHIP coverage.[9,11] Taken together, these factors make it considerably less likely for SCHIP-enrolled children to be continuously covered for a full year compared to children with either Denti-CAL or private dental insurance. This is a matter of great concern, given the importance of continuous coverage in improving access to dental care and ensuring the continuity of this care.

The rate of having a USC is lower for SCHIP children than for other insured children and is likely due to the lack of dental providers within the program.[31] Lack of dental providers has been a long-standing problem within Medicaid. Reasons cited for this include the burdensome administrative process required for reimbursement, the low reimbursement rates, negative attitudes toward welfare and complaints of broken appointments by publicly insured patients.[6] The state attempted to address some of these concerns by attempting to make reimbursement rates comparable to those of commercial insurance and by establishing a separate administrative structure for SCHIP from that of Medicaid.[8,32]

Table 4. Multivariate Analyses of Use of Dental Services by 2- to 11-year-old California Children With Continuous Health Insurance Coverage During the Past Year, 2001 (N=9,134)

Dental insurance type	Dental visits OR (95% CI)*	Preventive visits OR (95% CI)†
SCHIP	1	1
Uninsured	.5 (.3, .7)‡	0.8 (.6, 1.1)
Denti-CAL	1.5 (1.0, 2.3)§	1.4 (1.0, 1.9)
Private dental insurance	1.1 (.8, 1.5)	1.4 (1.1, 1.8)§

*Adjusted odds ratio and 95% confidence interval (adjusted for child's age, race/ethnicity, poverty level, and adult's age and education).
†Adjusted odds ratio and 95% confidence interval (adjusted for child's age, race/ethnicity, citizenship and general health status, adult's age, education, geographic residence, and usual source of care).
‡P<.001; Wald chi-squared test.

Early indications are that these efforts may not have been too successful, because dental network shortages were pervasive during the early years of SCHIP and involved both general and specialty dentists.[31,32] Low reimbursement rates contributed to this shortage by discouraging participating providers from accepting SCHIP patients.[31] Rates for California's largest participating SCHIP dental plan were significantly lower than those for commercial insurance.[31] Increasing reimbursement rates has been shown to improve provider participation and encourage providers to accept more children from these plans.[33]

Despite these shortcomings, dental plans and providers in the state consider SCHIP to be clearly more attractive than Medicaid.[34] Therefore, provider participation may be improved if outreach efforts highlight the positive attributes of SCHIP.

SCHIP children are more likely to utilize dental services than uninsured children, indicating that SCHIP coverage facilitates access to dental care. About 70% of SCHIP participants in California's largest SCHIP dental plan (Delta Dental) had a dental visit within their first 6 months of enrollment in the plan.[32] This rate is similar to the 72% dental utilization rate reported among SCHIP children in this study. Overall, there were no significant differences in dental utilization between Denti-CAL and SCHIP children. Significant disparities in dental utilization emerged, however, when continuously enrolled SCHIP and Denti-CAL children were compared. This finding is suggestive of barriers within the SCHIP dental program. Further research is needed to confirm this finding.

SCHIP children are also less likely to use preventive dental services than privately insured children. In general,

privately insured children are more likely to utilize preventive dental services than publicly insured children.[21] Despite benchmarking SCHIP against the state employee commercial insurance plan, however, disparities in the utilization of preventive services persisted between privately insured and SCHIP-insured children. Preventive procedures are especially negatively impacted by low reimbursement rates. For example, the reimbursement rate for dental sealants per tooth (CDT-4 code 1351), a treatment that is essential for preventing tooth decay on the tooth's biting surfaces, is $45 for commercial insurance, compared to only $9 for providers participating in California's largest SCHIP dental plan.[31] This disparity in reimbursement rates between SCHIP and commercial insurance may help explain the lower rate of utilization of preventive services by SCHIP children compared to privately insured children. Other factors that may contribute to the low use of preventive services among SCHIP children include their parent's lower educational attainment, rural residence, and lack of a usual source of care.[21] Parents with less than a college education may not be aware of the importance of preventive dental care or the need to start this care at an early age. Thus, SCHIP families should be educated about the importance of dental care in general and preventive dental care in particular. Parents should also be informed that there is no copayment for preventive dental procedures for SCHIP-enrolled children. Increasing the number of dental providers and improving the geographic distribution of these providers are further strategies for improving the use of preventive dental services.

This study has some limitations. Because CHIS is a cross-sectional study based on self-reports, trends in dental utilization before and after SCHIP implementation cannot be determined and information is not available on professionally determined dental needs. Approximately 2% of the population does not have access to telephones and are unlikely to be represented in a telephone survey. Children with no telephone access are less likely than other children to utilize dental services; therefore, dental utilization rates may be somewhat overestimated in this study. Because the type of dental insurance and the length of dental insurance coverage were inferred based upon the child's health insurance coverage, some error in the classification of dental insurance may have resulted. This study has several important strengths, however, which offset these weaknesses. CHIS 2001 provides a comprehensive and large database, allowing dental utilization rates to be estimated for a variety of dental insurance programs using an independent data source. The similarity between this study's estimates and those reported by Delta Dental validates the authors' findings and strengthens their conclusions. This study's findings may be compared to those of future CHIS surveys to determine changes in dental utilization over time.

Conclusions

Based on this study's results, the following conclusions can be made:

1. Significant disparities occur by dental insurance status and type.
2. Annual dental utilization rates for SCHIP children lagged behind those of children with Denti-CAL or private dental insurance.

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