# Dental Health and Access to Care among Rural Children:

# A National and State Portrait





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# A National and State Portrait

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### South Carolina Rural Health Research Center

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## **Executive Summary**

Although children's dental health in the U.S. has improved over recent decades, a subset of children continues to suffer dental disease severe enough to constitute a public health problem. The Chartbook that follows examines dental health status, use of preventive services, and dental insurance among rural and urban children. The Chartbook provides information specific to rural children, and in particular rural minority children, not available in similar detail from other sources. This information can be used at the state level for program planning and assessment. Key findings are presented below:

### Condition of Teeth:

- Overall, rural children were less likely than urban children to have excellent teeth, as described by their parents (41.0% versus 42.9%).
- Within white and black children, differences based on residence are more pronounced.
  - Among rural white children, 44.2% are reported to have excellent teeth, versus 50.8% of urban white children.
  - Similarly, only 30.4% of rural black children are reported to have excellent teeth, versus 34.9% of urban black children.
- Children with special health care needs are less likely than children without such needs to have excellent teeth (39.0% versus 43.4%). This disparity is greater among rural children. Only 35.1% of rural children with special health care needs, versus 39.8% of similar urban children, have excellent teeth.
- Low income families are more likely to report that their children have excellent teeth. Rural low income children, however, are slightly advantaged when compared to urban children. Among families at less than 200% of the Federal Poverty Level, 32.1% of rural children versus 30.2% of urban children have excellent teeth.
- The availability of primary care and dental providers is associated with better teeth. However, the effects of rurality do not play out evenly across all categories. In whole county primary care and dental Health Professions Shortage Areas (HPSAs), and for counties that do not have HPSA status, rural children are less likely than urban children to have excellent teeth. In counties that are part-county primary care or dental HPSAs, however, rural children are slightly more likely to have excellent teeth.

### Children with No Dental Visits in the Preceding Year:

Across the US, 22.5% of parents reported that their children had received no dental care in the preceding year.

- A larger proportion of rural than urban children had made no dental visits in the previous year (23.4% versus 22.3%).
- Hispanic children were at greatest risk for having no dental care during the preceding year. Among rural children, 31.9% of Hispanics had no dental visit, followed by



25.8% of rural black children, 23.1% of "other" children, and 22.2% of white children.

• Children who lacked dental insurance were markedly more likely to have made no dental visits (34.6% versus 18.2%). Among children who lack dental insurance, rural and urban children did not differ statistically with 33.4% of rural uninsured children and 34.9% of urban uninsured children lacking a visit.

# **Preventive Dental Care:**

The majority of parents in the United States reported that their child had received a preventive dental visit during the past year (72.2%).

- A smaller proportion of rural children (70.7%) than urban (72.5%) had visited a dentist for preventive care in the previous year.
- Across rural children, Hispanic children were least likely to have had a preventive dental visit (58.0%), followed by black (64.7%), other race/ethnicity (67.6%), and white (73.0%).
- Preventive visits varied sharply with insurance status, with only 58.1% of rural uninsured children receiving this service, versus 75.9% of rural insured children.

# Dental Insurance:

Given the strong links between dental insurance and receipt of dental services noted previously, rural disparities in insurance are particularly relevant to children's dental health.

- Rural children were less likely than urban children to have dental insurance (74.2% versus 78.4%). Further, the likelihood that a child would be insured declined steadily as the county of residence became more rural. Thus, 75.9% of children in micropolitan counties had dental insurance, versus 72.8% of children in small rural counties, and 69.9% of children in small, remote rural counties.
- Among rural children, black children were most likely to have dental insurance (77.0%), followed by other race/ethnicity children (75.3%), white children (74.7%) and Hispanic children (64.9%).



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#### Introduction

The Surgeon General's historic report, "Oral Health in America," emphasized that oral health and general health are inseparable (1). Oral health is integral to general health and means more than healthy teeth (1-2). Further, the Surgeon General's report outlines existing safe and effective disease prevention measures that everyone can adopt to improve oral health and prevent disease. A thorough oral examination, a key oral health prevention service, can detect signs of nutritional deficiencies, various systemic diseases, microbial infections, immune disorders, injuries and some cancers. However, 26.9% of all children in the U.S. did not have a routine preventive dental visit in 2003 (3). Dental health is a key element of overall oral health.

Although children's dental health in the U.S. has improved over recent decades, a subset of children continue to suffer dental disease severe enough to constitute a public health problem (1). Towards this end, the Surgeon General's report on oral health emphasizes the importance of achieving goals for oral health, embodied in the U.S. Department of Health and Human Services document, *Healthy People 2010*, to increase quality of life and eliminate disparities.

Children lose 52 million hours of school time each year due to dental problems, and poor children experience nearly twelve times as many restricted activity days from dental disease as do children from higher income families (4). Eighty percent of dental disease among children is found in 20 to 25 percent of children (approximately 18 million), and these are primarily children from African-American, Hispanic, American Indian/Alaskan Native, and low-income families. (5-6).



Disparities in access to dental care reflect family income, parental education, race/ethnicity, and urban/rural residence (7-9). In 2004, an estimated 6.6% of American children aged 2 to 17 years had an unmet dental need, and 13.1% had not seen a dentist in more than five years (2).

Dental care was identified as the most prevalent unmet health need in U.S. children, and rural children have greater unmet dental needs than their urban peers (3,7,9-10). Failure to obtain preventive dental care was more common among the children who came from low-income families, who were uninsured and white, and who had a parent with less than a college education (10).

#### Chartbook Purpose

The Chartbook that follows examines dental health status, use of preventive services, and dental insurance among children living in both rural and urban settings. The purpose of the Chartbook is to provide information specific to rural children, and in particular rural minority children. This information is not available in similar detail from other sources and can be used at the state level for program planning and assessment.

#### Data and Definitions

Data for this report were drawn from the 2003 National Survey of Children's Health (NSCH). The National Survey of Children's Health was designed to measure the health and well-being of children from birth to age 17 in the United States, while taking into account the environment in which they grow and develop. The survey was supported and developed by the U.S. Department of Health and Human Services, Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau and was conducted by the Centers for Disease Control and Prevention (CDC), National Center for Health Statistics in



2003. The survey was designed to produce reliable and representative state- and nationallevel estimates for *Healthy People 2010* national prevention objectives, for each state's Title V needs assessment, and for Title V program planning and evaluation.

The NSCH contained a series of questions addressing children's dental health. The findings presented here are based entirely on parental reports. The majority of questions have been tested for validity when reported by parents.

The four primary outcome variables are condition of teeth, no dental visits, preventive dental visits, and dental insurance. Parents were asked S2Q54 "How would you describe the condition of [CHILD]'s teeth: excellent, very good, good, fair, poor?" This variable was categorized as excellent, very good, and good to poor.

Parents were also asked in S2Q56 "About how long has it been since [he/she] last saw a dentist? Include all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists." Responses could include "never," "6 months or less," more than 6 months, but not more than 1 year ago," "more than 1 year, but not more than 2 years ago," "more than 2 years, but not more than 5 years ago," or "more than 5 years ago." For analytical purposes, responses were dichotomously grouped as either having seen, or not having seen, a dentist of any type in the previous 12 months.

Preventive dental care was examined based on parental responses to S74Q09, "During the past 12 months/Since[his/her] birth, did [CHILD] see a dentist for any routine preventive dental care, including check-ups, screenings, and sealants?" As with the previous question, responses were dichotomously grouped as yes or no.

Finally, dental insurance status was measured based on positive or negative responses to S3Q03 "Does [CHILD] have insurance that helps pay for any routine dental care



including cleanings, x-rays and examinations?" Type of dental insurance was not specifically asked by interviewers, therefore the study does not differentiate between public and private insurance.

*Urban/Rural residence* was defined at the county level using Urban Influence Codes (UICs). "Rural" in the aggregate was defined as UIC Codes 3 through 12 ("All rural"). When differentiated by level of rurality, counties were categorized as "micropolitan" rural (UIC Codes 3, 5 and 8), "small rural adjacent to a metro area" (UIC Codes 4, 6 and 7), and "small remote rural" (UIC Codes 9 and 12). If UIC Codes are 1 or 2, then the county was coded as "Urban". Due to sample size limitations, only the national and regional analysis used multiple categories of rurality.

*Race/ethnicity*: Race ethnicity was defined using the NSCH's definitions, based on parental report. All children identified as Hispanic are classified as such, regardless of their race. Non-Hispanic whites (hereafter, "whites"), non-Hispanic blacks (hereafter, "blacks") are presented separately. All other races are collectively classified as "other."

#### What is New in This Chartbook?

The Maternal and Child Health Bureau of the Health Resources and Services Administration has published several chartbooks highlighting information from the 2003 National Survey of Children's Health. The present Chartbook adds new information to the series in several ways. First, it provides an account of dental health status and services among children living in rural as well as urban areas, and presents information by level of rurality where possible. Second, the Chartbook provides state-specific portraits with information for both rural and urban children, wherever the sample size allows. Finally, the Chartbook presents regional analyses, including level of rurality presentations. We hope the



presentation of regional and state data specific to rural children will allow planners to better link dental services interventions to the nature of the locale in which children live.

#### How the Chartbook is Organized

This Chartbook is organized into three main sections. The first section analyzes condition of teeth, receipt of dental services, and dental insurance among rural children in the nation as a whole. Rankings of rural portions of states are included at the end of each analysis. Availability of dentists is also provided in the national section. The next section breaks down the analysis into four regions of the U.S. (Northeast, South, Midwest, and West), using the same factors of interest. Next, the Chartbook describes the condition of teeth and dental insurance status of rural and urban children within each state individually. Key findings for each state are highlighted. A detailed description of the data and analytic methods used to compile the information presented is provided at the end of the Chartbook.

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National Profile

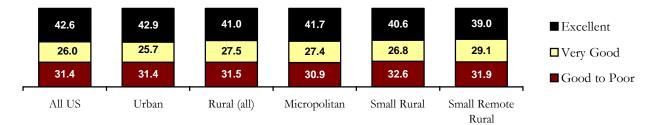


#### Condition of Teeth among Children

The majority of parents in the United States (68.6%) consider their children's teeth to be in excellent (42.6%) or very good condition (26.0%). A slightly smaller proportion of rural children are believed to have excellent teeth (41.0%), compared to urban children (42.9%; p=0.0009). The more rural the community, the less likely that a child's teeth would be described as excellent (p=0.0014), although differences were not large.

Many personal, household and community factors were associated with how rural parents would characterize their child's teeth.

### Figure 1: Parent's Description of Child's Teeth, by Level of Rurality, in percent



# Characteristics of the Child

*Race* – The parents of white children were more likely than other parents to describe their children's teeth as excellent (see chart, next page). Among white and black children, parents living in rural areas were less likely to characterize their child's teeth as "excellent" than were urban parents (p=<0.001, p=0.0014). While rural children of Hispanic and "other" race ethnicity were less likely to have excellent teeth than similar urban children, these differences were not statistically significant.



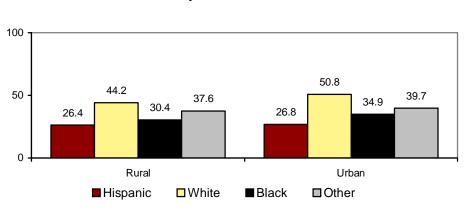
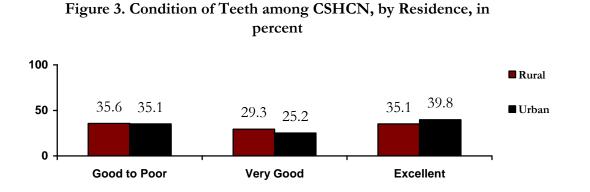


Figure 2. Proportion of Children With Excellent Teeth, by Race and Residence

*CSHCN Status* – Children with special health care needs (CSHCN) were less likely than those without such needs to have excellent teeth (39.0% versus 43.4%; see Table 1, at end of section). Rural CSHCN were less likely than similar urban children to have excellent teeth, and more likely to have very good or good to poor teeth (p=0.0008). No differences were detected among children without special health care needs.



*Personal Healthcare Provider Status* – Children with a personal healthcare provider (PHP) were more likely to have excellent teeth than those who lacked a PHP (see Figure 4, next page). Rural-urban differences were present both for children with a PHP and those without a PHP. Rural children with a PHP were



less likely than urban children to have excellent teeth. Conversely, rural children without a PHP were more likely to have excellent teeth than similar urban children.

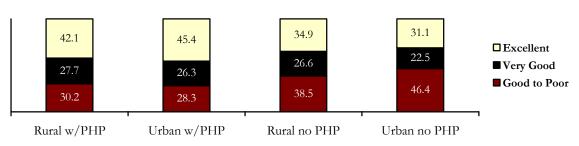


Figure 4. Condition of Teeth by Personal Healthcare Provider Status and Residence, in percent

*Dental Insurance Status* –Rural insured children were less likely than similar urban children to have excellent teeth (42.2% versus 44.1%), while rural children without dental insurance were slightly more likely than urban children to have excellent teeth (40.9% versus 39.5%). Within rural children, dental insurance was not associated with condition of teeth, while marked differences were present among urban children.

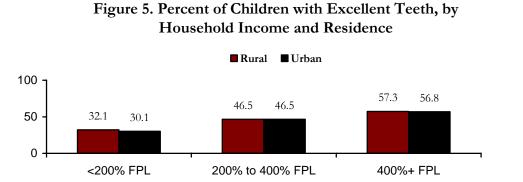
Age – The proportion of children with "excellent" teeth was highest among children aged 1 - 5 (55.7%) and lowest among children aged 6 - 11 (34.3%). While condition of teeth did not vary with residence for the youngest children, among children in the 6 - 11 and 12 - 17 age groups, rural children were less likely than similar urban children to have "excellent" teeth (See Table 2, end of section).

*Gender* - Parents were more likely to describe girls as having excellent teeth than boys. Among girls, but not among boys, rural residents were less likely to have "excellent" teeth than were urban residents (41.9% versus 44.2%).

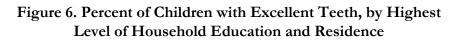


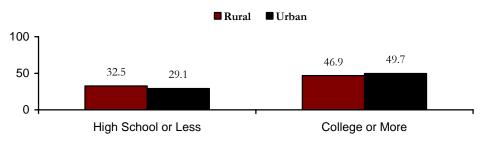
### Characteristics of the household

*Income* - As household income increases, the proportion of children with excellent teeth increases and the proportion of those with good to poor teeth decreases (p << 0.001). Among children living below 200% of FPL, rural children were more likely to have excellent teeth than were urban children. At higher income levels, no rural-urban differences were detected.



*Education* - The higher the education level in the household, the more likely a child had teeth in excellent condition. Among households where high school was the highest level of education, rural children were more likely to have excellent teeth. The reverse was true among more highly educated households, among which urban children enjoyed better teeth.









#### Characteristics of the community

State of residence

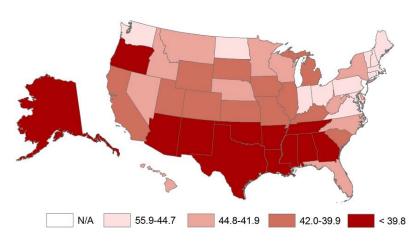


Figure 7. Percentage of Rural Children Reporting Excellent Condition of Teeth

\*State percentage distribution based on quartile values of Rural children reporting excellent condition of teeth

The proportion of rural children whose parents characterized their teeth as being in excellent condition ranged from a high of 55.9% in Massachusetts (however, this is based on a small number of respondents in rural counties) to a low of 31.8% in New Mexico.

Among states with a large number of rural respondents, New Hampshire had the highest proportion of children with excellent teeth (53.7%). Maryland also had more than half of rural children with "excellent" teeth (50.9%).

States in which fewer than a third of rural parents described their children's teeth as excellent included New Mexico, Mississippi (32.1%) and Arkansas (32.5%).



*HPSA status* – Health Professions Shortage Areas (HPSAs) are geographic areas for which there is a shortage of primary medical care, dental or mental health providers, whether for the area as a whole or for specific populations (See Workforce section, later in this report). In general, the better the supply of primary care or dental practitioners, as measured by whole county or partial county HPSA status, the more likely that parents would describe their child's teeth as excellent. Rural children living in whole county dental and primary care HPSAs were less likely to have excellent teeth than similar urban children; similar differences were found for non-HPSA counties. Interestingly, rural children living in counties that were partial dental or primary care HPSAs were slightly more likely than urban children to have excellent teeth (See Table 1).



Characteristics of the child	All	Rural	Urban
Race			
Hispanic	26.7	26.4	26.8
White	49.3	44.2*	50.8
Black	34.4	30.4*	34.9
Other	39.4	37.6	39.7
Child has Special Healthcare Needs			
Yes	39.0	35.1*	39.8
No	43.4	42.4	43.6
Child has dental insurance			
Yes	43.6	41.2*	44.1
No	39.8	40.9*	39.5
Child has personal healthcare provider			
Yes	44.8	42.1*	45.4
No	31.8	34.9*	31.1
Gender			
Male	41.4	40.2	41.7
Female	43.8	41.9*	44.2
Age		· · ·	
1 to 5 years	55.7	55.6	55.7
6 to 11 years	34.3	32.3*	34.7
12 to 17 years	40.3	38.7*	40.6
Characteristics of the household			
Highest level of education			
High School or Less	29.9	32.5*	29.1
College or More	49.2	46.9*	49.7
Income as percent Federal Poverty Level			
<200% of FPL	30.6	32.1*	30.2
200 to 400% of FPL	46.5	46.5	46.5
400% and over FPL	56.9	57.3	56.8
Characteristics of the Community			
Availability of Primary Care			
Whole County Primary Care HPSA	37.2	35.2*	39.3
Part County Primary Care HPSA	41.7	42.1*	41.7
No Primary Care HPSA	46.4	42.2*	47.5
Availability of Dental Care			
Whole County Dental HPSA	36.6	35.3*	38.3
Part County Dental HPSA	41.2	42.3*	41.0
No Dental HPSA	44.9	41.0*	45.9

Table 1. Factors associated with the likelih	ood that parents will rate the	ir child's teeth as ''excellent,	" by residence
	1		2

\*Rural is significantly different from urban, p<0.05



Ranking by Condition of Teeth	Rural Area	% Excellent Condition of Teeth	Ranking by Condition of Teeth	Rural Area	% Excellent Condition of Teeth
	US TOTAL	42.1	26	IL	41.4
1	МА	55.9*	27	IA	41.2
2	NH	53.7	28	KY	41.2
3	MD	50.9	29	WY	40.9
4	СТ	48.9	30	UT	40.4
5	ME	48.0	31	МО	40.3
6	РА	48.0	32	SC	40.3
7	VT	47.9	33	СА	40.2
8	VA	46.7	34	СО	40.0
9	OH	46.6	35	KS	39.9
10	IN	45.3	36	MI	39.9
11	WA	45.2	37	TN	39.8
12	ND	44.8	38	GA	39.7
13	NV	44.6	39	AK	38.0
14	DE	44.2	40	AL	37.6
15	WI	44.2	41	OK	37.5
16	HI	44.0	42	AZ	37.1
17	NE	43.9	43	OR	36.9
18	MT	43.6	44	LA	34.4
19	NY	43.2	45	TX	34.4
20	FL	42.9	46	AR	32.5
21	NC	42.5	47	MS	32.1
22	ID	42.2	48	NM	31.8
23	MN	42.1	49	DC	N/A
24	WV	42.0	50	NJ	N/A
25	SD	41.9	51	RI	N/A

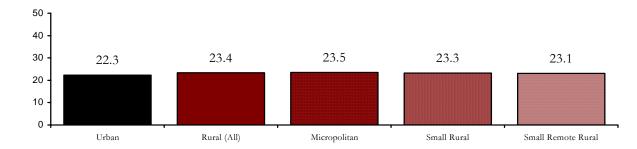
Table 2. State Rankings of Percentage of Children with Excellent Teeth – rural area of a state only

\*Cell size < 30 observations (unweighted)



#### Children Who Lacked Dental Care During the Previous Year

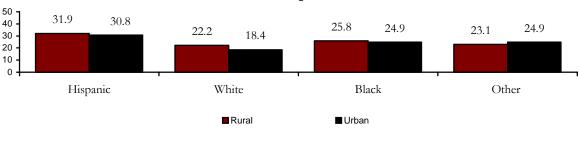
When asked if their child had made any dental visits in the previous 12 months, nearly a quarter (22.5%) of parents in the United States said their child had received <u>no</u> dental care. A larger proportion of rural than urban children had made no dental visits in the previous year (p=0.0391). There were no significant differences across levels of rurality.



### Figure 8. Proportion of Children with No Dental Visit in the Past Year, by Level of Rurality, in percent

#### Characteristics of the Child

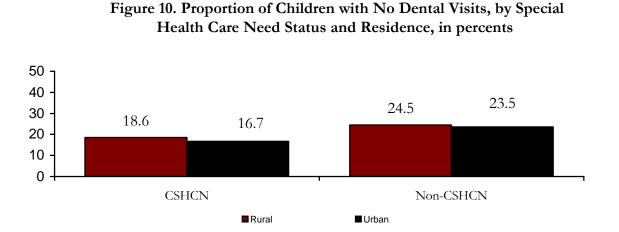
*Race* –Hispanic children, regardless of where they lived, were more likely than other race/ethnic groups to have made no dental visits in the previous 12 months. Rural white children were significantly more likely than urban children to have made no dental visits (p=<0.001). No rural-urban or within rural differences were observed for children across race/ethnicity categories.



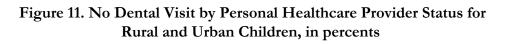
#### Figure 9. No Dental Visits by Race for Rural and Urban Children, in percents

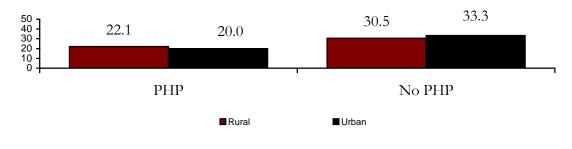


*CSHCN Status* - Rural children with special health care needs were less likely than children without such special needs to have made no dental visits in the previous year (p=<0.001). A similar pattern was found among urban children. Within the CSHCN category, rural and urban children did not differ statistically.



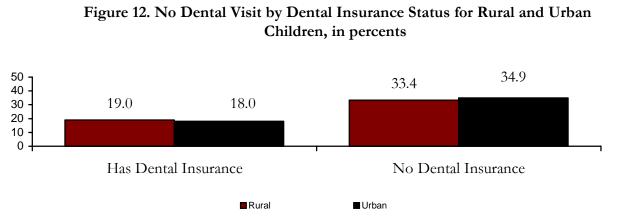
Personal Healthcare Provider Status - Rural children who had a personal healthcare provider (PHP) were slightly more at risk for having no dental visits in the previous year than urban children with a PHP, (p=0.0002). Among both rural and urban children, those who lacked a PHP were markedly more likely to have made no dental visits during the past year than were children having a PHP.







Dental Insurance Status - Rural children with dental insurance were markedly less likely to have made no dental visits, compared to rural children who lacked dental insurance (p=<0.001). Within each insurance category (insured/not insured), residence did not statistically influence the likelihood that a child would lack a dental visit.



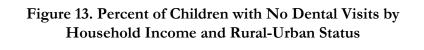
Age - Rural children aged 1 – 5 years (48.1%) were markedly more likely than older children (6 to 11, 13.0%; 12 to 17, 15.5%) to have made no dental visit in the previous year (p=<0.001). Rural-urban differences were found for children in the older age groups. Rural children in the 6 to 11 and 12 to 17 age groups were more likely to have made no dental visits (See Table 3, end of section).

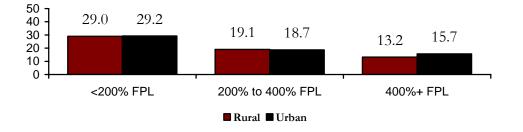
*Gender* – Rural girls (22.3%) were slightly less likely than rural boys (24.4%) to have made no dental visits in the previous year (p=0.0192). Rural boys were slightly more likely than urban boys to have made no dental visits in the past year (p=0.0274; See Table 3, end of section).



### Characteristics of the household

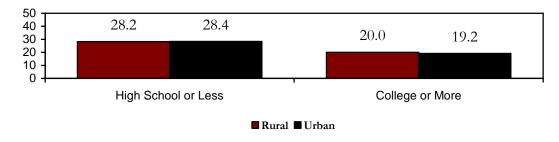
*Income* - As household income increases, the proportion of children with no dental visits in the previous year decreases (p=0.000). Rural children in households earning more than 400% of FPL were slightly less likely than similar urban children to lack a dental visit. At other income levels, the proportion of children with no dental visits did not differ significantly by residence.





*Education* - The higher the education level in the household, the less likely a rural child had made no dental visits in the previous year. Within educational categories, rural versus urban residence was not associated with the likelihood of a visit.

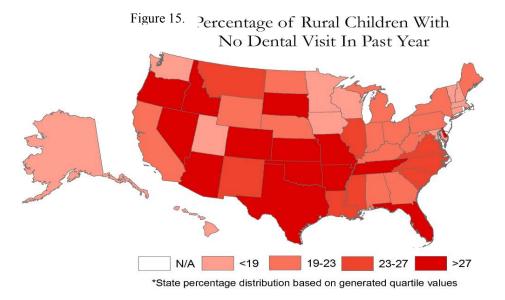
# Figure 14. Percent of Children with No Dental Visit by Household Education and Rural-Urban Status





#### Characteristics of the community

State of residence



States varied markedly in the proportion of rural children who lacked a dental visit during the past year, as reported in 2003. In eight states, more than 28% of rural children had not made a dental visit in the previous year. Delaware leads the states in the proportion of its rural children who lacked a dental visit during the past year, 31.6%. Texas ranked second in the proportion of rural children with no dental visits in the prior year, 30.0%.

In thirteen states, the rate at which rural children failed to make a dental visit in the past year fell below 20%. Vermont had the lowest proportion of rural children who lacked a dental visit (13.7%). Connecticut ranked next, with 14.0% of rural children lacking a dental visit, followed by Maryland (15.0%).

<u>HPSAs</u> - Rural children were more likely to have had no dental visits than urban children, whether living in counties that are whole county dental HPSAs (p=0.0018) or those which have no HPSA designation (dental p=0.0056; primary care p=0.0005). No rural-urban differences were observed for children living in partial county HPSA designations.



Characteristics of the child	All	Rural	Urban
Race			
Hispanic	30.9	31.9	30.8
White	19.2	22.2*	18.4
Black	25.0	25.8	24.9
Other	24.6	23.1	24.9
Child has Special Healthcare Needs			
Yes	17.0	18.6	16.7
No	23.7	24.5	23.5
Child has personal healthcare provider			
Yes	20.4	22.1*	20.0
No	32.9	30.5	33.3
Child has dental insurance			
Yes	18.2	19.0	18.0
No	34.6	33.4	34.9
Gender			
Male	23.1	24.4*	22.8
Female	21.8	22.3	21.7
Age			
1 to 5 years	47.4	48.1	47.2
6 to 11 years	11.2	13.0*	10.8
12 to 17 years	13.6	15.5*	13.2
Characteristics of the household			·
Highest level of education			
High School or Less	28.3	28.2	28.4
College or More	19.3	20.0	19.2
Income as percent Federal Poverty Level			
<200% of FPL	29.1	29.0	29.2
200 to 400% of FPL	18.8	19.1	18.7
400% and over FPL	15.5	13.2*	15.7
Characteristics of the Community			
Availability of Primary Care			
Whole County Primary Care HPSA	22.7	23.5	21.9
Part County Primary Care HPSA	22.9	23.2	22.9
No Primary Care HPSA	20.9	23.7*	20.2
Availability of Dental Care			
Whole County Dental HPSA	24.2	27.7*	19.6
Part County Dental HPSA	22.9	22.3	23.1
	- <i>i</i> - <i>i</i>		

Table 3. Factors associated with the likelihood that a child will have received no dental care during the previous year, in percent.

\*Rural is significantly different than urban at p<0.05.

No Dental HPSA



21.2

23.5\*

21.6

Ranking for No Dental Visit	Rural Area	% With No Dental Visit	Ranking for No Dental Visit	Rural Area	% With No Dental Visit
	US TOTAL		26	MI	22.1
1	DE	31.6	27	ND	21.3
2	TX	30.0	28	IN	21.2
3	OK	29.1	29	OH	21.1
4	TN	28.8	30	GA	20.9
5	МО	28.7	31	NE	20.6
6	NV	28.7	32	AL	20.5
7	OR	28.5	33	KY	20.5
8	FL	28.3	34	WV	20.5
9	ID	27.9	35	WY	20.2
10	KS	27.5	36	ME	19.7
11	AR	27.4	37	WA	18.6
12	SD	27.3	38	UT	18.5
13	СО	27.2	39	MA	18.4
14	AZ	27.1	40	AK	17.9
15	LA	25.6	41	MN	17.8
16	MS	25.2	42	HI	17.7
17	IL	24.0	43	WI	17.4
18	MT	23.9	44	IA	17.0
19	NC	23.9	45	NH	17.0
20	SC	23.7	46	MD	15.0
21	VA	23.5	47	СТ	14.1
22	NM	23.4	48	VT	13.7
23	СА	22.9	49	DC	N/A
24	РА	22.9	50	NJ	N/A
25	NY	22.4	51	RI	N/A

Table 4. State Rankings, by Percentage of Children with No Dental Visits - rural area of a state only

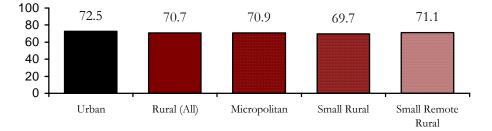
\*Cell size < 30 observations (unweighted)



## **Receipt of Preventive Dental Care**

The majority of parents in the United States reported that their children had received a preventive dental visit during the past year (72.2%). A smaller proportion of rural children (70.7%) than urban (72.5%) had visited a dentist for preventive care in the previous year. Within rural children, those living in small rural counties were least likely to have had a preventive dental visit in the past year.

Figure 16. Reported Receipt of Preventive Care During the Past Year, by Level of Rurality, in percents



# Characteristics of the Child

*Race* – Within every race/ethnicity group, rural children were slightly less likely to have received preventive care than urban children, although these differences are only statistically significant for white children. In both rural and urban settings, white children were most likely to have visited dentists for preventive care in the previous year.

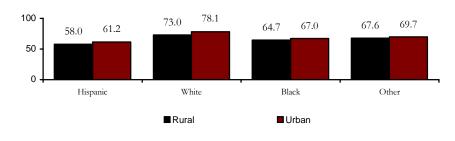
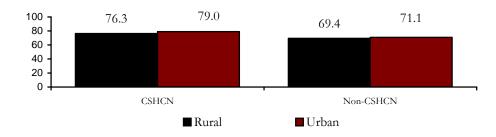


Figure 17. Preventive Care by Race for Rural and Urban Children, in percents



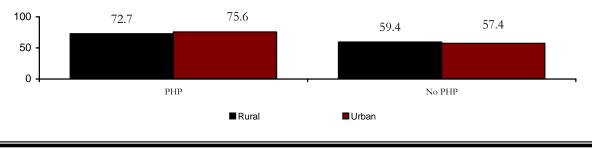
*CSHCN Status* - Rural children with special health care needs were more likely than children without special needs to have visited a dentist for preventive care in the previous year. Similar patterns were present among urban children. However, rural CSHCN were less likely than similar urban children to have received preventive care (p=0.0359).

Figure 18. Preventive Care by Special Health Care Needs Status for Rural and Urban Children, in percents

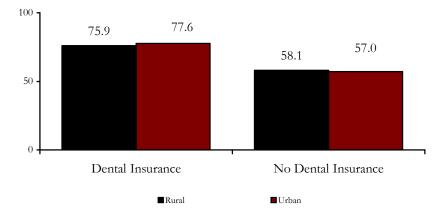


*Personal Healthcare Provider Status* - Rural children with a personal healthcare provider (PHP) were less likely to have had preventive care in the previous year than their urban peers (p=<0.001). No rural-urban differences were detected for children lacking PHPs; regardless of residence, these children were disadvantaged. Within rural counties, children with PHPs were markedly more likely to have received preventive care than those who had no PHP (p=<0.001). Differences were comparable for urban children. (See Table 5, end of section.)





South Carolina Rural Health Research Center Dental Insurance Status - Within rural counties, children with dental insurance were markedly more likely to have visited dentists for preventive care in the previous year, compared to those lacking dental insurance (p=<0.001). Differences for urban children were comparable. Among children with dental insurance, rural children were less likely than urban children to have visited dentists for preventive care (p=0.0111). Uninsured children did not differ statistically by residence.



### Figure 20. Preventive Care by Dental Insurance Status for Rural and Urban Children, in percents

Age - Rural children aged 1 – 5 years (46.4%) were markedly less likely than older children (6 to 11, 80.8%; 12 to 17, 78.4%) to have visited the dentist for preventive care in the previous year (p=<0.001). Similar differences were observed for urban children. Rural children aged 6 to 11 (80.8%) and 12 to 17 (78.4%) years were less likely than their urban peers (84.4% and 80.4%, respectively) to have had preventive care. No rural-urban differences were detected for children aged 1 to 5 years.

*Gender* - Within rural children, girls were more likely than boys to have visited dentists for preventive care in the previous year (72.2% versus 69.2%). No differences by gender were found within urban children. Rural boys were less likely than urban boys to have had preventive dental care (p=0.0006).

### Characteristics of the household

*Income* - As income increased, the likelihood that a rural child would have received preventive dental care increased (p=0.000). Rural-urban differences were limited to the 400%+ income bracket, with rural children more likely to have received preventive care than urban children (p = < 0.001).

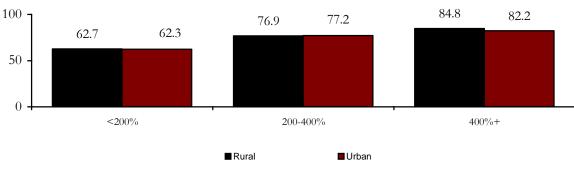


Figure 21. Preventive Care by Household Income Level (Percent of Federal Poverty Level) for Rural and Urban Children, in percents

Education – In both rural and urban counties, children were more likely to receive dental preventive care when living in households where the highest education level was college or more, versus high school or less (p = < 0.001). Within each education level, rural and urban children were not statistically different.

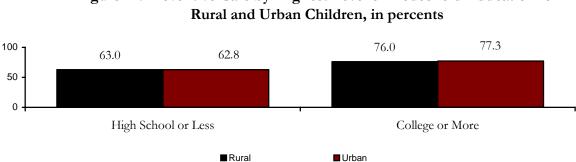
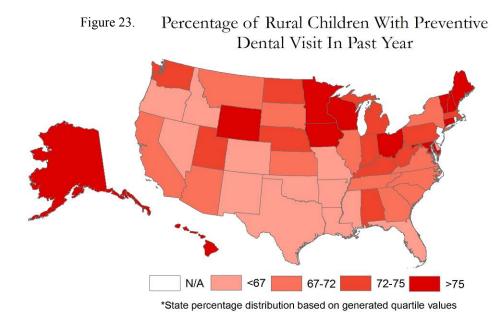


Figure 22. Preventive Care by Highest Level of Household Education for



### Characteristics of the community

State of residence



The proportion of rural children who had received preventive dental services in the past year varied from a high of 84.0% (Vermont) to a low of 60.9% (Florida). In four states, more than four of every five rural children had received a preventive dental visit in the past year: Vermont (84.0%), Connecticut (83.0%), Maryland (81.6%) and New Hampshire (80.3%). Southern states were more likely to fall at the lower end of preventive services delivery for rural children.



*Health Professional Shortage Areas* – Within rural counties, children living in whole county primary care HPSA designated areas were the least likely, and those living in counties without designations were most likely, to have received preventive dental care (p=0.0110). The pattern for dental care HPSAs among rural children differed, with children in partial county dental HPSAs having the highest level of receipt of preventive services (71.8%), followed by those in counties with no dental HPSA designation (71.4%) and those in whole county dental HPSAs (66.4%).

Across primary care and dental HPSA designations, rural children were less likely than similar urban children to have received preventive dental care; these differences were statistically significant for whole county dental HSPAs (p=0.0111) and for counties that were not designated primary care (p=0.0001) or dental care (p=<0.001) HPSAs.

Table 5. Factors associated with the likelihood that a child will have received a preventive dental visit during the previous year, in percent.

Characteristics of the child	All	Rural	Urban
Race		•	•
Hispanic	60.9	58.0	61.2
White	77.0	73.0*	78.1
Black	66.7	64.7	67.0
Other	69.4	67.6	69.7
Child has Special Healthcare Needs			
Yes	78.5	76.3*	79.0
No	70.8	69.4*	71.1
Child has personal healthcare provider			
Yes	75.1	72.7*	75.6
No	57.7	59.4	57.4
Child has dental insurance			
Yes	77.3	75.9*	77.6
No	57.2	58.1	57.0
Gender			
Male	71.5	69.2*	72.0
Female	72.9	72.2	73.1
Age		1	
1 to 5 years	48.1	46.4	48.5
6 to 11 years	83.8	80.8*	84.4
12 to 17 years	80.0	78.4*	80.4
Characteristics of the household		•	
Highest level of education			
High School or Less	62.9	63.0	62.8
College or More	77.1	76.0	77.3
Income as percent Federal Poverty Level			
<200% of FPL	62.4	62.7	62.3
200 to 400% of FPL	77.1	76.9	77.2
400% and over FPL	82.4	84.8*	82.2
Characteristics of the Community			
Availability of Primary Care			
Whole County Primary Care HPSA	69.7	69.0	70.5
Part County Primary Care HPSA	71.6	70.8	71.7
No Primary Care HPSA	74.7	71.4*	75.6
Availability of Dental Care			
Whole County Dental HPSA	69.6	66.4*	73.8
Part County Dental HPSA	71.4	71.8	71.4
No Dental HPSA	73.5	70.5*	74.2

\*Rural is significantly different from urban at p<0.05.

National: Preventive Dental Care

Ranking for Preventive Care	Rural Area	% With Preventive Care	Ranking for Preventive Care	Rural Area	% With Preventive Care
	US TOTAL		26	NC	71.2
1	VT	84.0	27	NY	71.0
2	СТ	83.0	28	MT	69.4
3	MD	81.6	29	IL	69.1
4	NH	80.3	30	SC	68.9
5	WI	79.2	31	KS	68.0
6	MN	78.8	32	AZ	67.9
7	IA	78.3	33	SD	67.5
8	ME	76.1	34	СА	67.2
9	WY	75.9	35	TN	67.1
10	AK	75.5	36	СО	66.9
11	OH	75.4	37	OR	66.8
12	HI	75.1	38	ID	66.7
13	NE	74.8	39	NV	66.6
14	WA	74.7	40	МО	66.3
15	WV	74.6	41	AR	66.0
16	IN	73.9	42	NM	65.5
17	AL	73.6	43	MS	64.3
18	ND	73.5	44	OK	63.9
19	KY	73.4	45	LA	63.8
20	MA	73.3	46	DE	62.3
21	MI	73.2	47	TX	62.0
22	РА	72.3	48	FL	60.9
23	UT	72.3	49	DC	N/A
24	GA	71.9	50	NJ	N/A
25	VA	71.6	51	RI	N/A

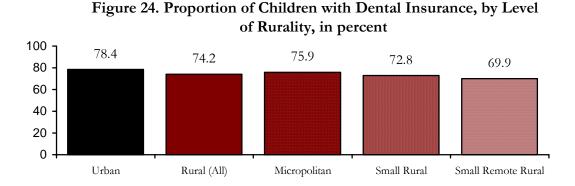
Table 6. State Rankings of Percentage of Children with Preventive Care – rural area of a state only

\*Cell size < 30 observations (unweighted)



### **Dental Insurance**

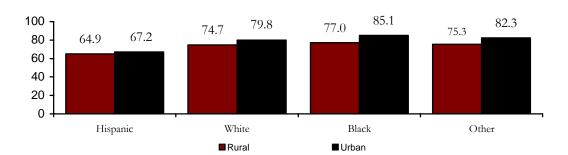
The majority of parents in the United States reported having dental insurance for their children (77.7%). Rural children were less likely than urban children to have dental insurance. As county of residence becomes more rural, children were more likely to lack dental insurance.



### Characteristics of the Child

Race - All Hispanic children were less likely to have dental insurance than children in other racial/ethnic groups, regardless of residence. In both rural and urban areas, black children were most likely to have dental insurance, followed by "other" children and white children.

Figure 25. Proportion of Children with Dental Insurance, by Race/Ethnicity and Residence, in percent

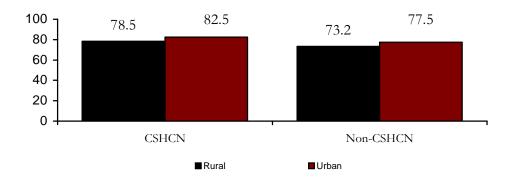


# National: Dental Insurance



CSHCN Status - Rural CSHCN were less likely than similar urban children to have dental

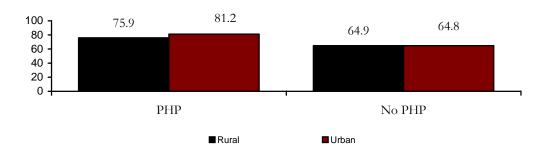
insurance. Both rural and urban CSHCN were more likely than children without special health care needs to have dental insurance.



### Figure 26. Dental Insurance by Special Health Care Needs Status for Rural and Urban Children, in percents

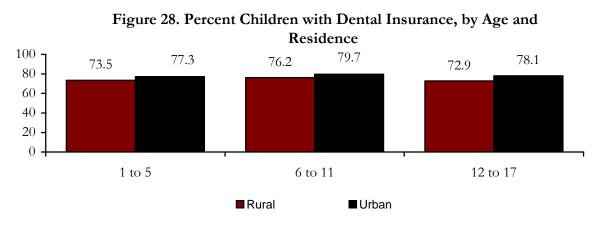
*Personal Healthcare Provider Status* - Rural children with a personal healthcare provider (PHP) were more likely to have dental insurance than rural children without a PHP. However, they were less likely to have dental insurance than urban children with a PHP. Among children lacking a PHP, the proportion of urban and rural children with dental insurance was nearly identical.

## Figure 27. Dental Insurance by Personal Healthcare Provider Status for Rural and Urban Children, in percents





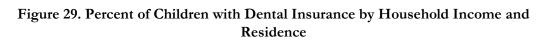
Age - Across all age groups, rural children were less likely than urban to have dental insurance. Rural children aged 1 to 5 years were more likely than those aged 12 to 17, but less likely than children aged 6 to 11 years to have dental insurance (p = < 0.001).

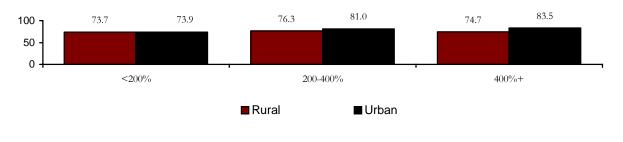


*Gender* - Rural girls and boys were less likely to have dental insurance than their urban peers. No differences between rural girls and rural boys were detected.

### Characteristics of the Household

*Income* - Among rural children, the proportion with dental insurance was highest in households falling at the 200-400% of FPL, versus lower or higher income levels. For urban children, the likelihood of insurance increased directly with income. Among children living at 200%-400% and 400+% of FPL, rural children were less likely than similar urban children to have dental insurance.

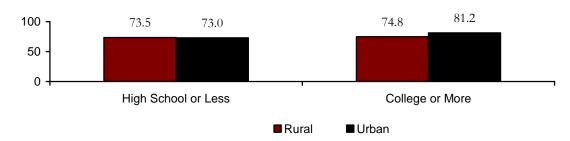






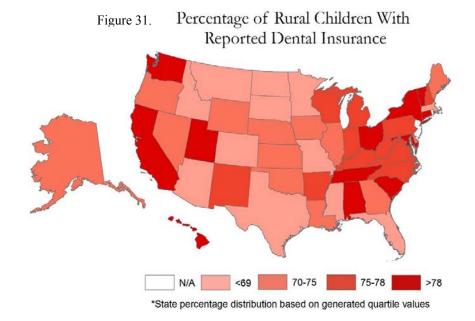
*Education* – Among urban families, children in more highly educated families were more likely to have dental insurance. Among rural children, however, this relationship was not present. Children in rural high education families did not differ from low education families, but were markedly less likely than children in urban high education families to be insured.

Figure 30. Percent of Children with Dental Insurance by Highest Level of Household Education and Residence



Characteristics of the Community

State of residence





The proportion of rural children with dental insurance ranged from a high of 88.9% in Hawaii to a low of 60.6% in Florida and Montana. In nine states, four of every five rural children have dental insurance: Hawaii (88.6%), Connecticut (88.3%), California (83.7%), New York (83.3%), Alabama (82.7%), Ohio (82.1%), Tennessee (81.2%), Utah (80.2%) and Maryland (80.0%).

*HPSA status*– Within rural counties, the availability of dental insurance did not vary consistently with HPSA status. The proportion of children with dental insurance was highest among partial primary care and partial dental HPSA counties, though differences were not marked within primary care HPSA status categories. Rural children living in whole county primary care or dental HPSA counties did not differ from their urban peers. However, rural children living in partial HPSAs or non-HPSA counties were less likely to have dental insurance than similar urban children (See Table 7, next page).



Characteristics of the child	All	Rural	Urban
Race		- -	
Hispanic	67.0	64.9	67.2
White	78.7	74.7*	79.8
Black	84.1	77.0*	85.1
Other	81.4	75.3*	82.3
Child has Special Healthcare Needs			
Yes	81.8	78.5*	82.5
No	76.7	73.2*	77.5
Child has personal healthcare provider			
Yes	80.3	75.9*	81.2
No	64.8	64.9	64.8
Gender			
Male	77.8	74.8*	78.4
Female	77.6	73.6*	78.5
Age			
1 to 5 years	76.7	73.5*	77.3
6 to 11 years	79.1	76.2*	79.7
12 to 17 years	77.1	72.9*	78.1
Characteristics of the household			
Highest level of education			
High School or Less	73.1	73.5	73.0
College or More	80.2	74.8*	81.2
Income as percent Federal Poverty Level			
<200% of FPL	73.9	73.7	73.9
200 to 400% of FPL	80.1	76.3*	81.0
400% and over FPL	82.6	74.7*	83.5
Characteristics of the Community			
Availability of Primary Care			
Whole County Primary Care HPSA	72.6	73.0	72.1
Part County Primary Care HPSA	77.7	74.6*	78.3
No Primary Care HPSA	78.7	74.2*	80.0
Availability of Dental Care			
Whole County Dental HPSA	71.9	73.2	70.1
Part County Dental HPSA	78.0	75.7*	78.4
No Dental HPSA	77.7	72.9*	78.9

Table 7. Factors associated with the likelihood that a child will have dental insurance during the previous year, in percent.

\*Rural is significantly different from urban at p<0.05.



National: Dental Insurance

Dental Insurance Ranking	Rural Area	% With Dental Insurance	Dental Insurance Ranking	Rural Area	% With Dental Insurance
	US TOTAL		26	KS	74.5
1	HI	88.6	27	GA	74.4
2	СТ	88.3	28	OK	73.9
3	СА	83.7	29	ME	73.3
4	NY	83.3	30	NV	73.3
5	AL	82.7	31	OR	73.2
6	ОН	82.1	32	LA	72.7
7	TN	81.2	33	IA	72.4
8	UT	80.2	34	NE	71.7
9	MD	80.0	35	DE	71.5
10	SC	79.6	36	IL	70.1
11	WA	79.5	37	MS	69.6
12	VT	78.5	38	MO	68.7
13	IN	77.8	39	AZ	68.0
14	WV	77.4	40	MN	66.7
15	MI	77.3	41	ID	66.3
16	NH	76.9	42	MA	65.4
17	NM	76.7	43	ND	63.7
18	WI	76.4	44	СО	62.2
19	PA	76.3	45	TX	61.8
20	AR	76.1	46	SD	61.5
21	VA	75.9	47	FL	60.6
22	KY	75.5	48	MT	60.6
23	NC	75.5	49	DC	N/A
24	WY	75.3	50	NJ	N/A
25	AK	75.2	51	RI	N/A

Table 8. State Rankings of Percentage of Children with Dental Insurance – rural area of a state only

\*Cell size < 30 observations (unweighted)



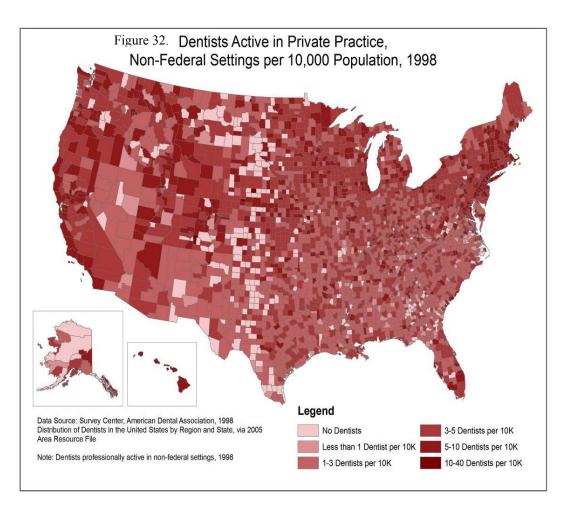
Availability of Dentists



### Actively Practicing Dentists in the United States

The geographic distribution of dentists active in private/non-federal settings per 10,000 population

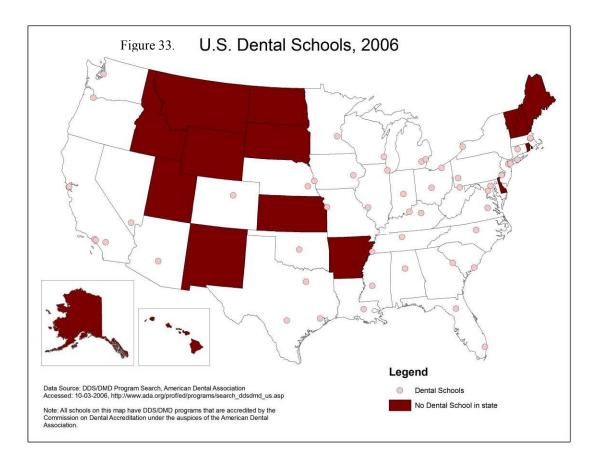
rates (in 1988) can be seen in the following map. There are hotspots of high dentist per capita



concentrations throughout the Southern U.S., with particularly high rates in the Northeast and Pacific coast states. Also note the absence of any professionally active dentists in many counties in the Central and Western U.S. states, particularly in Alaska, Texas and Montana. Generally speaking, rural counties are much more likely to have no dentists than their urban counterparts, and urban counties are more likely to have the highest concentrations of dentists. The mean rate of dentists active in private/non-federal settings per 10,000 population by county in 1988 is 3.78 in urban counties, compared with 2.84 in rural counties.

### Distribution of Dental Schools in the United States

The geographic distribution of dental schools is important to providing broad geographical access of rural residents to dental care providers. According to the American Dental Association, there are 55 dental schools in the U.S. that have DDS/DMD programs accredited by the Commission on Dental Accreditation.



While 34 states and the District of Columbia contain these schools, there is a large geographic variation in their locations. The majority of states without dental schools are concentrated in the Central/Mountain areas of the western U.S. and the northern New England states. Also, the distribution of dental schools is sparse in the Southern Atlantic and Gulf Coast states, with most of the nation's dental schools found in the lower New England and Midwestern states. Finally, it is worth noting that neither Alaska nor Hawaii



has a dental school, so all of their DDS/DMD-degreed providers are reasoned to have been trained in outof-state schools and then imported into those states.

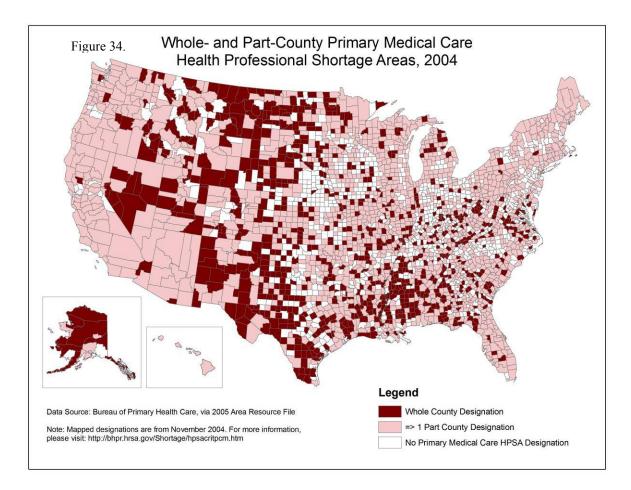
### Health Professional Shortage Areas

Health Professional Shortage Areas (HPSAs) are special designations that can be given to selected geographic areas, population groups, or public or nonprofit private medical facilities by the U.S. Department of Health and Human Affairs. A HPSA designation means that there is a shortage of primary medical care, dental or mental health providers in that area, population, or facility. Such a designation can give its holder special eligibility, a preferred status, or specific benefits in a variety of federal programs and grants, such as enhanced Medicaid/Medicare reimbursement, traineeship grants, Area Health Education Center funding, etc. Also, student loan repayment programs exist for those medical and public health related practitioners who elect to practice in HPSA-designated areas. Along with Dental HPSAs, Primary Care HPSAs are also relevant to the provision of oral health care, as primary care physicians are increasingly encouraged to provide both pediatric oral health screening and referrals to dental care providers as part of the standard preventive care visit.

In 2004, of the 34.7% (n=1091) of U.S. counties that are urban, 71.9% have a Primary Care HPSA designation: 15.5% have a whole county Primary Care HPSA designation, while another 56.4% have at least one part-county (geographic, population, or facility) Primary Care HPSA designation. Of rural U.S. counties (n=2050), 75.8% have a Primary Care HPSA designation. Of these, 31.1% have a whole county Primary Care HPSA designation, while another 44.7% of counties have at least one part-county Primary Care HPSA. Rural counties are more likely to have a whole county Primary Care



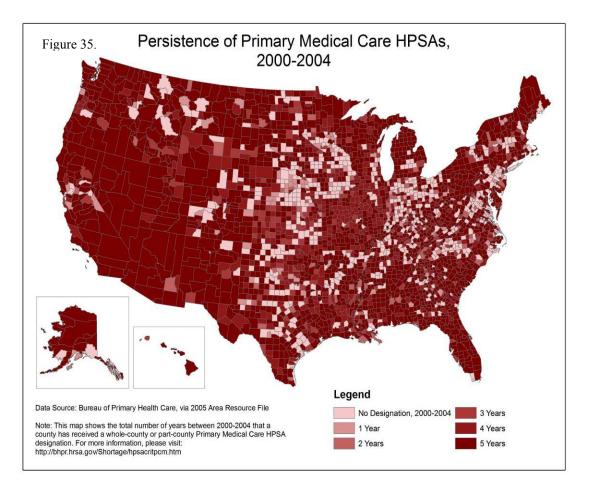
HPSA designation than urban counties as they are generally more likely to have lower provider to population ratios, whereas many urban counties often have Primary Care HPSA designations due to recognized vulnerable population concentrations. Also, whole county Primary Care HPSA designated counties tend to be located in the Western/Mountain and Southeastern zones of the U.S., while many partcounty Primary Care HPSA designated counties are located on the Atlantic and Pacific Coast and in Midwestern states. The following map delineates Primary Medical Care HPSAs.



The persistence of Primary Care HPSA designations from 2000-2004 shows a similar geographic distribution trend as compared to the distribution of Primary Care HPSA designations. The most persistent Primary Care HPSA designations are found in counties of the Western/Mountain and



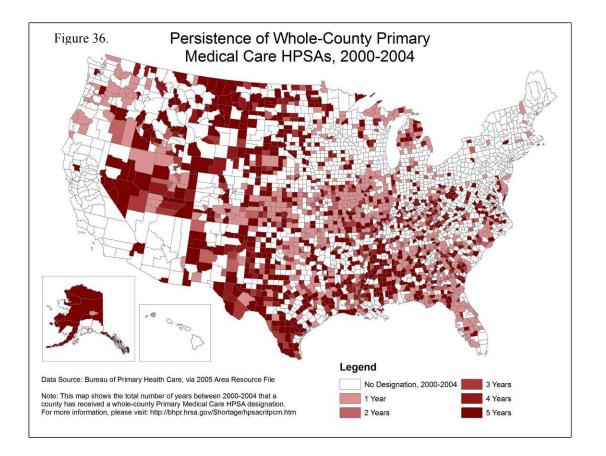
Southeastern zones of the U.S., while many Midwestern and Central U.S. counties show little to no historical designation persistence during the period studied (see following map). During the time period studied, the mean number of years that urban counties have held a Primary Care HPSA designation is 3.43,



as compared to a mean of 3.62 in rural counties. Of all the rural U.S. counties, 81.1% (n=1663) have held a Primary Care HPSA designation between the years of 2000 and 2004. Comparatively, 78.5% (n=856) of urban counties have held a Primary Care HPSA designation during the same time period.



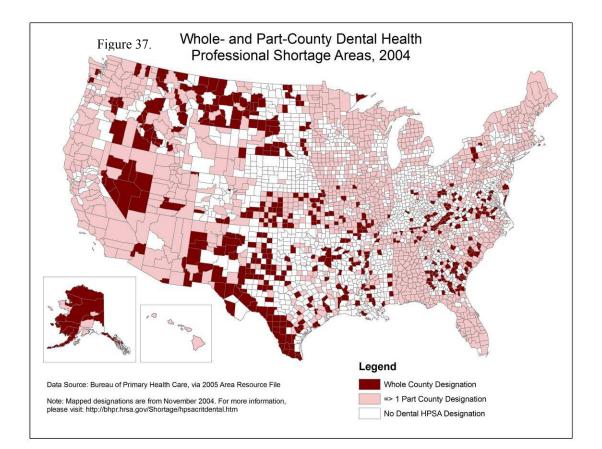




As previously noted, whole county Primary Care HPSAs are generally more likely to be found in rural counties than in urban counties. Comparing this map (whole county Primary Care HPSA designation persistence) with the prior one (all Primary Care HPSA designation persistence), it is apparent that the most persistent designations appear in the Western/Mountain and Southeastern U.S. counties, followed by those in Midwestern and Central U.S. counties. The mean number of years that urban counties in the U.S. have held whole-county Primary Care HPSA designations between 2000 and 2004 is 1.0 years, as compared to 1.9 years in rural counties. Also during that same time period, 59.6% (n=1222) of rural U.S. counties held a whole-county Primary Care HPSA designation for at least one year, as compared to 35.5% (n=387) of urban counties.



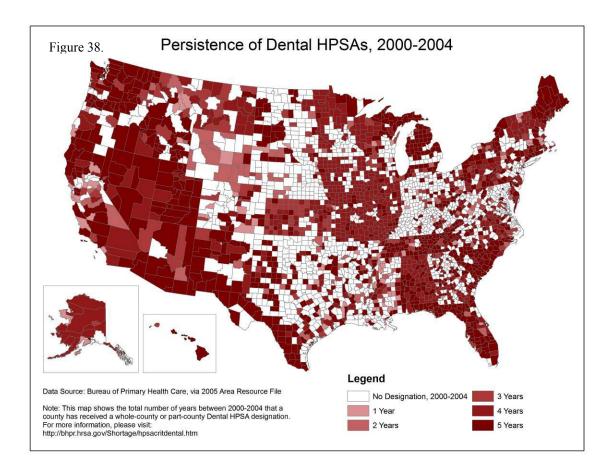
In 2004, of the 34.7% (n=1091) of U.S. counties that are urban, 56.7% have a Dental HPSA designation: 8.2% have a whole county Dental HPSA designation, while another 48.6% have at least one part-county Dental HPSA designation. Of the rural U.S. counties (n=2050), 56.7% have a Dental HPSA designation: 17.4% have a whole county Dental HPSA designation, while another 39.3% of rural counties have at least one part-county Dental HPSA. Similar to the pattern found in Primary Care HPSAs, rural counties are more likely to have a whole county Dental HPSA designation than urban counties. Part-county Dental HPSA designations tend to cluster in the Northeast, Pacific coast, and Southwestern U.S. Whole-county Dental HPSA designations are found in many counties in Georgia, Texas, Nevada, New Mexico, Kansas, and the Dakotas.





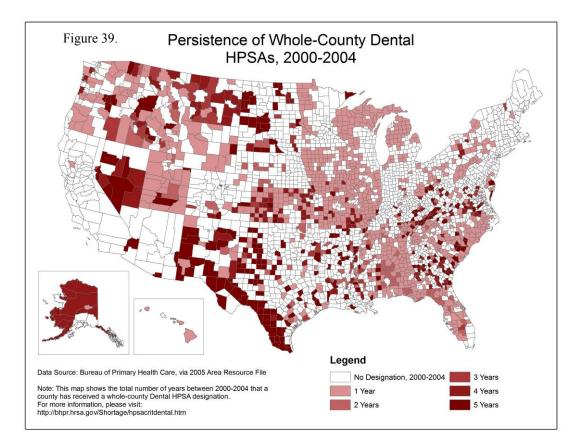


Persistence of Dental HPSA designations from 2000-2004 resembles that of Primary Care HPSAs. The most persistent Primary Care HPSA designations are found in Pacific coast states, as well as in the Southeast, Midwest, and northernmost parts of New England, with notable absences of Dental HPSA persistence in parts of Kentucky, Ohio, and Texas. During the study period, urban counties averaged 2.39 years for having a Dental HPSA, as compared to 2.45 years for rural counties. Of all rural U.S. counties, 59.7% (n=1222) have held a Dental HPSA designation between the years of 2000 and 2004. Likewise, 59.2% (n=646) of urban counties have held a Dental HPSA designation during the same time period. This pattern of persistence of any type of Dental HPSA designation between rural and urban counties is similar to that found in the persistence of Primary Care HPSA designations noted earlier.





The persistence of whole-county Dental HPSAs between 2000 and 2004 is similar to Primary Care HPSA designations in both rural versus urban comparisons and regional distribution. Whole county Dental HPSAs are more likely to be found in rural than in urban counties. The most persistent designations appear in the Northwest and Southwest states, followed by those in Midwest and Southeast. The relative absence of any whole-county Dental HPSA designation in most of the New England states is noticeable. On average, urban counties have held whole-county Dental HPSA designations between 2000 and 2004 for 0.60 years, as compared to 1.14 years in rural counties. During that same time period, 51.0% (n=1045) of rural counties held a whole-county Dental HPSA designation for at least one year, as compared to 32.5% (n=355) of urban counties. Again, this pattern is congruent to that found in wholecounty Primary Care HPSA designations.

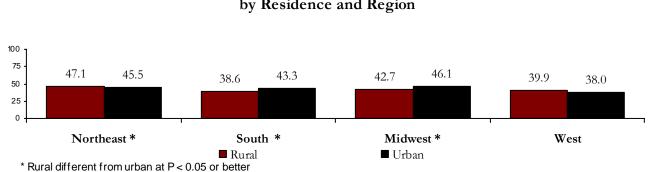




**Regional Analysis** 



While most parents in the United States describe their children's teeth as excellent, the condition of children's teeth varies by region. Rural/urban differences in the proportion of children with excellent teeth were relatively modest, within each region. In the Northeast and the Midwest, rural children were slightly more likely to have excellent teeth than were urban children, while the reverse was true in the South and West.



## Figure 40. Percent of Children with Excellent Teeth, by Residence and Region

**Impact of Race.** Regional disparities in condition of teeth are more pronounced among minority children than among white children, as shown in the chart below. Approximately half of white children, regardless of where they live, have teeth in excellent condition. Among Hispanic children, about a third of those living in

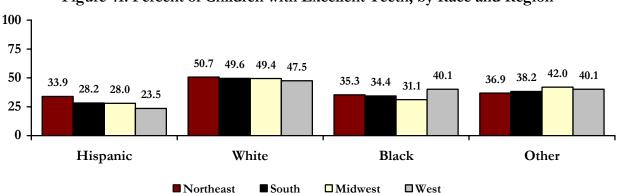


Figure 41. Percent of Children with Excellent Teeth, by Race and Region



the Northeast have excellent teeth (33.9%), versus less than a quarter among Hispanic children in the West (23.5%). Black children were most likely to have excellent teeth if they live in the West (40.1%), and least likely if they live in the Midwest (31.1%). Few regional differences are seen among children in the "other" group.

Residence-based differences within children of the same race, living in the same region, were limited. Among white children, rural children were significantly less likely to have excellent teeth than urban children in both the Midwest and the South (Table 9, below). In the Midwest, rural white children and rural children of other race/ethnicity groups were less likely to have excellent teeth than their urban peers.

### **Condition of Teeth** Rural Urban Excellent Very Good Good-Poor Excellent Very Good Good-Poor Northeast All ^ 47.1 28.9 24.0 45.5 26.3 28.3 45.2 Hispanic 31.2 29.0 39.8 34.0 20.8 White 47.5 28.9 23.6 51.3 26.1 22.6 30.6\* 35.2 31.5 33.3 Black 44.4\* n/a 27.5 19.0 35.9 27.8 Other 53.5 36.3 Midwest All ^ 42.7 28.7 46.1 27.8 28.6 26.1 Hispanic 29.9 21.8 48.3 27.7 19.2 53.1 White ^ 44.2 28.7 27.1 51.6 27.1 21.3 23.7\* 36.0\* 40.3\* 31.4 25.3 43.2 Black Other ^ 31.1 32.1 36.8 45.0 25.5 29.5 South All ^ 38.6 26.6 34.8 43.3 25.5 31.2 25.4 22.6 52.0 28.5 19.3 52.2 Hispanic 27.7 White ^ 43.1 29.2 51.6 26.9 21.5 Black ^ 30.5 23.3 46.2 35.4 25.8 38.8 Other 34.2 35.3 30.5 39.0 29.6 31.4 West All 39.9 26.4 33.7 38.0 25.2 36.9 25.3 20.3 56.3 Hispanic 24.0 50.8 23.4 29.0 White 43.9 27.1 48.1 26.9 25.0 41.7\* 23.0\* Black 35.2\* 40.1 29.9 30.0 41.3 26.6 32.1 39.9 29.5 30.6 Other

Table 9: Reported Oral Health Status of Children aged 1-17, by Region and Race/Ethnicity

\*Sample size is less than 30. N/a designates sample size less than 15.

^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. Data were drawn from the 2003 National Survey of Children's.



The majority of U.S. parents reported that their child had visited a dentist within the 12 months prior to the survey. Children living in the South were the most likely to lack dental visits, with nearly a quarter having had no care in the past year. The proportion of rural children who lacked a dental visit in the past year was similar across regions.

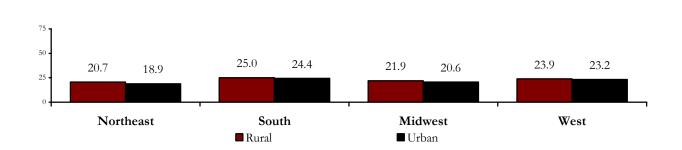
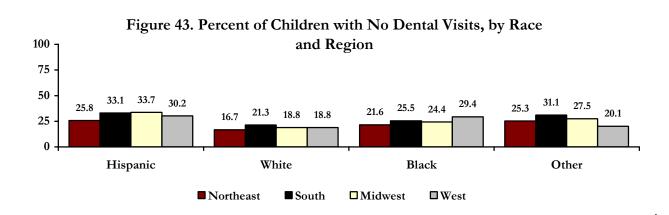


Figure 42. Percent of Children with No Dental Visits, by Residence and Region

Impact of Race. Regional disparities in dental visits were more pronounced among minority children than among white children, as shown in the chart below. Approximately one in five white children, regardless of where they live, had no dental visit in the previous year. Among Hispanic children, about a third of those living in the South (33.1%), Midwest (33.7%), and West (30.2%) had no dental visit, compared to one in four in the Northeast. Black children living in the West (29.4%) were most likely to have had no dental visits, compared to other regions. Nearly one third of Southern children in the "other" group had no dental visit (31.1%), compared to 20.1% among such children living in the West.



Rural Health Research Center

**Rural/Urban Differences within Race and Region.** Residence-based differences within children of the same race, living in the same region, were limited to white children, with rural children being significantly more likely to have had no dental visit than urban children in all four regions (Table 10, below).

	No Der	ntal Visit
	Rural	Urban
Northeast		
All	20.7	18.9
Hispanic	24.6*	25.8
White^	20.1	16.1
Black	n/a	21.5
Other	28.1	25.2
Midwest		
All	21.9	20.6
Hispanic	34.0	33.6
White ^	21.1	17.8
Black	n/a	24.3
Other	25.6	28.0
South		
All	25.0	24.4
Hispanic	32.7	33.1
White ^	23.6	20.6
Black	26.0	25.3
Other	27.2	31.9
West		
All	23.9	23.2
Hispanic	31.0	30.1
White^	23.5	18.0
Black ^	n/a	29.8
Other	17.7	20.4

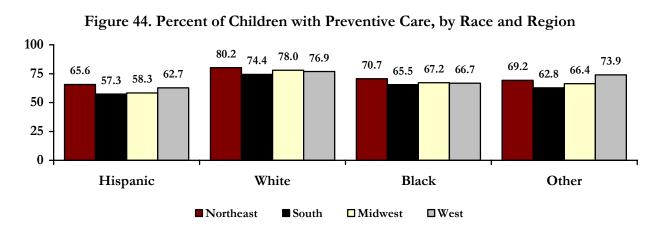
### Table 10: Children with No Dental Visit by Race and Residence

\*Sample size is less than 30. N/a designates sample size less than 15. ^Designates rural is significantly different than urban at p<0.05 for no dental visits. Data were drawn from the 2003 National Survey of Children's.



The majority of children in the United States, regardless of region, were reported to have received some type of preventive dental care in the previous 12 months. Children living in the South were least likely to have received preventive care, as reported by their parents.

**Impact of Race.** Regardless of region, white children were most likely to have received preventive care in the past year, and Hispanic children were least likely to have received such care. Within each race/ethnicity group, children living in the South were least likely to have received preventive care. With the exception of children of "other" race/ethnicity, the proportion of children with a preventive visit was generally highest in the Northeast.



**Rural/Urban Differences within Race and Region.** Significant residence-based differences within children of the same race were limited to white children, with rural children being less likely than urban children to have received preventive care (Table 11, next page).



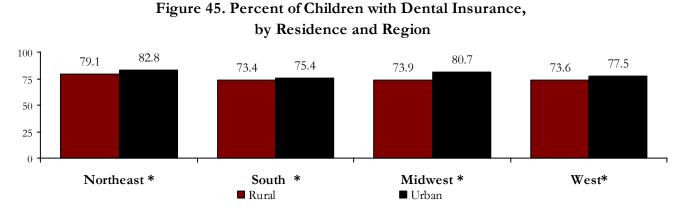
	Prevent	ive Care
	Rural	Urban
Northeast		
All	74.4	76.7
Hispanic	66.0	65.6
White^	75.6	81.0
Black	n/a	70.8
Other	55.3	70.0
Midwest		
All	73.6	75.1
Hispanic	59.0	58.2
White^	74.6	79.4
Black	70.8	67.1
Other	66.0	66.5
South		
All	68.0	69.5
Hispanic	57.9	57.2
White^	70.7	75.5
Black	64.1	65.8
Other	64.1	62.6
West		
All	69.3	71.6
Hispanic	56.5	63.1
White^	71.8	77.8
Black	89.0*	66.3
Other	73.3	74.0

Table 11: Children with Preventive Care by Race and Residence

\*Sample size is less than 30. N/a designates sample size less than 15. ^ Designates rural is significantly different than urban at p<0.05 for preventive dental care. Data were drawn from the 2003 National Survey of Children's.



The majority of children in the United States have some form of insurance that pays for dental care. Children in the Northeast are most likely to have dental insurance, although differences are minimal across regions. Rural children were significantly less likely to have dental insurance than their urban peers in every region of the country. As stated previously, the data do not differentiate between types of insurance (public versus private) therefore no conclusions can be made about the quality of the insurance.



Impact of Race. Black children living in the Northeast were likely to have dental insurance, and within each region, black children were more likely than others to have dental coverage. For Hispanic children, a little more than half (58.3%) in the South had dental insurance, a stark contrast to the 80.4% in the Northeast. White children and children in the "other" category are similar with dental insurance status. Regional representation is comparable to the other groups, although variance is minimal.

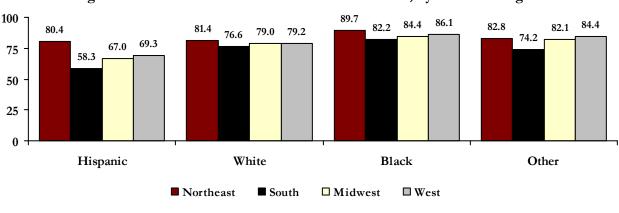


Figure 46. Percent of Children with Dental Insurance, by Race and Region





**Rural/Urban Differences within Race and Region.** Residence-based differences within children of the same race, living in the same region, were observed for non-Hispanic children. With the exception of the Northeast, rural white children were less likely to have dental insurance than urban (Table 12, below). Rural black children were more likely in the Northeast, but less likely in the South and Midwest, to have dental insurance. Rural/urban differences for children in the "other" race category, are limited to the West where rural is less likely than urban to have dental insurance.

	Dental Insurance			
	Rural	Urban		
Northeast				
All †	79.1	82.8		
Hispanic	77.5	80.4		
White	79.2	81.8		
Black†	n/a	89.6		
Other	74.3	83.3		
Midwest				
All †	73.9	80.7		
Hispanic	70.1	66.4		
White <sup>†</sup>	74.2	81.1		
Black†	55.9	85.5		
Other	78.2	83.2		
South				
All †	73.4	75.4		
Hispanic	56.9	58.5		
White <del>†</del>	74.0	77.5		
Black†	78.1	83.2		
Other	72.5	74.5		
West				
All†	73.6	77.5		
Hispanic	70.9	69.2		
White <sup>†</sup>	73.8	80.2		
Black	73.8*	86.3		
Other†	75.7	85.5		

### Table 12: Children with Dental Insurance by Race and Residence

\*Sample size is less than 30. N/a designates sample size less than 15. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's.





**State Profiles** 



35.8

29.9

Good-Poor

Urban

Reported Condition of Teeth Among Alabama Children

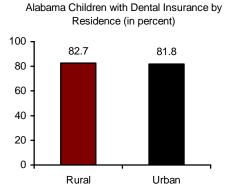
by Residence (in percent)

26.6 26.2

Very Good

# Alabama

As reported by their parents, slightly more rural Alabama children had dental insurance (82.7%), than urban children (81.8%). Despite similar dental insurance, only 37.6% of rural children had teeth in excellent condition, compared to 43.9% of urban children. Good-poor tooth status was more common among rural children (35.8%) than among urban children (29.9%).



### Highlights

•

Rural white children had teeth in worse condition than urban white children, with only 39.3% falling in the 'excellent' category, versus 51.0% among urban white children.

Rural

Excellent

43.9

37.6

60

50

40

30

20

10 0

- Among rural children, those living below 200% of the FPL were much less likely to have excellent teeth (29.4%) than rural children living above 200% of the FPL (48.6%).
- Among children with special health care needs, rural children were less likely to have excellent teeth (31.5%) than their urban counterparts (42.4%).
- Rural Alabama children who have a personal healthcare provider were markedly less likely to have excellent teeth (38.3%) than urban children with a personal healthcare provider (45.7%).

	Rural				Urban			
	Condition of teeth		Dental	Condition of teeth			Dental	
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	37.6	26.6	35.8	82.7	43.9	26.2	29.9	81.8
Race	II						<u>.</u>	
White ^	39.3	29.8	30.9	81.4	51.0	27.8	21.2	82.4
Non-White	34.3	20.4	45.3	85.4	32.6	23.7	43.7	80.7
Family Income								
< 200% FPL	29.4	24.6	46.0	84.8	33.6	24.8	41.5	79.1
> 200% FPL	48.6	29.9	21.5	82.3	53.1	27.7	19.1	85.0
Age of Child								
1 to 5 years	54.4	27.8	17.8*	84.0	55.8	22.5	21.7	76.4
6 to 11 years	29.8	25.1	45.1	80.6	35.7	28.6	35.7	83.7
12 to 17 years	33.2	27.2	39.7	83.8	42.8	26.8	30.4	83.9
Special Needs Status								
CSHCN	31.5	24.3*	44.3	83.5	42.4	23.6	34.0	88.3
Non-CSHCN	39.1	27.2	33.7	82.5	44.3	26.9	28.8	80.1
Personal Healthcare Pre	ovider (PHP	) Status						
PHP ^	38.3	26.9	34.8	84.6	45.7	26.6	27.7	84.3
No PHP	34.4*	24.6*	41.0	71.6	33.1	24.2	42.8	67.5

\*Sample size is less than 30. ^Designates rural is significantly different than urban at p<0.05 for condition of teeth. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2.167 children from Alabama.



33.1

25.5

Good-Poor

Urban

Reported Condition of Teeth Among Alaska Children

by Residence (in percent)

28.9 28.1

Very Good

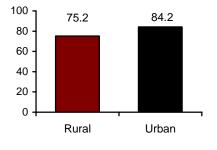
46.4

38.0

# Alaska

As described by their parents, 38.0% of rural Alaskan children had teeth in excellent condition, compared to 46.4% of urban children. One out of every three rural children (33.1%) had teeth only in good-poor condition. Reported dental insurance among rural children (75.2%) was lower than among urban children (84.2%).

Alaska Children with Dental Insurance by Residence (in percent)



### Highlights

Reported dental insurance among rural non-white children (68.1%) was lower than among urban non-white children (77.7%).

Excellent

Rural

60.0

50.0

40.0

30.0

20.0

10.0 0.0

Among children living below 200% of the FPL, rural children were less likely to be insured than urban children (68.6% among rural versus 81.8% of urban children).

- Rural children 6-11 years of age had poorer tooth condition and lower reported dental insurance than urban children in the same age group.
- Rural children who did not have a personal healthcare provider had teeth in poorer condition and lower reported dental insurance than their urban counterparts.

	Rural				Urban			
	Condition of teeth			Dental	Condition of teeth			Dental
	Excellent	Excellent   Very Good   Good - Poor	Insurance	Excellent	Very Good	Good - Poor	Insurance	
				Reported				Reported
Overall	38.0	28.9	33.1	75.2	46.4	28.1	25.5	84.2
Race	1	1	1	1	1	1		
White	46.5	30.4	23.0	83.5	50.0	28.1	21.8	87.5
Non-White	30.9	27.7	41.5	68.1†	39.5	27.9	32.6	77.7
Family Income			-					
< 200% FPL	32.9	26.6	40.5	68.6†	40.3	27.4	32.3	81.8
> 200% FPL	47.5	31.2*	21.4*	86.4	50.8	29.3	19.9	86.6
Age of Child								
1 to 5 years	46.3	27.5	26.2*	70.8	52.9	27.4	19.8	80.7
6 to 11 years ^	28.6	29.8	41.7	78.8	46.6	23.1	30.3	87.4
12 to 17 years	41.6	29.0	29.4	74.4†	41.3	32.8	25.9	84.3
Special Needs Status								
CSHCN	39.3	17.4*	43.3*	80.5	41.8	25.1	33.2	83.1
Non-CSHCN ^	37.8	31.0	31.3	74.2+	47.5	28.7	23.9	84.5
Personal Healthcare Pro	ovider (PHP	) Status						
PHP	41.8	29.1	29.1	78.6+	47.6	28.1	24.4	84.7
No PHP	30.6	29.0	40.4	69.0†	42.5	28.3	29.2	82.1

\*Sample size is less than 30.^Designates rural is significantly different than urban at p<0.05 for condition of teeth.<sup>+</sup> Designates rural is significantly different than urban at p<0.05 for dental insurance .Data were drawn from the 2003National Survey of Children's Health and are based on information for 1,904 children from Alaska..



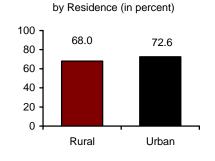
34.7 38.0

Good-Poor

Urban

# Arizona

As described by their parents, 37.1% of rural Arizona children had teeth in excellent condition, compared to 38.8% of urban children. One out of every three rural children (34.7%) had teeth that are only in good-poor condition. Reported dental insurance among rural children (68.0%) was slightly lower than among urban children (72.6%).



Arizona Children with Dental Insurance

#### Highlights

• Among white children, rural children were less likely to have excellent teeth than were urban children (33.4% versus 48.2%).

Excellent

Rural

37.1 38.8

60.0 50.0

40.0

30.0

20.0

10.0

0.0

Reported Condition of Teeth Among Arizona Children by Residence (in percent)

28.2

23.3

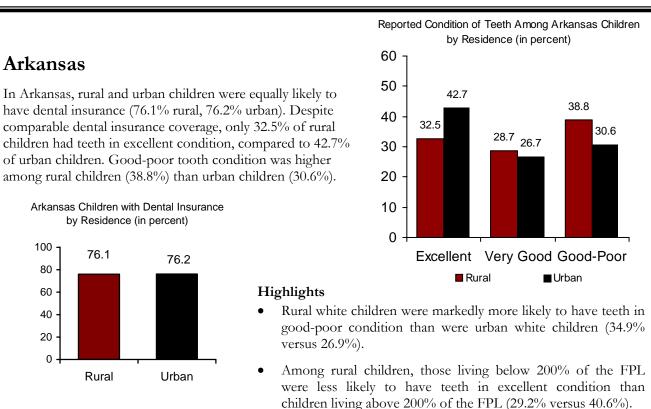
Very Good

- Excellent teeth were more common among rural non-white children (40.2%), than among urban non-white children (28.6%).
- Two out of every five (42.7%) rural children living below 200% of the FPL had only good-poor tooth condition.
- Among children who have a personal healthcare provider, excellent teeth were less common among rural children (34.4%) than among urban children with a personal healthcare provider (42.1%).

	Rural				Urban			
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	37.1	28.2	34.7	68.0	38.8	23.3	38.0	72.6
Race							1	1
White ^	33.4	35.9	30.7	74.7	48.2	26.1	25.7	78.1
Non-White	40.2	21.7*	38.1	62.3	28.6	20.3	51.1	66.6
Family Income								
< 200% FPL	31.2	26.1*	42.7	63.7	26.3	20.4	53.3	65.0
> 200% FPL	44.6	33.1*	22.4*	77.9	49.4	26.3	24.3	80.8
Age of Child								
1 to 5 years	47.6*	n/a	28.5*	68.2	50.2	23.2	26.6	73.0
6 to 11 years	26.7*	28.5*	44.8	67.0	28.4	24.0	47.6	72.7
12 to 17 years	37.8	31.2*	31.0	68.8	39.8	22.5	37.7	72.1
Special Needs Status								
CSHCN	n/a	n/a	n/a	83.9*	41.0	24.3	34.7	79.5
Non-CSHCN	38.2	27.3	34.6	65.8	38.3	23.1	38.6	71.3
Personal Healthcare Pro	ovider (PHP	) Status						
РНР	34.4	32.5	33.2	73.5	42.1	25.3	32.6	80.2
No PHP	42.7*	19.2*	38.1*	57.6	29.0	17.5	53.6	50.5

\*Sample size is less than 30. ^Designates rural is significantly different than urban at p<0.05 for condition of teeth.. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,919 children from Arizona.

Cells marked "n/a" have too few observations to display an estimate

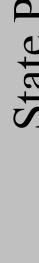


- Rural children 6-11 years of age had teeth in poorer condition than urban children in the same age group.
- Rural children who have a personal healthcare provider had teeth in poorer condition than urban children who also have a personal healthcare provider (38.3% in good-poor condition, versus 27.8% for urban).

		F	lural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	32.5	28.7	38.8	76.1	42.7	26.7	30.6	76.2
Race			1	1				
White ^	35.7	29.4	34.9	77.5	47.6	25.5	26.9	75.2
Non-White	24.8	27.2	48.0	72.9	31.1	29.6	39.4	78.8
Family Income	· · · · · · · · ·			-	-			
< 200% FPL	29.2	26.3	44.5	75.9	34.2	25.8	40.0	73.6
> 200% FPL ^	40.6	33.1	26.3	76.2	50.3	28.6	21.1	80.8
Age of Child								
1 to 5 years	52.1	24.4	23.5	73.6	59.8	19.4	20.8	71.3
6 to 11 years ^	22.7	28.2	49.1	78.8	33.2	30.9	36.0	81.8
12 to 17 years	27.7	32.0	40.3	75.5	36.3	29.3	34.4	75.5
Special Needs Status								
CSHCN	30.8	24.5	44.7	81.5	38.4	25.0	36.6	83.8
Non-CSHCN ^	32.9	29.7	37.4	74.9	43.8	27.2	29.0	74.2
Personal Healthcare	Provider (PHP	) Status						
PHP ^	32.9	28.8	38.3	78.4	44.7	27.5	27.8	78.1
No PHP	30.4*	28.2*	41.4	63.5	33.8	22.9	43.3	67.6

\*Sample size is less than 30  $\,^{\circ}$  Designates rural is significantly different than urban at p<0.05 for condition of teeth.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,878 children from Arkansas.



# California

Of the 2,223 California children surveyed by the NCHS, less than 2% lived in rural counties; therefore, estimates could not be developed at the rural level. The data presented below are for the entire survey population.

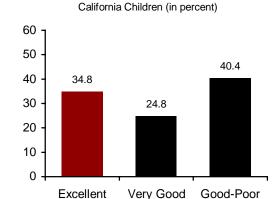
As described by their parents, 34.8% of California children had teeth in excellent condition, and 40.4% had teeth only in good-poor condition. Approximately 77.2% of children had dental insurance.

#### Highlights

- Teeth in excellent condition among white children (47.7%), was much higher than among non-white children (27.9%).
- Over one half (57.1%) of children living below 200% of the FPL had teeth only in good-poor condition, compared to 25.3% of children living above 200% of the FPL.
- Among children who have a personal healthcare provider, 82.1% had dental insurance, compared to 60.9% among children who do not have a personal healthcare provider.

		All Ca	alifornia Child	ren
	Co	ndition of teetl	h	Dental Insurance Reported
	Excellent	Very Good	Good - Poor	Reported
Overall	34.8	24.8	40.4	77.2
Race		•		
White	47.7	26.4	25.9	79.1
Non-White	27.9	23.9	482	76.1
Family Income				
< 200% FPL	22.2	20.8	57.1	71.8
> 200% FPL ^	45.1	29.6	25.3	83.5
Age of Child				
1 to 5 years	47.1	19.2	33.8	77.9
6 to 11 years	27.5	26.9	45.6	77.9
12 to 17 years	31.8	27.5	40.7	75.9
Special Needs Status				
CSHCN	31.8	24.7	43.5	80.5
Non-CSHCN	35.3	24.8	39.9	76.7
Personal Healthcare Provider (I	PHP) Status			
PHP	38.7	26.4	35.1	82.1
No PHP	21.9	19.4	58.7	60.9

\*Sample size is less than 30 ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,223children from California.



Reported Condition of Teeth Among

Colorado

34.3

Good-Poor

Urban

29.0

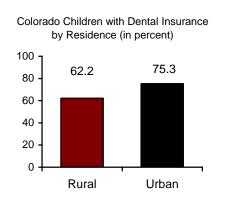
Reported Condition of Teeth Among Colorado Children by Residence (in percent)

25.7 24.6

Very Good

# Colorado

As described by their parents, 40.0% of rural Colorado children had teeth in excellent condition, compared to 46.4% of urban children. One out of every three rural children (34.3%) had teeth only in good-poor condition. Dental insurance was less common among rural children than among urban children (62.2% versus 75.3%).



#### Highlights

• Over one half (56.0%) of rural non-white children had only good-poor teeth.

Rural

Excellent

46.4

40.0

60.0

50.0

40.0

30.0

20.0

10.0

0.0

- Among white children, rural children were less likely to have dental insurance than urban children (60.7% versus 78.2%).
- Among families above 200% of the FPL, rural children were markedly less likely to have dental insurance than urban children (63.7% versus 80.6%).
- Dental insurance was lower among rural children 6-11 years of age (65.9%) than among urban children of the same age (78.7%).

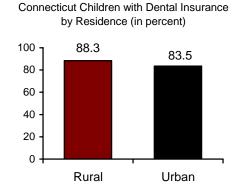
		R	ural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	40.0	25.7	34.3	62.2	46.4	24.6	29.0	75.3
Race			1			1		
White	48.3	27.7	24.0	60.7†	54.3	24.3	21.4	78.2
Non-White	22.5*	21.5*	56.0	65.5	31.0	25.2	43.8	69.7
Family Income								
< 200% FPL	22.0*	30.7*	47.3	65.0	31.4	25.5	43.1	64.5
> 200% FPL	53.1	22.2	24.7*	63.7+	53.6	25.1	21.3	80.6
Age of Child								
1 to 5 years	60.5	23.8	n/a	66.0	57.1	19.7	23.2	69.8
6 to 11 years	23.1*	31.4*	45.5*	65.9	35.2	28.4	36.4	78.7
12 to 17 years	39.1	23.0*	37.9	57.5+	48.0	25.2	26.8	76.7
Special Needs Status								
CSHCN ^	23.4*	36.7*	n/a	75.9	49.5	22.5	28.0	79.9
Non-CSHCN	43.1	23.6	33.2	59.7†	45.8	25.1	29.2	74.4
Personal Healthcare Pr	ovider (PHP	) Status						
РНР	41.1	28.1	30.9	63.7†	50.5	25.1	24.5	78.8
No PHP	29.2*	n/a	56.0*	n/a	30.9	22.8	46.4	61.3

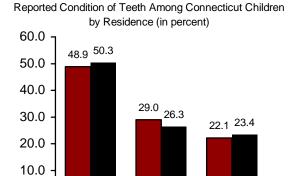
\*Sample size is less than 30 ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,855 children from Colorado. Cells marked "n/a" have too few observations to display an estimate



# Connecticut

As reported by their parents, rural Connecticut children were more likely to have dental insurance than were urban children (88.3% versus 83.5%). Nearly one half (48.9%) of rural children had teeth in excellent condition, similar to urban children (50.3%). Only one out of every five rural children (22.1%) had good-poor tooth condition.







#### Highlight

- Rural children 12-17 years of age had teeth in better condition than urban children in the same age group.
- Excellent condition of teeth among rural children living below 200% of the FPL (32.8%\*) was lower than rural children living above 200% of the FPL(56.1%).
- Reported dental insurance among rural children who do not have special health care needs (89.4%), was higher than among urban children who do not have special health care needs (83.2%).

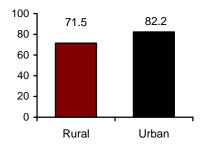
		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	48.9	29.0	22.1	88.3	50.3	26.3	23.4	83.5
Race	· ·							
White	51.3	30.2	18.5*	87.9	55.7	25.6	18.7	83.0
Non-White	n/a	n/a	n/a	91.9*	38.7	27.9	33.4	84.7
Family Income								
< 200% FPL	n/a	n/a	n/a	98.4*+	37.0	31.4	31.6	81.4
> 200% FPL	56.1	25.6	18.3*	88.3	54.6	25.4	20.0	84.4
Age of Child								
1 to 5 years	66.7	n/a	n/a	86.2	60.7	22.4	16.9	83.9
6 to 11 years	29.7*	31.1*	39.3*	89.9	43.6	28.8	27.6	84.5
12 to 17 years ^	58.9	31.0*	n/a	88.3	48.7	27.0	24.3	82.2
Special Needs Status								
CSHCN	n/a	n/a	n/a	83.8	44.5	27.0	28.6	84.8
Non-CSHCN	53.3	29.3	17.4*	89.4†	51.6	26.2	22.2	83.2
Personal Healthcare Pre	ovider (PHP	) Status						
РНР	49.3	29.1	21.7	88.8	52.2	25.7	22.1	84.8
No PHP	n/a	n/a	n/a	n/a	32.0	33.3	34.7	70.3

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,146children from Connecticut. Cells marked "n/a" have too few observations to display an estimate

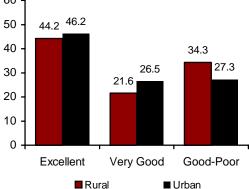
# Delaware

As described by their parents, 44.2% of rural Delaware children had teeth in excellent condition, compared to 46.2% of urban children. One out of every three rural children (34.3%) had teeth in good-poor condition. A smaller proportion of rural children (71.5%) had dental insurance than urban children (82.2%).

Delaware Children with Dental Insurance by Residence (in percent)



Reported Condition of Teeth Among Delaware Children by Residence (in percent) 60 า



#### Highlights

- Rural white children were less likely to have dental insurance there were urban children (68.3% versus 81.6%)
- Among non-white children, rural children were more likely to have teeth in only good-poor condition than were urban children (53.6% versus 36.2%).
  - Nearly one half (48.2%) of rural children living below 200% of

the FPL had teeth in only good-poor condition.

• The proportion of rural children 12-17 years of age with dental insurance was lower than among urban children in the same age group (70.2% versus 82.2%).

		R	lural			Urban			
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental	
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported	
Overall	44.2	21.6	34.3	71.5	46.2	26.5	27.3	82.2	
Race			1			1	1	1	
White	52.5	24.1	23.3	68.3†	50.2	27.3	22.5	81.6	
Non-White ^	29.3	17.2*	53.6	77.4	38.7	25.1	36.2	83.3	
Family Income									
< 200% FPL	32.2	19.5	48.2	76.1	33.5	25.8	40.7	71.1	
> 200% FPL	54.9	23.8	21.3	67.3†	52.5	27.2	20.3	87.2	
Age of Child									
1 to 5 years ^	68.5	13.4*	18.2*	66.4†	59.0	25.1	15.9	81.3	
6 to 11 years	30.5	25.1*	44.4	77.8	38.0	26.1	35.9	82.9	
12 to 17 years	37.9	24.6	37.5	70.2†	44.4	28.1	27.5	82.2	
Special Needs Status									
CSHCN	47.4	27.2*	25.4*	78.6	43.4	25.9	30.8	85.9	
Non-CSHCN ^	43.5	20.4	36.2	70.0†	46.9	26.7	26.4	81.2	
Personal Healthcare F	Provider (PHP	) Status							
PHP	47.1	23.4	29.5	71.3†	48.3	26.6	25.1	83.6	
No PHP	n/a	n/a	54.3*	71.5*	28.2	25.8	45.9	70.5	

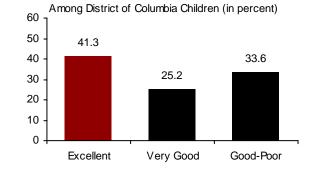
\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,156 children from Delaware. Cells marked "n/a" bave too few observations to display an estimate

# **District of Columbia**

As described by their parents, 41.3% of District of Columbia children had teeth in excellent condition, and 33.6% report only good-poor tooth status. Approximately 85.0% of District children had dental insurance.

#### Highlights

• Despite being more likely to have dental insurance, non-white children were markedly less likely than white children to have teeth in excellent condition (38.2% compared to 65.0%).



Reported Condition of Teeth

- A greater proportion of children living in families with income below 200% of the FPL had only good-poor teeth, compared to children living above 200% of the FPL (42.2% versus 21.7%).
- Over one half (58.0%) of children 1-5 years had teeth in excellent condition, versus only 33.9% of children aged 12 -17 years.

			All	
		Dental Insurance Reported		
	Excellent	Very Good	Good - Poor	-
Overall	41.3	25.2	33.6	85.0
Race				
White	65.0	23.4	11.6	75.4
Non-White	38.2	25.4	36.4	86.2
Family Income				
< 200% FPL	36.0	21.8	42.2	86.3
> 200% FPL	50.9	27.4	21.7	84.0
Age of Child				
1 to 5 years	58.0	20.1	21.9	81.0
6 to 11 years	33.6	25.7	40.7	86.9
12 to 17 years	33.9	29.4	36.7	86.6
Special Needs Status				
CSHCN	32.7	30.7	36.6	86.9
Non-CSHCN	43.3	23.9	32.8	84.6
Personal Healthcare Pr	ovider (PHP) St	atus		
PHP	42.1	26.3	31.6	86.5
No PHP	37.7	21.6	40.7	78.4

\*Sample size is less than 30.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,049 children from District of Columbia.



# Reported Condition of Teeth Among Florida Children

by Residence (in percent)

17.6

Excellent Very Good Good-Poor

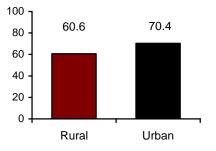
Urban

25.6

# Florida

As described by their parents, 42.9% of rural Florida children had teeth in excellent condition, as did 45.0% of urban children. However, 39.4% of rural children had teeth in good-poor condition, compared to 29.4% of urban children. The proportion of children with dental insurance was lower among rural children than among urban children (60.6% versus 70.4%).

Florida Children with Dental Insurance by Residence (in percent)



#### Highlights

• Rural white children were less likely to have dental insurance than urban white children (54.6% versus70.7%).

Rural

42.9 45.0

60.0

50.0

40.0

30.0

20.0

10.0

0.0

- Rural children 1-5 years of age had teeth in poorer condition than urban children in the same age group.
- Among rural children with a personal healthcare provider, rural children were less likely to have dental insurance than similar urban children (57.0% versus 74.0%).

		F	lural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	42.9	17.6*	39.4	60.6	45.0	25.6	29.4	70.4
Race			1				1	1
White ^	49.6	n/a	38.2*	54.6	49.2	29.0	21.8	70.7
Non-White	n/a	n/a	n/a	77.0*	40.0	21.6	38.4	70.1
Family Income	· · · · ·							
< 200% FPL	38.4*	n/a	47.1*	58.0*	33.6	25.0	41.5	70.0
> 200% FPL	51.2*	n/a	n/a	63.7*	54.3	26.2	19.5	72.8
Age of Child								
1 to 5 years ^	45.6*	n/a	n/a	55.1*	59.4	22.2	18.4	68.1
6 to 11 years	n/a	n/a	n/a	67.4*	37.9	27.5	34.5	74.7
12 to 17 years	48.8*	n/a	n/a	58.9*	41.1	26.4	32.5	68.2
Special Needs Statu	s							
CSHCN	n/a	n/a	n/a	n/a	39.8	26.0	34.2	73.3
Non-CSHCN	45.0	17.9*	37.2*	58.3	46.3	25.6	28.2	69.7
Personal Healthcare	Provider (PHP	') Status						
PHP ^	47.3	14.0*	38.6*	57.0+	47.0	26.5	26.5	74.0
No PHP	n/a	n/a	n/a	n/a	37.3	22.1	40.6	56.5

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,116children from Florida. Cells marked "n/a" have too few observations to display an estimate



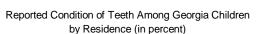


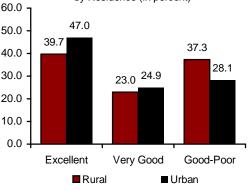
39.4

29.4

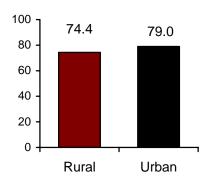
# Georgia

As described by their parents, 39.7% of rural Georgia children had teeth in excellent condition, compared to 47.0% of urban children. One out of every three rural children (37.3%) had only good-poor tooth condition. Reported dental insurance among rural children (74.4%) was lower than among urban children (79.0).





Georgia Children with Dental Insurance by Residence (in percent)



#### Highlights

- Rural white children had teeth in worse condition than did urban white children, with 44.0% falling in the 'Excellent' category, versus 56.6% among urban white children.
- Rural children 12-17 years of age had teeth in worse condition than urban children in the same age group.
- Rural children with special health care needs had teeth in poorer condition than urban children who also have special health care needs.

• Rural children who had a personal healthcare provider had

teeth in poorer condition than urban children who also have a personal healthcare provider.

		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	39.7	23.0	37.3	74.4	47.0	24.9	28.1	79.0
Race	<u> </u>		1			1	1	1
White ^	44.0	24.6	31.4	77.9	56.6	22.6	20.8	80.1
Non-White	33.8	20.8*	45.3	69.6	34.2	28.1	37.7	77.4
Family Income								
< 200% FPL	32.1	21.6	46.3	73.5	36.0	24.9	39.1	75.6
> 200% FPL	47.8	25.7	26.6	78.9	54.7	25.7	19.6	81.8
Age of Child								
1 to 5 years	51.0	19.0*	29.9*	72.3	62.2	19.2	18.6	75.3
6 to 11 years	40.9	27.3*	31.8	69.0	33.6	28.5	37.9	81.9
12 to 17 years ^	31.2	22.4	46.4	79.7	48.6	25.9	25.5	78.9
Special Needs Status								
CSHCN ^	34.1*	26.3*	39.7*	83.7	55.2	22.9	21.9	84.4
Non-CSHCN	41.5	22.0	36.6	71.4	45.2	25.4	29.5	77.7
Personal Healthcare Pr	ovider (PHP	) Status						
PHP ^	40.9	22.2	37.0	76.8	50.2	24.1	25.7	81.2
No PHP	34.4*	27.0*	38.5*	63.7	30.5	29.0	40.6	67.4

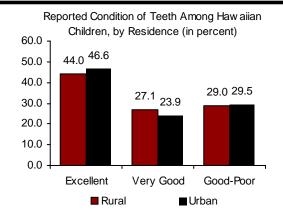
\*Sample size is less than 30.  $^{\circ}$  Designates rural is significantly different than urban at p<0.05 for condition of teeth.

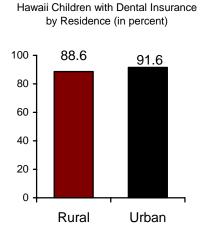
Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,864 children from Georgia.

Hawaii

# Hawaii

As described by their parents, 44.0% of rural Hawaiian children had teeth in excellent condition, compared to 46.6% of urban children. Good-poor tooth status was comparable for urban and rural children, 29.0% and 29.5%. Reported dental insurance among rural children (88.6%) was slightly lower than among urban children (91.6%).





#### Highlights

- Reported dental insurance among rural white children (81.0%) was lower than among urban children (94.7%).
- Rural white children were markedly less likely to have teeth in excellent condition (44.7%) than were urban white children (55.2%).
- Among rural children, those living below 200% of the FPL were much less likely to have excellent teeth (37.7%) than those living over 200% of the FPL (50.4%).
- Reported dental insurance among rural children who had a personal healthcare provider (89.1%), was markedly lower than among urban children who also have a personal healthcare provider (93.8%).

		F	lural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	44.0	27.1	29.0	88.6	46.6	23.9	29.5	91.6
Race			1				1	
White	44.7	30.7	24.6*	81.0†	55.2	24.9	19.9	94.7
Non-White	43.8	26.4	29.8	90.0	45.2	23.7	31.1	91.1
Family Income	· · · · · ·							
< 200% FPL	37.7	25.6	36.8	89.1	40.5	26.1	33.4	87.7
> 200% FPL	50.4	29.0	20.6	89.1	49.4	23.5	27.1	94.0
Age of Child								
1 to 5 years	52.1	25.2	22.7	83.7	58.3	20.0	21.7	91.0
6 to 11 years	37.6	25.5	36.9	91.4	39.6	22.8	37.7	91.5
12 to 17 years	44.3	29.7	26.1	89.1	43.3	28.2	28.5	92.1
Special Needs Statu	s							
CSHCN	46.8	20.1*	33.1	87.9	52.7	20.8	26.5	90.5
Non-CSHCN	43.4	28.5	28.2	88.7	45.5	24.4	30.1	91.8
Personal Healthcare	Provider (PHP	') Status						
РНР	45.0	26.3	28.7	89.1+	48.7	22.9	28.4	93.8
No PHP	37.6*	31.7*	30.7*	85.3	35.4	30.0	34.6	78.6

\*Sample size is less than 30.  $\dagger$  Designates rural is significantly different than urban at p<0.05 for dental insurance.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,021 children from Hawaii



As reported by their parents, rural Idaho children were less

likely than urban children to have dental insurance (66.3%)

versus 75.2%). Despite differences in dental insurance

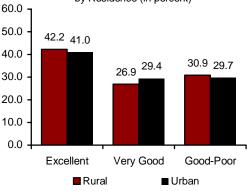
coverage, 42.2% of rural children had teeth in excellent

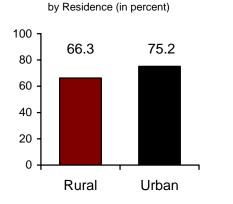
condition, as did 41.0% of urban children.

Idaho Children with Dental Insurance

#### Reported Condition of Teeth Among Idaho Children

by Residence (in percent)





Idaho

#### Highlights

- Among rural children, non-white children were less likely to have teeth in excellent condition than white children (31.6% versus 44.2%).
- Reported dental insurance among rural white children (67.0%), was lower than among urban white children (76.5%).
- Among children living below 200% of the FPL, dental insurance was markedly lower among rural children than among urban children (62.7% versus 71.4%)
- Rural children 1-5 years of age were more likely to have teeth in excellent condition than urban children in the same age group.
- Reported dental insurance among rural children who had a personal healthcare provider (65.4%), was lower than among urban children who had a personal healthcare provider (76.8%).

		R	ural		Urban			
	Cor	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	42.2	26.9	30.9	66.3	41.0	29.4	29.7	75.2
Race	II						1	
White	44.2	28.6	27.2	67.0†	42.3	30.7	27.0	76.5
Non-White	31.6	17.9*	50.5	62.6	33.4	21.7	44.9	68.0
Family Income								
< 200% FPL	33.7	27.0	39.3	62.7	29.9	29.5	40.6	71.4
> 200% FPL	50.8	28.7	20.4	72.0†	47.2	30.8	22.1	79.0
Age of Child								
1 to 5 years	61.9	18.2*	19.9*	61.3†	49.2	26.5	24.3	74.7
6 to 11 years	29.6	31.1	39.3	70.9	29.5	32.2	38.3	77.8
12 to 17 years	38.8	29.7	31.6	65.7	45.2	29.1	25.7	73.0
Special Needs Status								
CSHCN	36.5*	20.2*	43.3	72.8	39.0	29.6	31.4	83.4
Non-CSHCN	43.0	28.0	29.0	65.3†	41.4	29.3	29.3	73.4
Personal Healthcare Pre	ovider (PHP	) Status					·	
РНР	44.8	26.9	28.3	65.4†	43.0	29.6	27.4	76.8
No PHP	31.6	26.6*	41.8	69.3	30.6	29.6	39.8	68.0

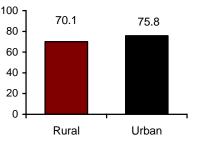
\*Sample size is less than 30. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,861 children from Idabo.

Illinois

# Illinois

As reported by their parents, rural Illinois children were less likely to have dental insurance than were urban children (70.1% versus 75.8%). Rural children were slightly less likely to have teeth in excellent condition than were urban children (41.4% versus 42.8%), and slightly more likely to have teeth considered in "very good" condition (28.4% versus 24.4%).

Illinois Children with Dental Insurance by Residence (in percent)



Highlights

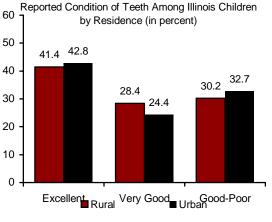
- Rural white children had teeth in worse condition than urban white children, with 30.6% falling in the "Good-Poor" category, versus 18.7% among urban children.
- Among children with special health care needs, reported dental insurance was markedly higher among rural children than among urban children (83.5% versus 74.9%).

Among children who do not have special health care needs, rural children were less likely to have dental insurance than urban children (67.8% versus 76.0%).

Urban children who lacked a personal healthcare provider (PHP) had poorer teeth than children with a PHP; there were not enough rural children without PHPs to explore this issue among rural children.

		R	ural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	41.4	28.4	30.2	70.1	42.8	24.4	32.7	75.8
Race			1			1	1	1
White^	43.0	26.4	30.6	71.5	54.9	26.4	18.7	77.3
Non-White	n/a	n/a	n/a	57.6*	28.6	22.2	49.2	74.1
Family Income								
< 200% FPL	23.4*	31.3*	45.2	65.4	24.3	21.4	54.2	69.3
> 200% FPL	52.7	27.0	20.3	74.9	53.5	26.5	20.1	81.0
Age of Child								
1 to 5 years	53.4	n/a	n/a	71.8	55.3	23.3	21.4	75.0
6 to 11 years	42.4	25.0*	32.6*	73.2	35.1	25.7	39.3	80.2
12 to 17 years	34.3	34.6	31.1	67.1	39.8	24.2	36.0	72.0
Special Needs Status								
CSHCN	39.3*	32.0*	n/a	83.5	44.9	19.7	35.5	74.9
Non-CSHCN	41.8	27.8	30.4	67.8+	42.4	25.5	32.1	76.0
Personal Healthcare Pr	ovider (PHP	) Status						
РНР	40.1	29.2	30.7	71.8	45.5	24.7	29.8	77.5
No PHP	n/a	n/a	n/a	n/a	27.3	22.7	50.0	65.8

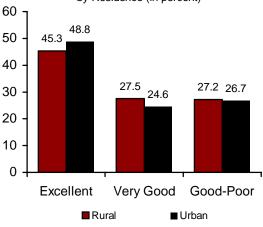
\*Sample size is less than 30 ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and a based on information for 2,158 children from Illinois Cells marked "n/a" bave too few observations to display an estimate.





Reported Condition of Teeth Among Indiana Children

by Residence (in percent)



Indiana Children with Dental Insurance by Residence (in percent)

As described by their parents, 45.3% of rural Indiana

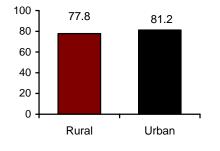
children (77.8%), was slightly lower than among urban

children had teeth in excellent condition, as did 48.8% of urban children. A similar proportion of rural and urban

children had good-poor tooth condition (27.2% and 26.7%, respectively). Reported dental insurance among rural

Indiana

children (81.2%).



#### Highlights

- Teeth in excellent condition was less common among rural white children (46.3%) than among urban white children (52.8%).
- Among children living below 200% of the FPL, 42.7% of rural children had teeth in excellent condition, slightly higher than urban children (40.4%).
- Nearly one out of every four rural children 12-17 years of age (25.7%) had only good-poor tooth condition.
- Among children who had a personal healthcare provider, teeth in excellent condition was less common among rural children than among urban children (47.9% versus 50.6%).

		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	45.3	27.5	27.2	77.8	48.8	24.6	26.7	81.2
Race	· · · · ·					1	1	
White	46.3	27.6	26.1	77.9	52.8	24.2	23.1	80.6
Non-White	n/a	n/a	n/a	n/a	34.6	26.0	39.4	83.3
Family Income								
< 200% FPL	42.7	23.4*	34.0	78.6	40.4	25.6	34.0	78.7
> 200% FPL	45.9	31.7	22.4	78.2	54.2	24.0	21.8	83.8
Age of Child								
1 to 5 years	63.4	20.7*	15.9*	71.5	61.9	21.6	16.4	80.0
6 to 11 years	36.4	27.4	36.3	81.1	41.8	25.1	33.2	82.0
12 to 17 years	41.9	32.4	25.7	78.7	44.5	26.7	28.8	81.2
Special Needs Status								
CSHCN	55.5*	n/a	29.6*	80.3	48.3	23.0	28.7	82.9
Non-CSHCN	43.6	29.6	26.8	77.4	48.9	25.0	26.1	80.7
Personal Healthcare Pre	ovider (PHP	) Status						
РНР	47.9	26.8	25.3	78.6	50.6	25.1	24.3	82.0
No PHP	n/a	n/a	39.8*	71.1*	37.7	21.6	40.7	75.6

\*Sample size is less than 30.

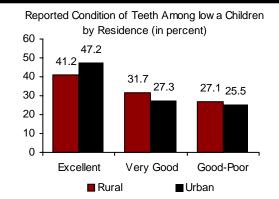
Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,874 children from Indiana. Cells marked "n/a" have too few observations to display an estimate.



Iowa

## Iowa

As described by their parents, 41.2% of rural Iowa children had teeth in excellent condition, compared to 47.2% of urban children. Reported dental insurance among rural children (72.4%) was lower than among urban children (81.4%).



# lowa Children with Dental Insurance by Residence (in percent)

#### Highlights

- Rural white children had teeth in poorer condition and lower reported dental insurance than urban white children.
- Among rural children, non-white children were markedly less likely to have teeth in excellent condition than were white children (27.1% versus 42.4%).
- Reported dental insurance among rural children 6-11 and 12-17 years of age was lower than their urban counterparts in the same age groups.
- Reported dental insurance among rural children with special health care needs (73.9%) was lower than among similar urban children (85.4%).

		F	lural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	41.2	31.7	27.1	72.4	47.2	27.3	25.5	81.4
Race			1			1	1	1
White	42.4	32.4	25.2	72.3†	49.2	28.2	22.7	81.9
Non-White	27.1	24.4*	48.5	74.2	32.8	20.9	46.3	77.6
Family Income								
< 200% FPL	30.7	35.8	33.5	74.5	35.5	27.0	37.5	78.0
> 200% FPL	48.5	29.8	21.7	72.3†	52.3	27.0	20.7	82.9
Age of Child								
1 to 5 years	53.9	27.8	18.3	71.3	59.2	22.6	18.2	76.4
6 to 11 years	32.0	32.3	35.7	75.3+	38.1	27.0	34.9	85.4
12 to 17 years	40.7	33.8	25.5	70.6†	46.2	31.0	22.8	81.6
Special Needs Status								
CSHCN	35.8	34.8	29.4	73.9†	46.3	27.1	26.6	85.4
Non-CSHCN	42.4	31.0	26.6	72.1†	47.4	27.4	25.2	80.4
Personal Healthcare P	rovider (PHP	) Status						
РНР	42.8	31.9	25.4	73.3†	48.9	26.8	24.3	82.8
No PHP	30.1	30.5	39.4	66.0	29.9	32.8	37.3	67.7

\*Sample size is less than 30. † Designates rural is significantly different than urban at p<0.05 for dental care.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,949 children from Iowa.



Kansas

29.7 <sub>26.0</sub>

Good-Poor

Urban

#### Reported Condition of Teeth Among Kansas Children by Residence (in percent)

<sup>30.4</sup> 27.8

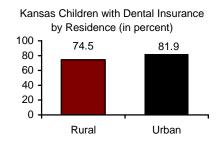
Very Good

46.2

39.9



As described by their parents, 39.9% of rural Kansas children had teeth in excellent condition, compared to 46.2% of urban children. Reported dental insurance among rural children (74.5%) was lower than among urban children (81.9%).



#### Highlights

• Among both white and non-white children, rural children were markedly less likely to have dental insurance than urban children. Only two thirds (67.7%) of rural non-white children have dental insurance.

Excellent

Rural

60.0

50.0

40.0

30.0

20.0

10.0 0.0

- The proportion of children with dental insurance among families below 200% of poverty was similar in urban and rural Kansas. Among higher income families, however, rural children were less likely to be insured than were urban children (78.4% versus 86.3%).
- Rural children with special health care needs were less likely to have dental insurance than their urban counterparts.
- Among children who had a personal healthcare provider, rural children were less likely to have dental insurance than urban children (75.7% versus 84.2%).

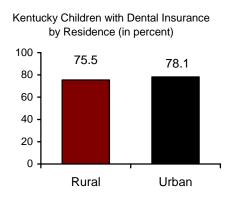
		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	39.9	30.4	29.7	74.5	46.2	27.8	26.0	81.9
Race								
White	43.2	31.6	25.2	76.2†	49.7	28.7	21.6	82.5
Non-White	25.7	25.4	48.8	67.7+	35.2	24.9	39.9	79.9
Family Income								
< 200% FPL	32.1	33.0	34.9	72.9	39.1	25.5	35.4	74.1
> 200% FPL	49.6	28.8	21.6	78.4+	49.5	29.2	21.4	86.3
Age of Child								
1 to 5 years	57.2	21.9	20.9	76.2	56.0	22.4	21.6	77.1
6 to 11 years	28.3	33.8	37.9	75.8†	35.0	34.5	30.6	86.2
12 to 17 years ^	36.6	34.1	29.3	72.2+	50.0	25.2	24.8	81.2
Special Needs Status								
CSHCN	27.3*	32.9	39.8	76.0+	40.9	25.9	33.3	87.8
Non-CSHCN	42.7	29.9	27.4	74.2+	47.8	28.4	23.9	80.2
Personal Healthcare Pre	ovider (PHP	) Status						
PHP	41.0	32.2	26.9	75.7+	47.7	28.7	23.6	84.2
No PHP	33.4*	20.0*	46.6	67.5	37.3	21.4*	41.3	66.4

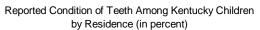
\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,849 children from Kansas.

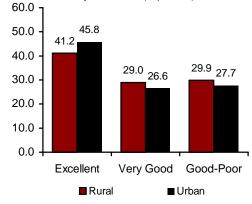


# Kentucky

As described by their parents, 41.2% of rural children had teeth in excellent condition, compared to 45.8% of urban children. Reported dental insurance among rural children (75.5%) was slightly lower than among urban children (78.1%).







- Among while children, rural children were less likely than urban children to have teeth in excellent condition (42.0% versus 48.2%).
- Among children 12-17 years of age, rural children were less likely to have dental insurance than urban children in the same age group (73.6% versus 80.8%).
- Only one out of every four rural children with special health care needs (27.3%) had teeth in excellent condition.

Highlights

• Rural children who did not have a personal healthcare provider had teeth in better condition than their urban counterparts.

		R	lural			Ur	ban	
	Co	ndition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	41.2	29.0	29.9	75.5	45.8	26.6	27.7	78.1
Race			1	1	1	1	1	1
White	42.0	29.6	28.5	75.2	48.2	28.1	23.7	78.8
Non-White	28.5*	19.4*	52.1*	81.7	35.6	20.1	44.3	75.0
Family Income								
< 200% FPL	34.8	27.2	38.0	80.7	35.2	25.7	39.2	75.9
> 200% FPL	49.5	30.7	19.8	70.1†	52.5	27.1	20.4	79.7
Age of Child								
1 to 5 years	60.8	27.4	11.9*	77.6	62.0	23.7	14.3	78.0
6 to 11 years	31.5	26.0	42.5	76.2	37.6	29.0	33.5	75.0
12 to 17 years	36.1	32.7	31.2	73.6	40.5	26.7	32.8	80.8
Special Needs Status								
CSHCN	27.3	29.8	42.8	76.8	38.3	23.8	37.9	84.3
Non-CSHCN	45.4	28.7	26.0	75.1	48.0	27.4	24.6	76.2
Personal Healthcare Pro	vider (PHP)	Status						
PHP	40.7	27.6	31.7	76.0	46.7	27.7	25.6	80.0
No PHP^	45.0	38.5*	16.5*	72.9	40.0	20.0*	40.0	65.6

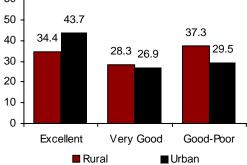
\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,953 children from Kentucky.



Louisiana

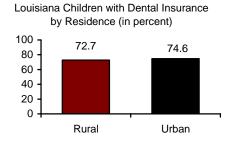
Reported Condition of Teeth Among Louisiana Children

by Residence (in percent)



## Louisiana

As reported by their parents, 72.7% of rural Louisiana children have dental insurance, as do 74.6% of urban children. Despite similar dental insurance levels, only 34.4% of rural children had teeth in excellent condition, compared to 43.7% of urban children. Slightly above one out of every three rural children (37.3%) had only good-poor tooth condition.



#### Highlights

- Rural non-white children had teeth in worse condition than urban non-white children, with only 25.2% falling into the "Excellent" category, versus 36.3% of urban non-white children.
- Among children living above 200% of the FPL, rural children had teeth in worse condition than their urban counterparts.
- Rural children 6-11 years of age had teeth in poorer condition than urban children in the same age group.
- Among children who did not have special heath care needs, rural children had teeth in worse condition than their urban counterparts.
- Rural children who had a personal healthcare provider (PHP) had teeth in poorer condition than urban children who had a PHP (35.0% "excellent" among rural children, versus 43.9% among urban).

Excellent	R dition of tee Very Good	ural eth Good - Poor	Dental Insurance	Con	dition of tee		Dental
Excellent	Very	Good -	Insurance				Dental
				Excellent	Vor		_
			Reported		Very Good	Good - Poor	Insurance Reported
34.4	28.3	37.3	72.7	43.7	26.9	29.5	74.6
I						1	1
41.6	34.2	24.2	71.2	49.8	28.1	22.1	72.3
25.2	20.7	54.1	74.7	36.3	25.4	38.3	77.3
29.3	26.2	44.5	73.1	35.0	26.4	38.6	75.4
39.0	35.7	25.3	70.0	54.8	26.4	18.8	74.6
52.4	22.9	24.7	79.8	56.6	25.6	17.8	75.8
20.8	28.8	50.4	76.2	36.0	27.7	36.3	74.6
33.4	32.0	34.6	64.2	40.3	27.1	32.5	73.6
28.1*	33.1	38.8*	80.0	31.9	26.6	41.5	72.2
35.6	27.4	37.0	71.3	47.3	27.0	25.8	75.3
der (PHP)	Status						
35.0	28.7	36.4	74.1	43.9	28.1	28.0	76.0
32.6*	26.0*	41.5	67.0	42.7	20.7	36.5	67.0
	25.2       29.3       39.0       52.4       20.8       33.4       28.1*       35.6       der (PHP)       35.0	41.6       34.2         25.2       20.7         29.3       26.2         39.0       35.7         52.4       22.9         20.8       28.8         33.4       32.0         28.1*       33.1         35.6       27.4         der (PHP) Status       35.0         35.0       28.7	41.6       34.2       24.2         25.2       20.7       54.1         29.3       26.2       44.5         39.0       35.7       25.3         52.4       22.9       24.7         20.8       28.8       50.4         33.4       32.0       34.6	41.6       34.2       24.2       71.2         25.2       20.7       54.1       74.7         29.3       26.2       44.5       73.1         39.0       35.7       25.3       70.0         52.4       22.9       24.7       79.8         20.8       28.8       50.4       76.2         33.4       32.0       34.6       64.2	$41.6$ $34.2$ $24.2$ $71.2$ $49.8$ $25.2$ $20.7$ $54.1$ $74.7$ $36.3$ $29.3$ $26.2$ $44.5$ $73.1$ $35.0$ $39.0$ $35.7$ $25.3$ $70.0$ $54.8$ $52.4$ $22.9$ $24.7$ $79.8$ $56.6$ $20.8$ $28.8$ $50.4$ $76.2$ $36.0$ $33.4$ $32.0$ $34.6$ $64.2$ $40.3$ $28.1^*$ $33.1$ $38.8^*$ $80.0$ $31.9$ $35.6$ $27.4$ $37.0$ $71.3$ $47.3$ Her (PHP) Status $35.0$ $28.7$ $36.4$ $74.1$ $43.9$	$41.6$ $34.2$ $24.2$ $71.2$ $49.8$ $28.1$ $25.2$ $20.7$ $54.1$ $74.7$ $36.3$ $25.4$ $29.3$ $26.2$ $44.5$ $73.1$ $35.0$ $26.4$ $39.0$ $35.7$ $25.3$ $70.0$ $54.8$ $26.4$ $52.4$ $22.9$ $24.7$ $79.8$ $56.6$ $25.6$ $20.8$ $28.8$ $50.4$ $76.2$ $36.0$ $27.7$ $33.4$ $32.0$ $34.6$ $64.2$ $40.3$ $27.1$ $28.1^*$ $33.1$ $38.8^*$ $80.0$ $31.9$ $26.6$ $35.6$ $27.4$ $37.0$ $71.3$ $47.3$ $27.0$ <b>btr</b> (PHP) Status $35.0$ $28.7$ $36.4$ $74.1$ $43.9$ $28.1$	$41.6$ $34.2$ $24.2$ $71.2$ $49.8$ $28.1$ $22.1$ $25.2$ $20.7$ $54.1$ $74.7$ $36.3$ $25.4$ $38.3$ $29.3$ $26.2$ $44.5$ $73.1$ $35.0$ $26.4$ $38.6$ $39.0$ $35.7$ $25.3$ $70.0$ $54.8$ $26.4$ $18.8$ $52.4$ $22.9$ $24.7$ $79.8$ $56.6$ $25.6$ $17.8$ $20.8$ $28.8$ $50.4$ $76.2$ $36.0$ $27.7$ $36.3$ $33.4$ $32.0$ $34.6$ $64.2$ $40.3$ $27.1$ $32.5$ $28.1^*$ $33.1$ $38.8^*$ $80.0$ $31.9$ $26.6$ $41.5$ $35.6$ $27.4$ $37.0$ $71.3$ $47.3$ $27.0$ $25.8$ <b>btr</b> ( <b>PHP) Status</b> $35.0$ $28.7$ $36.4$ $74.1$ $43.9$ $28.1$ $28.0$

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,241 children from Louisiana.



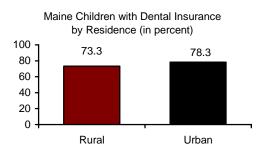
]

# Maine

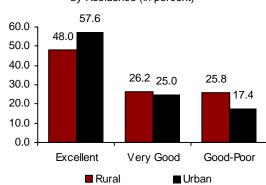
As described by their parents, only 48.0% of rural Maine children had teeth in excellent condition, compared to 57.6% of urban children. One out of every four (25.8%) rural children had teeth only in good-poor condition. Reported dental insurance among rural children (73.3%) was lower than among urban children (78.3%).

#### Highlights

• Rural white and non-white children had teeth in poorer condition than their urban counterparts.



Reported Condition of Teeth Among Maine Children by Residence (in percent)



- Rural children 1-5 years of age had teeth in poorer condition than urban children in the same age group.
- Among children who did not have special health care needs, rural children had teeth in poorer condition and were less likely to have dental insurance than their urban counterparts.
- Rural children who had a personal healthcare provider had teeth in poorer condition and were less likely to have dental insurance than their urban counterparts.

		F	lural		Urban			
	Cor	ndition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	48.0	26.2	25.8	73.3	57.6	25.0	17.4	78.3
Race			1	1		1	1	1
White ^	48.9	26.4	24.7	72.9†	57.5	24.7	17.8	77.8
Non-White	30.3*	n/a	48.6*	83.6	59.3	30.6*	10.2*	87.2
Family Income								
< 200% FPL	37.7	28.4	33.9	77.8	47.9	23.8	28.4	80.4
> 200% FPL	56.2	25.1	18.7	69.8+	61.6	25.5	12.9	76.6
Age of Child								
1 to 5 years ^	59.4	19.2	21.4*	65.9	69.4	21.3	9.3*	74.0
6 to 11 years	43.7	28.0	28.3	75.8	52.6	26.9	20.5	79.9
12 to 17 years	46.2	27.9	25.9	74.8	53.4	26.1	20.5	79.9
Special Needs Status								
CSHCN	44.3	21.7	34.0	81.5	47.5	27.1	25.5	84.2
Non-CSHCN ^	49.3	27.7	23.1	70.6†	60.3	24.5	15.2	76.6
Personal Healthcare P	rovider (PHP	) Status						
PHP ^	47.0	26.8	26.2	73.6	58.0	25.0	17.0	78.3
No PHP	58.3	n/a	22.3*	71.2	52.4	25.4*	22.2*	77.7

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,920 children from Maine. Cells marked "n/a" bave too few observations to display an estimate.



27.5 <sub>25.2</sub>

Good-Poor

Urban

#### Reported Condition of Teeth Among Maryland Children by Residence (in percent)

25.5 21.6

Very Good

# Maryland

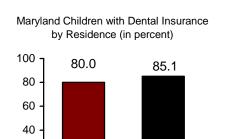
20

0

Rural

As described by their parents, 50.9% of rural Maryland children had teeth in excellent condition, as did 49.3% of urban children. Good-poor tooth status among rural children (27.5%) was slightly higher than among urban children (25.2%). Reported dental insurance among rural children (80.0%), was lower than among urban children (85.1%).

Urban



#### Highlights

Slightly over one half (53.2%) of rural white children had teeth in excellent condition, as did 56.2% of urban children.

Rural

Excellent

50.9 <sub>49.3</sub>

60

50

40

30

20

10 0

- Among children living above 200% of the FPL, rural children were less likely to have dental insurance than urban children living above 200% of the FPL (73.7% versus 87.5%).
- Among children who had a personal healthcare provider (PHP), 52.4% of rural children had teeth in excellent condition, as did 50.3% of urban children who had a PHP.

		R	ural		Urban				
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental	
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported	
Overall	50.9	21.6*	27.5*	80.0	49.3	25.5	25.2	85.1	
Race	·					1			
White	53.2	23.6*	23.2*	79.0	56.2	25.8	18.0	83.5	
Non-White	n/a	n/a	n/a	n/a	41.0	25.2	33.8	86.9	
Family Income									
< 200% FPL	n/a	n/a	n/a	96.1*+	37.8	25.0	37.3	80.3	
> 200% FPL	52.2	23.9*	n/a	73.7†	54.0	25.5	20.5	87.5	
Age of Child									
1 to 5 years	76.0	n/a	n/a	76.8*	64.3	22.4	13.3	86.5	
6 to 11 years	45.7*	n/a	n/a	75.6*	41.1	27.4	31.5	85.4	
12 to 17 years	41.0*	n/a	n/a	85.1	46.1	26.0	27.9	83.6	
Special Needs Status									
CSHCN	n/a	n/a	n/a	90.1*	41.4	23.5	35.1	86.5	
Non-CSHCN	52.8	24.3*	22.9*	77.6	51.2	26.0	22.8	84.7	
Personal Healthcare Pr	ovider (PHP	) Status							
РНР	52.4	22.5*	25.1*	78.4	50.3	25.4	24.2	86.2	
No PHP	n/a	n/a	n/a	n/a	42.0	26.1	32.0	76.7	

\*Sample size is less than 30. † Designates rural is significantly different than urban at p<0.05 for dental insurance.

Data were drawn from the 2003 National Survey of Children's Health and are based on information of 2,128children from Maryland. Cells marked "n/a" bave too few observations to display an estimate.



# Massachusetts

Of the 2,114 Massachusetts children surveyed by the NCHS, less than 2% lived in rural counties; therefore, estimates could not be developed at the rural level. The data presented below are for the entire population.

As described by their parents, 47.2% of Massachusetts children had teeth in excellent condition, while 26.5% had teeth only in good-poor condition. A high proportion of children (85.1%) were reported to have dental insurance.

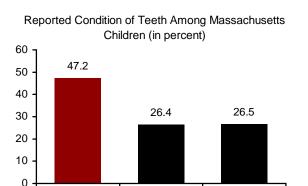
#### Highlights

- Non-white children were much less likely to have teeth in excellent condition than white children (30.1% versus 52.6%).
- Children living below 200% of the FPL were much more likely to have teeth described as being in good-poor tooth condition than children living above 200% of the FPL (44.1% versus 19.2%).
- Children with special health care needs were much less likely to have teeth in excellent condition than children who did not have special health care needs (37.4% versus 50.2%).

		I	A11		
		Condition of teeth	1	Dental Insurance	
	Excellent	Very Good	Good - Poor	Reported	
Overall	47.2	26.5	26.3	85.1	
Race					
White	52.6	27.7	19.7	84.9	
Non-White	30.1	22.5	47.4	85.9	
Family Income		-			
< 200% FPL	27.6	28.3	44.1	87.4	
> 200% FPL	54.5	26.3	19.2	85.0	
Age of Child			·		
1 to 5 years	60.6	22.9	16.5	85.3	
6 to 11 years	38.6	27.2	34.2	85.8	
12 to 17 years	45.6	28.5	25.9	84.4	
Special Needs Status					
CSHCN	37.4	27.9	34.8	86.5	
Non-CSHCN	50.2	26.1	23.7	84.7	
Personal Healthcare Provid	der (PHP) Status	·	· · · · · · · · · · · · · · · · · · ·		
РНР	48.7	26.2	25.1	85.7	
No PHP	31.5	29.2	39.4	78.9	

\*Sample size is less than 30.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,114 children from Massachusetts.



Very Good

Good-Poor

Excellent



As described by their parents, only 39.9% of rural Michigan

of urban children. Good-poor teeth were more common

among rural children (31.6%) than among urban children

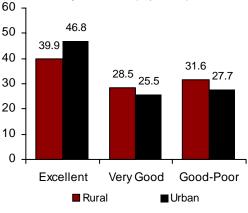
(27.7%). Reported dental insurance among rural children (77.3%) was lower than among urban children (83.2%).

children had teeth in excellent condition, compared to 46.8%

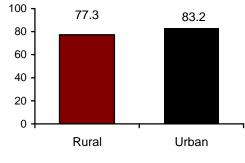
**Michigan** 

#### Reported Condition of Teeth Among Michigan Children

by Residence (in percent)



#### Michigan Children with Dental Insurance by Residence (in percent)



#### Highlights

- Rural white children had teeth in worse condition than urban white children, with 31.5% falling in the "Good-Poor" category versus 21.4% among urban children.
- Among children with special health care needs, rural children were markedly less likely to have dental insurance than were urban children with special health care needs (71.5% versus 89.0%).
- Rural children who did not have a personal healthcare provider were less likely to have dental insurance than their urban counterparts (64.4% versus 81.8%).

		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	39.9	28.5	31.6	77.3	46.8	25.5	27.7	83.2
Race	· ·							
White ^	40.3	28.3	31.5	77.5	52.8	25.7	21.4	83.0
Non-White	36.6*	n/a	32.5*	75.1	33.7	25.1	41.3	83.7
Family Income								
< 200% FPL	29.1	28.7	42.2	69.7	33.3	27.8	38.9	78.1
> 200% FPL	46.8	28.6	24.6	82.5	54.2	25.1	20.8	86.3
Age of Child								
1 to 5 years	51.5	21.0*	27.5*	78.9	64.7	17.4	17.8	82.2
6 to 11 years	36.3	24.6	39.1	77.0	37.2	28.6	34.2	84.2
12 to 17 years	35.1	36.6	28.4	76.5	43.0	28.4	28.7	83.0
Special Needs Status								
CSHCN	35.3	34.4*	30.4*	71.5+	40.2	26.4	33.5	89.0
Non-CSHCN	41.3	26.8	31.9	79.1	48.6	25.3	26.1	81.6
Personal Healthcare Pre	ovider (PHP	) Status						
РНР	41.0	28.4	30.6	79.1	48.9	25.5	25.6	83.6
No PHP	32.3*	29.6*	38.2*	64.4†	34.7	25.5	39.8	81.8

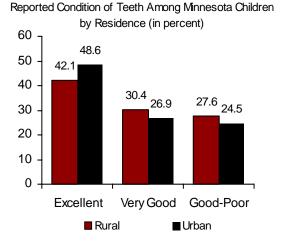
\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,191 children from Michigan. Cells marked "n/a" bave too few observations to display an estimate.



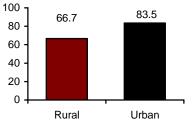


# Minnesota

As described by their parents, 42.1% of rural Minnesota children had teeth in excellent condition, compared to 48.6% of urban children. A slightly higher proportion of rural than urban children had teeth in good-poor condition (27.6% compared to 24.5%). Reported dental insurance among rural children (66.7%) was much lower than among urban children (83.5%).



Minnesota Children with Dental Insurance by Residence (in percent)



#### Highlights

- Rural white children were markedly less likely to have dental insurance than their urban counterparts (66.4% versus 84.8%).
- Across all age groups, rural children were less likely to have dental insurance than urban children.

• Rural children with special health care needs were less likely to have dental insurance than their urban counterparts (72.0% versus 88.4%).

• Rural children who did not have a personal healthcare provider were much less likely to have dental insurance than urban children who did not have a personal healthcare provider (52.6% versus 73.7%).

		R	lural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	42.1	30.4	27.6	66.7	48.6	26.9	24.5	83.5
Race			1				1	1
White	45.2	31.4	23.5	66.4†	52.0	27.9	20.1	84.8
Non-White	n/a	n/a	59.0	70.5	34.3	22.4	43.3	77.7
Family Income				·				
< 200% FPL	25.0	31.7	43.3	67.4†	30.0	28.1	41.9	80.2
> 200% FPL	51.4	30.2	18.5	65.7+	54.6	26.8	18.6	85.7
Age of Child								
1 to 5 years	56.5	28.6	14.9*	65.2†	61.9	24.8	13.3	79.5
6 to 11 years	34.9	23.9	41.2	64.0†	39.1	27.8	33.1	82.2
12 to 17 years	39.6	36.6	23.8	70.1†	47.3	27.6	25.1	87.9
Special Needs Status								
CSHCN	42.6	20.9*	36.5*	72.0†	46.5	20.1	33.4	88.4
Non-CSHCN	41.9	32.2	25.9	65.9†	49.1	28.4	22.6	82.4
Personal Healthcare P	rovider (PHP	) Status						
РНР	43.4	31.3	25.3	69.7†	51.1	26.1	22.8	85.4
No PHP	36.3	24.7*	39.0*	52.6†	36.1	30.4	33.5	73.7

\*Sample size is less than 30. † Designates rural is significantly different than urban at p<0.05 for dental insurance.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,864 children from Minnesota. Cells marked "n/a" bave too few observations to display an estimate.



42.1

33.0

Good-

Poor

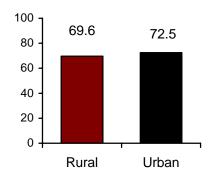
Urban

Reported Condition of Teeth Among Mississippi Children by Residence (in percent)

25.9 28.0

# Mississippi

As described by their parents, only 32.1% of rural children had teeth in excellent condition, compared to 39.0% of urban children. A higher proportion of rural children than urban children had teeth in only good-poor condition (42.1% versus 33.0%). Reported dental insurance among rural children (69.6%) was slightly lower than among urban children (72.5%).



#### Mississippi Children with Dental Insurance by Residence (in percent)



Among children 6-11 years of age, rural children had teeth in poorer condition than urban children in the same age group.

Rural

Excellent Very Good

39.0

32.1

60.0 50.0

40.0

30.0

20.0

10.0

0.0

- Among children 12-17 years of age, rural children were less likely to have dental insurance than their urban counterparts (65.2% versus 75.2%).
- Rural children who did not have special health care needs had teeth in poorer condition than urban children who did not have special health care needs.
- Rural children who had a personal healthcare provider had teeth in worse condition than their urban counterparts, with only 33.5% of rural children falling in the "Excellent" category versus 43.2% of urban children.

		R	ural			Url	oan	
	Cor	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	32.1	25.9	42.1	69.6	39.0	28.0	33.0	72.5
Race	· ·							
White	40.4	27.4	32.2	72.4	46.1	29.0	24.9	72.0
Non-White	25.1	24.6	50.4	67.2	30.1	26.7	43.2	73.2
Family Income								
< 200% FPL	24.6	24.8	50.6	68.2	30.1	28.2	41.8	72.2
> 200% FPL	46.2	26.1	27.7	73.9	50.1	28.8	21.1	74.5
Age of Child								
1 to 5 years	41.9	23.0	35.1	72.9	45.2	27.7	27.1	68.5
6 to 11 years ^	26.6	20.3	53.2	71.3	35.4	23.2	41.4	73.0
12 to 17 years	29.4	33.7	36.9	65.2+	37.1	32.3	30.6	75.2
Special Needs Status								
CSHCN	22.0	24.7	53.3	68.9	30.0	31.6	38.4	71.7
Non-CSHCN ^	34.5	26.2	39.4	69.7	41.2	27.1	31.7	72.7
Personal Healthcare Pre	ovider (PHP	) Status						
PHP ^	33.5	25.8	40.7	72.1	43.2	27.9	29.0	75.8
No PHP	26.4	26.7	47.0	59.6	25.8	27.1	47.1	61.6

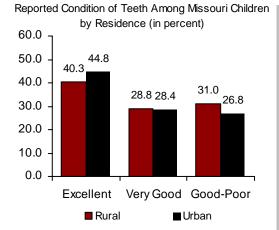
\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,035 children from Mississippi.



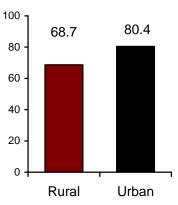
Missouri

# Missouri

As described by their parents, 40.3% of rural Missouri children had teeth in excellent condition, compared to 44.8% of urban children. Slightly more rural children (31.0%) had teeth in only good-poor condition than did urban children (26.8%). Reported dental insurance among rural children (68.7%) was much lower than among urban children (80.4%).



Missouri Children with Dental Insurance by Residence (in percent)



#### Highlights

- Rural white children had teeth in poorer condition and were less likely to have dental insurance than their urban counterparts.
- Rural children 6-11 years of age had teeth in worse condition than urban children in the same age group with only 25.0% falling in the "Excellent" category, compared to 38.3% among urban children.
- Among all three age groups, rural children were less likely to have dental insurance than urban children.
- Rural children with special health care needs were markedly less likely to have dental insurance than their urban counterparts (74.9% versus 87.4%).

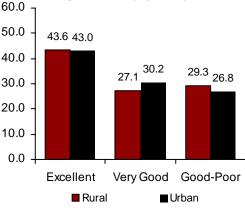
		R	lural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	40.3	28.8	31.0	68.7	44.8	28.4	26.8	80.4
Race			1	1		1		1
White ^	41.4	29.2	29.5	68.1†	47.7	30.1	22.4	79.5
Non-White	31.4*	25.6*	43.1*	72.8	36.8	23.0	40.1	83.2
Family Income								
< 200% FPL	35.0	24.6	40.4	74.8	32.1	28.9	39.0	78.0
> 200% FPL	47.7	32.0	21.2	62.3†	50.5	28.0	21.5	81.3
Age of Child								
1 to 5 years	62.9	18.6*	18.5*	69.1†	57.5	24.7	17.8	79.2
6 to 11 years ^	25.0	37.9	37.1	66.8†	38.3	26.9	34.8	80.2
12 to 17 years	42.6	25.4	32.0	70.4+	40.7	32.6	26.8	81.4
Special Needs Status								
CSHCN	40.0	24.7*	35.3	74.9+	37.3	28.2	34.4	87.4
Non-CSHCN	40.3	29.7	30.0	67.3+	46.5	28.4	25.1	78.8
Personal Healthcare l	Provider (PHP	') Status						
РНР	40.8	29.0	30.2	70.2+	45.1	29.6	25.3	81.3
No PHP	35.2*	28.6*	36.3*	58.0	43.1	20.8	36.1	74.5

\*Sample size is less than 30.^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,220 children from Missouri



#### Reported Condition of Teeth Among Montana Children

by Residence (in percent)



Montana Children with Dental Insurance by Residence (in percent)

condition, as did 43.0% of urban children.

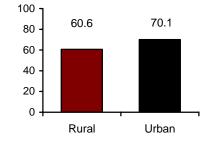
As described by their parents, only 60.6% of rural

Montana children had dental insurance, compared to

70.1% of urban children. Despite differences in dental

insurance, 43.6% of rural children had teeth in excellent

Montana



#### Highlights

- Dental insurance among rural white children (60.2%) was much lower than among urban white children (70.9%).
- Among children 12-17 years of age, rural children were markedly less likely to have dental insurance than were urban children (60.3% versus 73.3%).
- Rural children who did not have special health care needs were less likely to have dental insurance than urban children who did not have special health care needs (58.2% versus 69.8%).
- Rural children who had a personal healthcare provider were less likely to have dental insurance than their urban counterparts (62.9% versus 71.4%).

		R	lural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	43.6	27.1	29.3	60.6	43.0	30.2	26.8	70.1
Race								
White	47.4	26.8	25.9	60.2+	44.2	29.8	26.1	70.9
Non-White	26.4	28.7	44.8	62.2	33.2	33.6*	33.3*	64.0
Family Income								
< 200% FPL	37.8	24.5	37.8	61.0	37.0	30.7	32.3	66.0
> 200% FPL	51.0	29.0	20.1	62.1+	46.2	29.9	23.9	71.9
Age of Child								
1 to 5 years	55.5	20.8	23.8	56.6	57.4	23.7	18.9*	65.7
6 to 11 years	36.6	28.2	35.2	64.2	34.7	33.4	31.9	69.3
12 to 17 years	41.2	30.7	28.1	60.3+	41.2	31.4	27.4	73.3
Special Needs Status								
CSHCN	35.4	22.3	42.4	74.9	42.0	26.6	31.4	71.3
Non-CSHCN	45.0	27.9	27.1	58.2+	43.3	31.1	25.7	69.8
Personal Healthcare Pr	ovider (PHP	) Status						
РНР	45.9	27.7	26.5	62.9†	45.6	30.4	23.9	71.4
No PHP	34.5	24.3	41.2	50.5	31.7	29.7	38.6	63.8

\*Sample size is less than 30.  $\dagger$  Designates rural is significantly different than urban at p < 0.05 for dental insurance.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,941 children from Montana.



Nebraska

30.0

22.7

Good-Poor

Urban

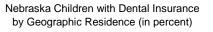
Reported Condition of Teeth Among Nebraska Children by Residence (in percent)

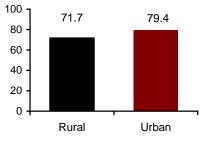
26.1 28.4

Very Good

# Nebraska

As described by their parents, 43.9% of rural Nebraska children had teeth in excellent condition, compared to 48.9% of urban children. Reported dental insurance was lower among rural children (71.7%) than among urban children (79.4%).





#### Highlights

Rural white children had teeth in poorer condition and were less likely to have dental insurance than urban white children.

Rural

Excellent

48.9

43.9

60.0

50.0

40.0

30.0

20.0

10.0 0.0

- Rural children 6-11 and 12-17 years of age were less likely to have dental insurance than urban children in the same age groups.
- Rural children with special health care needs had teeth in poorer condition than their urban counterparts, with 42.7% falling in the "Good-Poor" category, versus 20.0% among urban children.
- Rural children who had a personal healthcare provider had teeth in worse condition and were less likely to have dental insurance than their urban counterparts.

		R	ural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	43.9	26.1	30.0	71.7	48.9	28.4	22.7	79.4
Race								
White ^	46.1	25.9	28.0	71.3†	52.0	29.7	18.3	81.1
Non-White	28.2*	27.5*	44.3	75.2	37.5	23.7	38.8	73.2
Family Income								
< 200% FPL	37.5	25.2	37.3	74.0	37.5	27.1	35.4	76.4
> 200% FPL ^	48.7	26.5	24.8	71.3†	54.8	30.1	15.2	82.7
Age of Child								
1 to 5 years	56.4	20.7	22.9	74.1	59.8	24.2	16.1	76.1
6 to 11 years	33.7	30.9	35.4	72.7†	42.3	30.0	27.7	83.2
12 to 17 years	45.5	25.0	29.5	69.4+	46.2	30.6	23.2	78.4
Special Needs Statu	s							
CSHCN ^	36.1	21.1	42.7	78.1	46.2	33.8	20.0	83.2
Non-CSHCN	45.8	27.4	26.9	70.2†	49.5	27.2	23.3	78.5
Personal Healthcare	e Provider (PHP	) Status						
PHP ^	45.1	26.0	28.9	72.4+	51.0	28.4	20.7	80.9
No PHP	34.1	26.6*	39.3	67.3	32.2	29.5	38.3	67.9

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,874 children from Nebraska



As described by their parents, 44.6% of rural Nevada

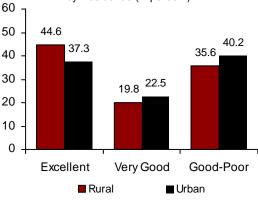
of urban children. The proportion of rural children with

dental insurance (73.3%) was comparable to that among

children had teeth in excellent condition, compared to 37.3%

## Reported Conditon of Teeth Among Nevada Children

by Residence (in percent)



# 100 80 60 40 20 0 Rural Urban

Nevada Children with Dental Insurance

by Residence (in percent)

Nevada

urban children (74.8%).

#### Highlights

- Dental insurance among rural white children (74.6%) was markedly lower than among urban white children (82.2%).
- Nearly one half (47.9%) of rural non-white children had only good-poor tooth condition, and only 69.6% of rural-nonwhite children had dental insurance.
- Rural children living above 200% of the FPL were less likely to have dental insurance than their urban counterparts (76.1% versus 85.0%).
- Among children who had a personal healthcare provider, rural children were less likely to have dental insurance than urban children (74.0% versus 83.0%).

		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	44.6	19.8	35.6	73.3	37.3	22.5	40.2	74.8
Race								
White	48.7	20.4	30.9	74.6†	49.0	23.9	27.1	82.2
Non-White	33.8*	n/a	47.9	69.6	24.8	20.9	54.3	66.8
Family Income								
< 200% FPL	34.3	n/a	44.0	69.3	22.4	18.7	58.9	62.8
> 200% FPL	51.6	20.0	28.4	76.1†	49.1	25.6	25.3	85.0
Age of Child								
1 to 5 years	59.1	n/a	n/a	74.7	47.8	20.9	31.3	68.1
6 to 11 years	35.5*	19.3*	45.3	69.8	27.6	22.9	49.6	77.0
12 to 17 years	44.0	19.4*	36.6	75.2	38.7	23.4	37.9	78.4
Special Needs Status								
CSHCN	n/a	n/a	46.3*	78.6	33.0	18.1	48.9	80.6
Non-CSHCN	44.5	21.7	33.9	72.4	38.2	23.3	38.5	73.7
Personal Healthcare Pr	ovider (PHP	) Status						
РНР	46.7	21.0	32.4	74.0†	42.3	23.0	34.7	83.0
No PHP	40.7*	n/a	41.9*	69.9	26.2	21.3	52.5	55.9

\*Sample size is less than 30.<sup>+</sup> Designates rural is significantly different than urban at p<0.05 for dental insurance.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,064 children from Nevada.

Cells marked "n/a" have too few observations to display an estimate.



#### New Hampshire

23.8 25.4

22.5 21.0

Very Good Good-Poor

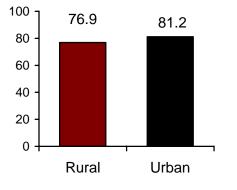
Urban

Reported Condition of Teeth Among New Hampshire Children by Residence (in percent)

# New Hampshire

As described by their parents, 53.7% of rural New Hampshire children had teeth in excellent condition, virtually the same as urban children (53.6%). Reported dental insurance among rural children (76.9%) was slightly less than among urban children (81.2%).

New Hampshire Children with Dental Insurance by Residence (in percent)



# Highlights

• Among white children, 54.3% of rural children had teeth in excellent condition, as did 54.9% of urban children.

Rural

Excellent

53.7 53.6

60.0

50.0

40.0

30.0

20.0 10.0

0.0

- Among children living below 200% of the FPL, 51.7% of rural children had teeth in excellent condition, as did 52.8% of urban children.
- Among children living above 200% of the FPL, rural children were less likely to have dental insurance than urban children (76.6% versus 82.4%).
- Rural children who did not have special health care needs were less likely to have dental insurance than their urban counterparts (75.0% versus 80.4%).

		F	lural		Urban			
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	53.7	23.8	22.5	76.9	53.6	25.4	21.0	81.2
Race			1			1	1	1
White	54.3	22.8	22.8	77.3	54.9	25.4	19.7	81.6
Non-White ^	39.5*	44.8*	n/a	67.9	36.9	25.2	37.9	76.5
Family Income	· · · · · ·				-			
< 200% FPL	51.7	23.3	25.0	78.6	52.8	21.6	25.6	78.4
> 200% FPL	55.0	24.3	20.7	76.6†	54.2	26.9	18.9	82.4
Age of Child								
1 to 5 years	69.8	16.0	14.2*	77.4	63.9	25.0	11.2	79.7
6 to 11 years	46.4	27.1	26.5	75.2	42.8	28.1	29.1	82.9
12 to 17 years	51.6	25.0	23.4	78.0	55.7	23.4	20.9	80.9
Special Needs Statu	s							
CSHCN	49.6	20.7	29.6	83.0	41.9	27.3	30.8	84.2
Non-CSHCN	54.9	24.8	20.4	75.0†	56.8	24.9	18.3	80.4
Personal Healthcare	Provider (PHP	) Status					·	·
PHP	53.8	23.8	22.5	78.0	54.4	26.0	19.6	81.5
No PHP	52.6	24.4*	23.0*	67.3	40.6	18.5*	40.8*	79.4

\*Sample size is less than 30.^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,925 children from New Hampshire. Cells marked "n/a" have too few observations to display an estimate.



# New Jersey

Of the 2,113 New Jersey children surveyed by the NCHS, less than 2% lived in rural counties; therefore, estimates could not be developed at the rural level. The data presented below are for the entire survey population.

As described by their parents, 46.5% of New Jersey children had teeth in excellent condition, and 25.9% had teeth in very good condition. About three quarters (77.3%) of New Jersey children were reported to have dental insurance.

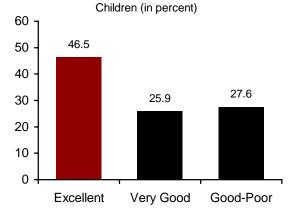
#### Highlights

- Excellent teeth were more common among white children (53.4%) than among non-white children (35.8%).
- Among children living below 200% of the FPL, 31.4% had teeth in excellent condition, compared to 52.8% of children living above 200% of the FPL.
- The proportion of children with special health care needs who had teeth in excellent condition (42.8%) was slightly lower than among children who did not have special health care needs (47.2%).
- Among children who had a personal healthcare provider, 26.4% had teeth in good-poor condition, compared to 37.2% of children who lacked a personal healthcare provider.

		I	<b>A</b> 11	
		Condition of teeth	1	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	46.5	25.9	27.6	77.3
Race				
White	53.4	26.0	20.6	76.7
Non-White	35.8	25.7	38.5	78.4
Family Income				
< 200% FPL	31.4	22.9	45.8	72.8
> 200% FPL	52.8	27.0	20.2	79.7
Age of Child				
1 to 5 years	55.1	20.6	24.3	74.3
6 to 11 years	41.6	27.9	30.5	79.3
12 to 17 years	45.1	27.8	27.1	77.6
Special Needs Status				
CSHCN	42.8	25.6	31.6	77.2
Non-CSHCN	47.2	25.9	26.8	77.4
Personal Healthcare Provider (PH	IP) Status			
PHP	47.1	26.5	26.4	78.2
No PHP	42.7	20.1	37.2	70.9

\*Sample size is less than 30.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,113 children from New Jersey.



Reported Condition of Teeth Among New Jersev



40.6

33.6

Good-Poor

Urban

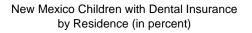
Reported Conditon of Teeth Among New Mexico Children by Residence (in percent)

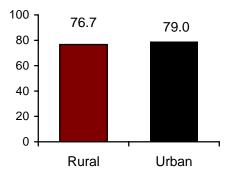
27.7 28.7

Very Good

## New Mexico

As described by their parents, only 31.8% of rural New Mexico children had teeth in excellent condition, compared to 37.7% of urban children. Reported dental insurance was slightly lower among rural children (76.7%) than among urban children (79.0%).





#### Highlights



60 50

40

30

20

10

0

Rural white children had teeth in poorer condition and were less likely to have dental insurance than urban white children.

Rural

37.7

31.8

Excellent

- Among children 12-17 years of age, rural children had teeth in poorer condition than urban children, with only 28.8% of children falling in the "Excellent" category, versus 40.4% of urban children.
- Only one out of every four (25.0%) rural children with special health care needs had teeth in excellent condition.
- Among children who had a personal healthcare provider, rural children had poorer tooth condition than urban children, with 31.5% of children falling in the "Excellent" category, versus 40.5% of urban children.

			0		0.1			
		F	Rural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	31.8	27.7	40.6	76.7	37.7	28.7	33.6	79.0
Race			1	1	1	1	1	1
White ^	36.8	33.9	29.3	71.4†	49.2	32.3	18.5	81.8
Non-White	29.6	24.9	45.6	79.1	31.8	26.8	41.4	77.5
Family Income	· · ·							
< 200% FPL	25.5	25.7	48.8	74.9	28.4	26.9	44.7	76.2
> 200% FPL	39.2	32.9	27.9	79.4	45.5	32.5	22.0	84.1
Age of Child								
1 to 5 years	44.8	25.0	30.2	80.8	50.7	26.0	23.3	81.2
6 to 11 years	24.6	24.2	51.2	77.8	24.6	33.9	41.6	82.0
12 to 17 years ^	28.8	32.4	38.9	73.0	40.4	25.7	33.9	74.5
Special Needs Status	•							
CSHCN	25.0	29.5	45.5	79.2	28.6	30.1	41.4	87.0
Non-CSHCN	33.5	27.2	39.4	76.1	39.8	28.3	31.9	77.1
Personal Healthcare	Provider (PHP	) Status	·				·	·
PHP ^	31.5	30.7	37.8	80.8	40.5	29.7	29.8	81.4
No PHP	33.8	16.1*	50.2	64.5	25.5	23.6	50.9	67.1

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,848children from New Mexico



31.7

22.2

Good-Poor

Urban

Reported Condition of Teeth Among New York Children by Residence (in percent)

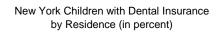
34.6

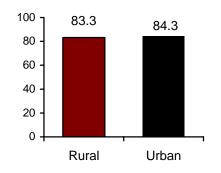
26.0

Very Good

# New York

As described by their parents, 43.2% of rural and 42.3% of urban New York children had teeth in excellent condition. A lower proportion of rural than of urban children had teeth in only good-poor condition (22.2% compared to 31.7%). Comparable proportions of rural (83.3%) and urban (84.3%) children had dental insurance.





#### Highlights

•

Among children 1-5 years of age, rural children had teeth in better condition than urban children.

Excellent

Rural

43.2 42.3

60.0 50.0

40.0

30.0

20.0

10.0 0.0

- Rural children 6-11 years of age had teeth in better condition than urban children in the same age group.
- Rural children who had a personal healthcare provider had • teeth in better condition than urban children, with only 19.7% of rural children in the "Good-Poor" category, versus 29.0% of urban children.

		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	43.2	34.6	22.2	83.3	42.3	26.0	31.7	84.3
Race			1			1	,	
White	44.3	34.5	21.3	84.0	49.9	24.2	25.9	82.3
Non-White	n/a	n/a	n/a	77.1*	34.1	27.9	38.0	87.0
Family Income								
< 200% FPL	33.3*	39.2*	27.5*	80.0	28.1	27.6	44.3	83.8
> 200% FPL	48.3	31.3	20.5*	86.9	52.6	26.2	21.2	84.5
Age of Child								
1 to 5 years ^	79.6	n/a	n/a	87.0	55.3	24.7	20.0	84.6
6 to 11 years ^	22.2*	48.7*	29.2*	87.1	35.5	26.8	37.7	84.4
12 to 17 years	42.0	33.6*	24.5*	78.2	38.4	26.2	35.4	84.1
Special Needs Status								
CSHCN ^	33.2*	53.4*	n/a	75.2*	39.4	25.1	35.5	85.8
Non-CSHCN	46.5	28.3	25.2	85.9	42.9	26.2	30.9	84.0
Personal Healthcare Pr	ovider (PHP	) Status						
PHP ^	45.3	35.1	19.7	82.0	43.9	27.1	29.0	84.8
No PHP	n/a	n/a	n/a	n/a	31.3	18.3	50.4	80.3

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,021 children from New York.

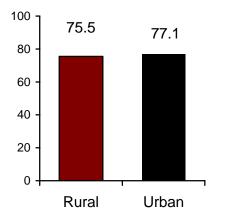
Cells marked "n/a" have too few observations to display an estimate



# North Carolina

As described by their parents, 42.5% of rural North Carolina children had teeth in excellent condition, as did 44.9% of urban children. Similar proportions of rural and urban North Carolina children had dental insurance (75.5% and 77.1%, respectively).

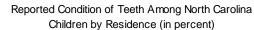
North Carolina Children with Dental Insurance by Residence (in percent)

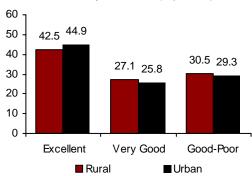


#### Highlights

- Excellent teeth were more common among rural white children (48.9%) than among rural non-white children (32.0%).
- Among children 12-17 years of age, 39.9% of rural children had teeth in excellent condition, as did 44.0% of urban children in the same age group.
- Only one out of every three (34.3%) rural children 6-11 years of age had teeth in excellent condition, as did 35.5% of urban children.
- Among children who did not have a personal healthcare provider, 35.2% of rural children had teeth in excellent condition, as did 34.2% of urban children.

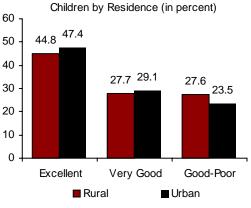
		F	Rural		Urban			
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	42.5	27.1	30.5	75.5	44.9	25.8	29.3	77.1
Race	·		,				,	,
White	48.9	26.5	24.6	74.4	49.9	27.1	23.0	76.7
Non-White	32.0	28.0	40.1	77.4	36.4	23.6	40.0	77.9
Family Income								
< 200% FPL	30.0	28.7	41.3	74.3	32.2	23.8	44.0	74.8
> 200% FPL	56.5	25.3	18.2	76.2	53.3	26.5	20.2	79.8
Age of Child	· · · · ·							
1 to 5 years	56.8	22.3	20.9	72.4	56.0	21.0	23.0	77.4
6 to 11 years	34.3	29.5	36.2	78.7	35.5	27.4	37.1	77.8
12 to 17 years	39.9	28.2	31.9	74.8	44.0	28.5	27.5	76.3
Special Needs Statu	15							
CSHCN	39.9	28.2	31.9	79.3	41.3	22.2	36.5	80.3
Non-CSHCN	43.1	26.8	30.1	74.7	45.8	26.7	27.6	76.4
Personal Healthcar	e Provider (PHP	) Status						
РНР	44.8	27.1	28.1	78.7	47.8	26.2	26.0	80.1
No PHP	35.2	27.2	37.7	64.4	34.2	24.5	41.3	65.6







Reported Condition of Teeth Among North Dakota



#### Highlights

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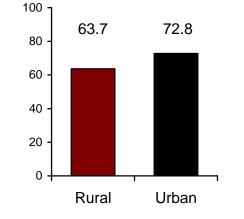
- Dental insurance among rural white children (62.5%) was markedly lower than among urban white children (72.0%).
- Nearly one half (47.2%) of rural non-white children had only good-poor teeth.
- Among children 12-17 years of age, rural children were markedly less likely to have dental insurance than were urban children (59.6% versus 74.5%).
- Dental insurance among rural children who did not have a personal healthcare provider (53.0%), was much lower than among urban children who also did not have a personal healthcare provider (74.3%).

		R	ural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	44.8	27.7	27.6	63.7	47.4	29.1	23.5	72.8
Race								
White	48.1	27.5	24.4	62.5†	48.4	29.0	22.6	72.0
Non-White	24.0	28.8	47.2	71.3	40.1	29.6*	30.3*	78.8
Family Income								
< 200% FPL	35.7	27.3	37.0	64.5	35.0	30.5	34.6	71.4
> 200% FPL	51.4	27.0	21.6	63.6+	51.0	29.3	19.7	73.5
Age of Child								
1 to 5 years	55.8	23.5	20.8	65.7	59.0	25.4	15.7	74.1
6 to 11 years	36.7	29.2	34.1	67.1	43.4	31.9	24.7	70.5
12 to 17 years	44.4	29.1	26.6	59.6†	43.3	28.6	28.1	74.5
Special Needs Status								
CSHCN	39.2	32.6	28.1	67.4	35.1	33.4	31.6	76.5
Non-CSHCN	45.9	26.7	27.5	62.9+	50.4	28.1	21.6	71.9
Personal Healthcare Pre	ovider (PHP	) Status						
PHP	48.2	27.0	24.8	65.9†	49.2	28.1	22.7	72.6
No PHP	29.7	31.2	39.2	53.0†	38.7	35.3	26.0	74.3

\*Sample size is less than 30.† Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,955 children from North Dakota.

# North Dakota

As described by their parents, 44.8% of rural North Dakota children had teeth in excellent condition, as did 47.4% of urban children. A lower proportion of rural children had dental insurance (63.7%) than did urban children (72.8%).



North Dakota Children with Dental Insurance by Residence (in percent)

Ohio

27.9 26.8

Good-Poor

Urban

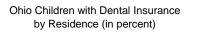
Reported Condition of Teeth Among Ohio Children by Residence (in percent)

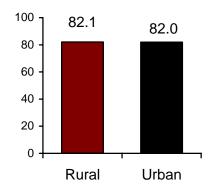
25.5 26.0

Very Good

# Ohio

As described by their parents, 46.6% of rural Ohio children had teeth in excellent condition, as did 47.2% of urban children. Reported dental insurance among rural children (82.1%), was nearly identical to that among urban children (82.0%).





#### Highlights

Among white children, 47.4% of rural children had teeth in excellent condition, as did 50.9% of urban children.

Excellent

Rural

46.6 47.2

Among children 1-5 years of age, (58.9%) of rural children had • teeth in excellent condition, as did (62.4%) of urban children.

60.0

50.0

40.0

30.0

20.0

10.0 0.0

- Nearly one half (48.4%) of rural children with special health care needs had teeth in excellent condition.
- Among children who had a personal healthcare provider, 47.2% of rural children had excellent tooth condition, compared to 48.5% of urban children.

		R	lural			U	rban	
	(	Condition of t	eeth	Dental	(	Condition of t	eeth	Dental
	Excellent	Very Good	Good - Poor	Insurance	Excellent	Very Good	Good - Poor	Insurance
				Reported				Reported
Overall	46.6	25.5	27.9	82.1	47.2	26.0	26.8	82.0
Race		1		1		1		
White	47.4	25.3	27.2	82.8	50.9	26.4	22.7	81.0
Non-White	n/a	n/a	n/a	73.4*	35.5	24.9	39.6	85.0
Family Income								
< 200% FPL	38.7	22.7	38.7	81.1	36.6	26.2	37.2	79.9
> 200% FPL	54.1	27.9	18.1	83.1	53.8	26.6	19.6	83.8
Age of Child								
1 to 5 years	58.9	16.8*	24.4*	82.6	62.4	20.2	17.4	78.7
6 to 11 years	36.2	31.1	32.7	81.5	37.8	31.3	31.0	81.9
12 to 17 years	46.4	27.5	26.1	82.2	43.5	26.0	30.5	84.7
Special Needs Sta	atus							
CSHCN	48.4	25.5*	26.1*	83.6	40.7	26.1	33.3	86.6
Non-CSHCN	46.2	25.5	28.3	81.7	49.0	26.0	25.0	80.7
Personal Healthc	are Provider (	PHP) Status						
PHP	47.2	23.0	29.8	81.9	48.5	25.4	26.1	82.1
No PHP ^	41.8*	47.2*	n/a	84.1	39.5	29.2	31.3	80.9

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,241 children from Obio. Cells marked "n/a" bave too few observations to display an estimate.





As described by their parents, 37.5% of rural Oklahoma

Oklahoma Children with Dental Insurance by Residence (in percent)

73.9

Rural

children had teeth in excellent condition, compared to 41.8%

of urban children. Comparable proportions of rural and urban

74.5

Urban

children were reported to have dental insurance (73.9% and

Oklahoma

74.5%, respectively).

100

80

60

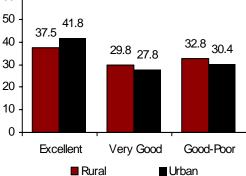
40

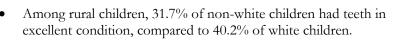
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0

#### Reported Condition of Teeth Among Oklahoma Children

by Residence (in percent)





- Rural children living in families above 200% of the FPL were less likely to have dental insurance than their urban counterparts.
- Among children with special health care needs, rural children were less likely to have dental insurance than urban children (75.7% versus 85.8%).
- Among rural children, 22.6% of children who did not have a personal healthcare provider had teeth in excellent condition, compared to 40.2% of children who did have a personal healthcare provider.

Highlights

		R	ural		Urban			
	Con	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	37.5	29.8	32.8	73.9	41.8	27.8	30.4	74.5
Race			1			1	,	
White	40.2	28.0	31.8	74.8	46.0	27.2	26.8	77.5
Non-White	31.7	33.4	34.9	72.1	34.0	28.8	37.2	68.7
Family Income								
< 200% FPL	25.7	36.0	38.3	78.1†	32.0	28.7	39.3	69.0
> 200% FPL	49.0	24.5	26.5	70.4†	50.3	27.7	21.9	79.9
Age of Child								
1 to 5 years	47.1	28.4	24.5	76.7	58.2	23.9	17.9	69.7
6 to 11 years	29.6	32.3	38.1	77.6	30.6	33.1	36.3	79.3
12 to 17 years	37.9	28.4	33.8	68.5	39.2	25.8	35.0	73.8
Special Needs Status								
CSHCN	32.5	32.0	35.5	75.7+	37.7	26.5	35.8	85.8
Non-CSHCN	38.9	29.1	32.0	73.4	43.0	28.1	28.9	71.4
Personal Healthcare Pr	ovider (PHP	) Status						
PHP	40.2	27.7	32.2	75.5	44.0	28.3	27.7	78.7
No PHP	22.6	41.4	36.1	64.9	32.8	25.3	41.9	56.8

\*Sample size is less than 30.  $\dagger$  Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were denum from the 2003 National Survey of Children's Health and are based on information for 1.937 shildren from Oklaba

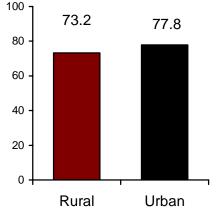
Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,937 children from Oklahoma.

Oregon

# Oregon

As described by their parents, only 36.9% of rural Oregon children had teeth in excellent condition, compared to 44.8% of urban children. The proportion of children with dental insurance was slightly lower among rural children (73.2%) than urban children (77.8%).

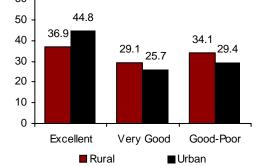
Oregon Children with Dental Insurance by Residence (in percent)



Highlights

•

Reported Condition of Teeth Among Oregon Children by Residence (in percent)



- Among white children, 39.6% of rural children had teeth in excellent condition, compared to 47.7% of urban children.
- One half (50.9%) of rural non-white children had only goodpoor tooth condition.
- Among children with special health care needs, 43.3% of rural children had teeth only in good-poor condition, as did 35.0% of urban children.
- Among children who had a personal healthcare provider, 40.1% of rural children had teeth in excellent condition, as did 47.2% of urban children.

		F	Rural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	36.9	29.1	34.1	73.2	44.8	25.7	29.4	77.8
Race			,					
White	39.6	30.2	30.2	75.2	47.7	26.8	25.4	79.5
Non-White	24.9*	24.2*	50.9	64.4	35.7	22.3	42.0	72.4
Family Income								
< 200% FPL	28.7	31.1	40.3	71.3	30.6	23.9	45.5	70.5
> 200% FPL	45.1	28.9	26.0	76.3	51.8	27.0	21.3	82.2
Age of Child								
1 to 5 years	51.4	33.3*	15.3*	72.6	59.3	22.1	18.6	76.3
6 to 11 years	31.0	27.5	41.5	77.3	36.5	28.3	35.2	79.9
12 to 17 years	33.8	28.0	38.2	70.3	41.2	26.2	32.6	76.9
Special Needs Status								
CSHCN	26.8*	29.9*	43.3	81.2	42.8	22.2	35.0	88.2
Non-CSHCN	39.4	28.8	31.8	71.3	45.2	26.4	28.4	75.8
Personal Healthcare I	Provider (PHP	) Status						
PHP	40.1	29.5	30.4	76.2	47.2	26.0	26.7	80.9
No PHP	24.8*	27.1*	48.1	61.8	31.8	24.0	44.2	59.5

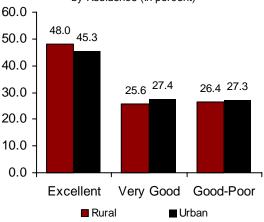
\*Sample size is less than 30.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,969 children from Oregon.



Reported Condition of Teeth Among Pennsylvania Children

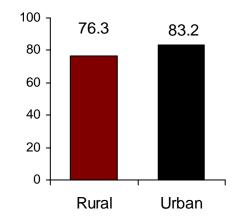
by Residence (in percent)



Pennsylvania

As reported by their parents, rural Pennsylvania children were slightly less likely to have dental insurance than were urban children (76.3% and 83.2%, respectively). Despite differences in reported dental insurance, 48.0% of rural children had teeth in excellent condition, compared to 45.3% of urban children.

Pennsylvania Children with Dental Insurance by Residence (in percent)



### Highlights

•

Despite being less likely to have dental insurance, rural Pennsylvania children living below 200% of the FPL had teeth in better condition than their urban counterparts.

- Rural Pennsylvania children with special health care needs were much less likely to have dental insurance than urban children with special health care needs (68.2% versus 86.7%).
- Among children who had a personal healthcare provider, rural children were less likely to have dental insurance than urban children (75.9% versus 83.3%).

		F	Rural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	48.0	25.6	26.4	76.3	45.3	27.4	27.3	83.2
Race						1		
White	47.3	26.1	26.6	76.3	48.0	27.9	24.1	82.0
Non-White	59.0*	n/a	n/a	77.2*	36.8	25.7	37.5	87.1
Family Income					-			
< 200% FPL ^	51.0	19.1*	30.0	75.1†	33.6	28.5	38.0	85.2
> 200% FPL	45.6	30.1	24.3	78.5	52.9	26.5	20.6	83.5
Age of Child								
1 to 5 years	68.1	19.4*	n/a	71.5	58.5	22.5	19.1	80.7
6 to 11 years	43.9	25.5	30.6	80.4	36.5	31.4	32.1	86.8
12 to 17 years	40.3	29.3	30.3	75.0	44.2	27.1	28.7	81.8
Special Needs Status								
CSHCN	47.4*	26.1*	26.5*	68.2	38.2	25.9	35.9	86.7
Non-CSHCN	48.1	25.5	26.4	77.9	47.1	27.8	25.1	82.3
Personal Healthcare Pr	rovider (PHP	) Status	,	•			,	,
PHP	48.6	25.6	25.8	75.9†	45.8	27.8	26.4	83.3
No PHP	n/a	n/a	n/a	79.5*	43.0	23.4	33.6	82.2

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,200 children from Pennsylvania. Cells marked "n/a" bave too few observations to display an estimate.

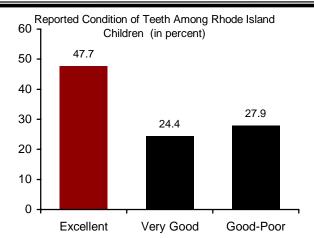


Rhode Island

# Rhode Island

Of the 2,019 Rhode Island children surveyed by the NCHS, less than 2% lived in rural counties; therefore, estimates could not be developed at the rural level. The data presented below are for the entire survey population.

As described by their parents, 47.7% of Rhode Island children had teeth in excellent condition, and 27.9% had only good-poor tooth condition. Approximately 87.9% of children were reported to have dental insurance.



### Highlights

- Excellent tooth condition was less common among non-white children (35.6%) than among white children (51.7%).
- Nearly one half (48.2%) of Rhode Island children living below 200% of the FPL had teeth in only good-poor condition, compared to 18.8% of children living above 200% of the FPL.
- Only 26.1% of children who had a personal healthcare provider had teeth in good-poor condition, compared to 44.8% of children who lacked a personal healthcare provider.

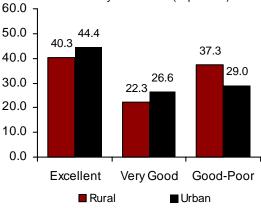
		A	JI	
		Condition of teeth		Dental Insurance
	Excellent	Very Good	Good - Poor	Reported
Overall	47.7	24.5	27.9	87.9
Race				
White	51.7	25.8	22.4	87.9
Non-White	35.6	20.4	44.0	87.7
Family Income				
< 200% FPL	33.9	17.9	48.2	86.5
> 200% FPL	54.4	26.8	18.8	89.1
Age of Child				
1 to 5 years	58.8	19.8	21.5	85.1
6 to 11 years	42.6	24.7	32.7	88.1
12 to 17 years	44.2	27.8	27.9	89.7
Special Needs Status				
CSHCN	42.1	25.4	32.5	90.0
Non-CSHCN	49.1	24.2	26.7	87.3
Personal Healthcare Provider (PHP	) Status			
РНР	48.9	25.0	26.1	88.2
No PHP	35.4	19.8	44.8	84.0

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,019 children from Rhode Island.



Reported Condition of Teeth Among South Carolina

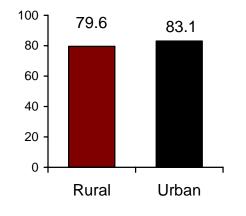
#### Children by Residence (in percent)



# South Carolina

As described by their parents, 40.3% of rural South Carolina children had teeth in excellent condition, as did 44.4% of urban children. Reported dental insurance among rural children (79.6%) was slightly lower than among urban children (83.1%).

South Carolina Children with Dental Insurance by Residence (in percent)



### Highlights

- Rural non-white children were less likely to have dental insurance than urban non-white children (80.1% versus 88.1%).
- Among children 12-17 years of age, rural children had teeth in poorer condition and were less likely to have dental insurance than urban children.
- Dental insurance among rural children with special health care needs (93.5%) was higher than among urban children with special health care needs (86.4%).
- Rural children who had a personal healthcare provider had teeth in poorer condition than urban children who also had a personal healthcare provider.

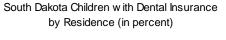
		R	ural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	40.3	22.3	37.3	79.6	44.4	26.6	29.0	83.1
Race	·							
White	51.0	23.9	25.2	79.1	49.3	27.6	23.1	80.2
Non-White	30.9	21.0	48.1	80.1†	36.4	24.9	38.7	88.1
Family Income								
< 200% FPL	35.3	20.4	44.3	77.7	34.3	28.3	37.4	81.9
> 200% FPL	49.3	25.9	24.8	83.3	51.4	26.6	22.0	84.6
Age of Child								
1 to 5 years	55.6	19.9	24.5	80.8	55.9	25.7	18.5	81.3
6 to 11 years	34.5	29.7	35.8	85.4	34.4	31.5	34.0	81.9
12 to 17 years ^	32.9	17.6	49.5	73.2†	45.5	22.8	31.7	85.4
Special Needs Status								
CSHCN	35.7	21.9*	42.4*	93.5†	37.5	26.9	35.6	86.4
Non-CSHCN ^	41.2	22.4	36.4	76.9+	46.2	26.5	27.3	82.3
Personal Healthcare Pr	ovider (PHP	) Status		· · · ·		·	·	·
PHP ^	41.7	22.3	36.1	81.4	45.2	26.7	28.1	85.3
No PHP	33.0*	23.0*	44.1	70.8	41.0	26.1	33.0	70.9

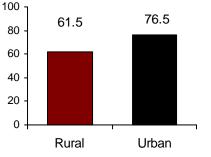
\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,157 children from South Carolina.



# South Dakota

As described by their parents, 41.9% of rural South Dakota children had teeth in excellent condition, compared to 48.2% of urban children. A markedly lower proportion of rural than urban children had dental insurance (61.5% compared to 76.5%).





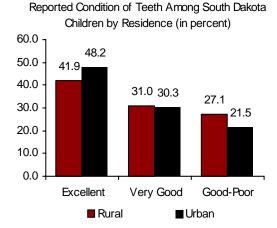


- Rural white children were less likely to have dental insurance than urban white children (60.1% versus 76.8%).
- Across all age groups, rural children were less likely to have dental insurance than urban children the same age.
- Rural children with special health care needs were markedly less likely to have dental insurance than their urban counterparts (62.5% versus 80.3%).
- Rural children who did not have a personal healthcare provider were less likely to have dental insurance than urban children who did not have a personal healthcare provider (58.8% versus 76.7%).

		-		_				
		R	ural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	41.9	31.0	27.1	61.5	48.2	30.3	21.5	76.5
Race								
White	45.2	31.2	23.6	60.1†	48.9	30.7	20.4	76.8
Non-White	31.5	30.1	38.4	66.1	42.8	27.6*	29.5*	74.3
Family Income								
< 200% FPL	38.4	32.6	29.0	58.5+	41.6	28.8	29.7	76.9
> 200% FPL	46.0	30.0	24.0	65.0†	51.7	31.2	17.2	76.8
Age of Child								
1 to 5 years	50.2	27.4	22.5	55.9+	53.7	28.7	17.6	74.1
6 to 11 years	34.5	35.6	29.9	65.1†	43.6	34.7	21.7	78.0
12 to 17 years	42.9	29.2	27.9	61.9†	48.3	27.7	24.0	76.8
Special Needs Status								
CSHCN	32.7	32.2	35.1	62.5+	41.8	30.9	27.2	80.3
Non-CSHCN	43.6	30.7	25.6	61.3+	49.6	30.2	20.3	75.6
Personal Healthcare Pr	ovider (PHP	') Status						
PHP	44.8	29.2	26.0	62.3+	48.6	29.9	21.5	76.4
No PHP	31.3	37.5	31.2	58.8+	46.4	32.3	21.2*	76.7

\*Sample size is less than 30. † Designates rural is significantly different than urban at p<0.05 for dental insurance.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,868 children from South Dakota

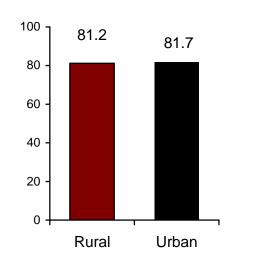


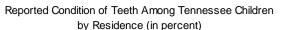


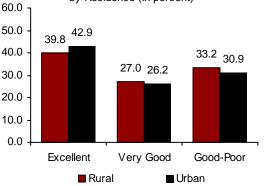
### Tennessee

As described by their parents, 39.8% of rural Tennessee children had teeth in excellent condition, as did 42.9% of urban children. Reported dental insurance was comparable among rural and urban children (81.2% and 81.7%, respectively).

Tennessee Children with Dental Insurance by Residence (in percent)







HighlightsDespite

comparable dental insurance coverage, rural white children had teeth in poorer condition than urban white children.

- Among rural children, children living in families below 200% of the FPL were markedly less likely than children living in families above 200% of the FPL to have excellent teeth (29.9% versus 53.0%).
- Among children 6-11 years of age, 29.9% of rural children had teeth in excellent condition, compared to 36.9% of urban children.
- One out of every three (33.4%) rural children with special health care needs had teeth only in good-poor condition, as did 33.0% of urban children with special health care needs.

		R	ural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	39.8	27.0	33.2	81.2	42.9	26.2	30.9	81.7
Race								
White ^	39.7	28.7	31.6	80.4	48.0	26.7	25.4	79.9
Non-White	40.0	16.1*	43.8*	86.3	32.2	25.2	42.6	85.5
Family Income								
< 200% FPL	29.9	28.8	41.3	85.7	30.8	24.2	45.0	85.1
> 200% FPL	53.0	28.0	19.1	77.9	51.3	28.2	20.6	80.1
Age of Child								
1 to 5 years	53.8	30.4	15.8*	82.9	56.6	23.7	19.7	81.7
6 to 11 years	29.9	25.1	45.0	82.4	36.9	26.1	37.1	81.5
12 to 17 years	37.5	26.1	36.5	78.6	38.1	28.2	33.6	81.9
Special Needs Status								
CSHCN	36.4	30.2*	33.4	89.3	41.7	25.3	33.0	83.2
Non-CSHCN	40.5	26.3	33.2	79.4	43.2	26.4	30.4	81.3
Personal Healthcare Pr	ovider (PHP	) Status						
PHP	39.7	27.7	32.6	80.7	44.6	26.7	28.8	82.1
No PHP	40.7*	22.1*	37.2*	83.8 al is significantly differen	31.6	22.7	45.7	80.1

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,922 children from Tennessee.



Texas

23.9

Very Good Good-Poor

37.1 39.0

Reported Condition of Teeth Among Texas Children by Residence (in percent)

28.5

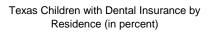
37.1

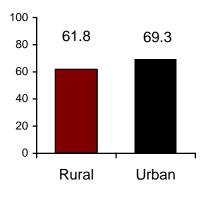
Excellent Rural

34.4

# Texas

As described by their parents, 34.4% of rural Texas children had teeth in excellent condition, compared to 37.1% of urban children. Rural children were less likely to have dental insurance (61.8%) than were urban children (69.3%).





### Highlights

Rural white children had teeth in poorer condition and were less likely to have dental insurance than urban white children.

50.0

40.0

30.0

20.0

10.0

0.0

- Among children living in families below 200% of the FPL, 50.7% of rural children had teeth in good-poor condition, as did 52.4% of urban children.
- Rural children 1-5 years of age were markedly less likely to have dental insurance than urban children in the same age group (55.8% versus 69.8%).
- Among children who had a personal healthcare provider, 34.5% of rural children had teeth in excellent condition, as did 40.6% of urban children.

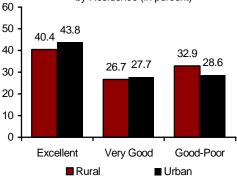
		F	Rural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	34.4	28.5	37.1	61.8	37.1	23.9	39.0	69.3
Race			1	1		1	1	1
White	40.7	31.0	28.3	64.0†	53.3	27.0	19.8	76.4
Non-White	26.3*	25.1*	48.6	58.8	26.1	21.8	52.2	64.4
Family Income					-			
< 200% FPL	22.8*	26.6*	50.7	57.5	26.4	21.2	52.4	61.9
> 200% FPL	47.4	27.7	24.9*	70.2	48.4	27.7	23.9	76.9
Age of Child								
1 to 5 years	47.3	24.3*	28.4*	55.8	49.9	22.5	27.6	69.8
6 to 11 years	n/a	27.0*	53.0	68.3	27.9	23.0	49.1	69.5
12 to 17 years	36.2	33.7	30.2*	61.0	35.4	26.1	38.6	68.5
Special Needs Status								
CSHCN	n/a	36.8*	42.6*	70.8	35.2	26.5	38.3	78.0
Non-CSHCN	38.2	26.2	35.6	59.3	37.6	23.2	39.1	67.1
Personal Healthcare P	rovider (PHF	') Status						
РНР	34.5	28.6	36.9	67.6	40.6	25.2	34.2	75.2
No PHP	n/a	n/a	38.2*	n/a	26.2	19.3	54.5	50.0

\*Sample size is less than 30. † Designates rural is significantly different than urban at p<0.05 for dental insurance.

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,179 children from Texas. Cells marked "n/a" have too few observations to display an estimate.



Reported Condition of Teeth Among Utah Children by Residence (in percent)



Among children living below 200% of the FPL, rural children were markedly more likely to have dental insurance than their urban counterparts (82.1% versus 69.5%).

- Among white children, rates of dental insurance were nearly • identical among rural and urban children (80.6% and 80.2%, respectively).
- One out of every three rural children who had a personal healthcare provider (33.2%), had teeth only in good-poor condition, as did 26.7% of urban children who also had a personal healthcare provider.

		R	lural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	40.4	26.7	32.9	80.2	43.8	27.7	28.6	77.2
Race			,					
White	43.1	26.4	30.5	80.6	44.8	28.5	26.7	80.2
Non-White	n/a	n/a	n/a	n/a	38.8	24.0	37.2	62.8
Family Income								
< 200% FPL	35.0*	n/a	46.0*	82.1†	36.5	26.4	37.1	69.5
> 200% FPL	50.5	28.8*	20.8*	79.1	49.4	28.4	22.3	83.7
Age of Child								
1 to 5 years	52.9*	n/a	n/a	71.3*	55.4	22.5	22.2	77.9
6 to 11 years	36.0*	30.8*	33.2*	90.9†	35.7	26.1	38.2	76.1
12 to 17 years	34.3*	33.1*	32.7*	76.4	40.5	34.4	25.2	77.5
Special Needs Status								
CSHCN	n/a	n/a	n/a	89.1*	39.9	24.9	35.2	83.2
Non-CSHCN	42.1	28.1	29.8	79.0	44.5	28.2	27.3	76.0
Personal Healthcare P	rovider (PHP	) Status						
PHP	39.4	27.4	33.2	82.6	45.3	27.9	26.7	80.2
No PHP	n/a	n/a	n/a	n/a	34.1	26.5	39.4	59.2

Highlights

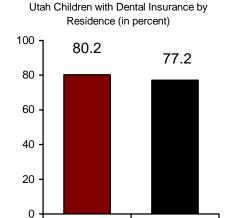
Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,483 children from Utah. Cells marked "n/a" have too few observations to display an estimate.



# Utah

As reported by their parents, 80.2% of rural Utah children had dental insurance, compared to 77.2% of urban children. Despite differences in dental insurance, 40.4% of rural children had teeth in excellent condition, compared to 43.8% of urban children.

Urban

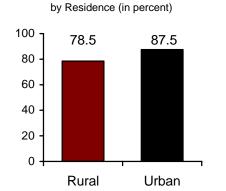


Rural

Vermont

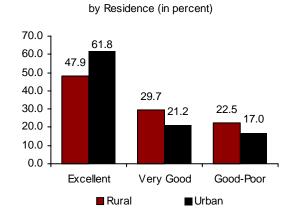
# Vermont

As described by their parents, 47.9% of rural Vermont children had teeth in excellent condition, much lower than among urban children (61.8%). Reported dental insurance was lower among rural children (78.5%) than among urban children (87.5%).



Vermont Children with Dental Insurance

### Highlights



Reported Condition of Teeth Among Vermont Children

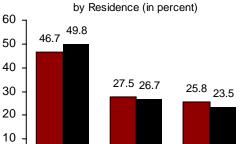
- Rural white children had teeth in poorer condition and were less likely to have dental insurance than urban white children.
- Rural children 12-17 years of age had teeth in poorer condition and were less likely to have dental insurance than urban children in the same age group.
- Among children who did not have special health care needs, rural children had teeth in worse condition and were less likely to have dental insurance than their urban counterparts.
- Among children with a personal healthcare provider, rural children had teeth in poorer condition and were less likely to have dental insurance than urban children.

		R	lural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	47.9	29.7	22.5	78.5	61.8	21.2	17.0	87.5
Race			1	1			1	1
White ^	47.9	29.3	22.8	78.5+	62.1	21.0	16.9	87.8
Non-White	48.7	35.6*	15.7*	78.7	56.7*	23.9*	19.4*	81.6
Family Income								
< 200% FPL	37.8	30.4	31.7	82.5†	42.6	17.2*	40.2*	92.4
> 200% FPL ^	54.5	28.7	16.8	76.9	66.1	21.7	12.2	85.8
Age of Child								
1 to 5 years ^	56.9	28.0	15.2	81.4	75.5	13.8*	10.8*	80.3
6 to 11 years	42.1	31.2	26.7	80.9	52.8	22.7	24.5	87.1
12 to 17 years ^	47.2	29.4	23.3	74.9†	63.7	23.4	13.0	91.2
Special Needs Status				· · ·				
CSHCN	40.8	32.2	27.0	85.2	47.5	27.7*	24.8*	88.6
Non-CSHCN ^	49.8	29.0	21.2	76.6†	64.5	20.0	15.5	87.3
Personal Healthcare P	rovider (PHP	) Status	·	· ·				
PHP ^	48.1	29.9	22.0	79.3+	61.9	21.5	16.6	87.8
No PHP	44.5	28.7	26.8*	71.8	61.3*	16.7*	n/a	82.6

Designates rural is significantly different toan urban at p<0.05 for condition of teelb. 7 Designates rural is significantly different toan urban at p<0.05 Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,902 children from Vermont.



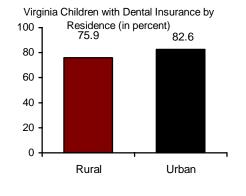
### Reported Condition of Teeth Among Virginia Children



0 - Excellent Very Good Good-Poor

# Virginia

As described by their parents, 46.7% of rural Virginia children had teeth in excellent condition, compared to 49.8% of urban children. Reported dental insurance was lower among rural children (75.9%) than among urban children (82.6%).



### Highlights

- Rural white children were less likely to have dental insurance than urban white children (75.1% versus 84.0%).
- Among children in families living above 200% of the FPL, rural children were less likely to have dental insurance than urban children (74.1% versus 85.2%).
- Among children who had a personal healthcare provider, rural children were less likely to have dental insurance than urban children (77.7% versus 84.6%).

		R	ural			Ur	ban	
	Con	dition of te	eth	Dental	Con	dition of tee	th	Dental
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance
		Good	Poor	Reported		Good	Poor	Reported
Overall	46.7	27.5	25.8	75.9	49.8	26.7	23.5	82.6
Race								
White	49.1	27.4	23.5	75.1†	56.5	25.7	17.9	84.0
Non-White	40.4*	27.8*	31.9*	78.0	38.4	28.5	33.1	80.2
Family Income								
< 200% FPL	37.0	28.9	34.1	74.9	41.3	24.4	34.3	75.9
> 200% FPL	52.8	30.2	17.0*	74.1†	53.2	28.1	18.8	85.2
Age of Child								
1 to 5 years	67.9	n/a	n/a	74.7	65.2	22.8	11.9	77.3
6 to 11 years	37.0	29.7*	33.3*	83.1	42.1	27.6	30.2	87.1
12 to 17 years	41.1	31.7	27.3*	72.1	44.7	29.0	26.3	82.6
Special Needs Status								
CSHCN	41.1*	38.5*	n/a	81.6	47.5	27.0	25.5	87.4
Non-CSHCN	47.6	25.8	26.7	75.0	50.3	26.7	23.0	81.5
Personal Healthcare Pro	ovider (PHP	) Status						
PHP	46.6	28.8	24.6	77.7†	51.4	26.4	22.3	84.6
No PHP	n/a	n/a	n/a	n/a	41.2	28.3	30.5	71.8

\*Sample size is less than 30. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,179 children from Virginia.

Cells marked "n/a" have too few observations to display an estimate.



Washington

27.5

31.7 28.1

Good-Poor

Reported Condition of Teeth Among Washington Children by Residence (in percent)

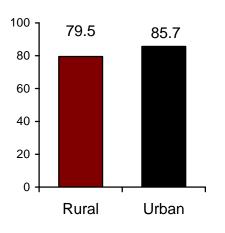
23.2

Very Good

### Washington

As reported by their parents, 79.5% of rural Washington children had dental insurance, compared to 85.7% of urban children. Despite lower reported dental insurance, 45.2% of rural children had teeth in excellent condition, as did 44.4% of urban children.

Washington Children with Dental Insurance by Residence (in percent)



### Highlights

- Rural Urban Among white children, 47.7% of rural children had teeth in
- excellent condition, as did 47.5% of urban children.

Excellent

45.2 44.4

60

50

40

30

20

10 0

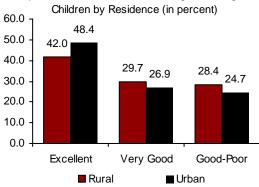
- Rural children 1-5 years of age were less likely to have dental insurance than urban children in the same age group (72.0% versus 88.2%).
- Rural children 12-17 years of age had teeth in better condition than urban children in the same age group, with 53.5% falling in the "Excellent" category, versus 41.7%.
- Among children who did not have special heath care needs, rural children were less likely to have dental insurance than their urban counterparts (76.9% versus 84.8%).

		F	Rural			Ur	ban	
	Cor	ndition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	45.2	23.2	31.7	79.5	44.4	27.5	28.1	85.7
Race	_!!		1	1		<u>.</u>	1	1
White	47.7	22.8	29.5	83.0	47.5	28.5	24.0	87.0
Non-White	36.8*	n/a	38.8*	67.9	36.7	25.0	38.3	82.5
Family Income					-			
< 200% FPL	41.7	19.3*	39.0	81.7	33.3	24.1	42.7	78.6
> 200% FPL	46.9	28.2	25.0*	82.0	50.0	29.4	20.6	90.0
Age of Child				•				*
1 to 5 years	49.4*	n/a	n/a	72.0	54.8	24.7	20.6	88.2
6 to 11 years	32.6*	32.8*	34.6*	81.2	38.4	28.7	32.9	82.7
12 to 17 years ^	53.5	13.4*	33.1	82.1	41.7	28.6	29.7	86.4
Special Needs Status								
CSHCN	n/a	n/a	n/a	91.4	40.3	24.0	35.8	89.7
Non-CSHCN	46.1	23.4	30.5	76.9†	45.3	28.3	26.4	84.8
Personal Healthcare F	rovider (PHP	) Status						
РНР	44.1	25.5	30.4	83.3	45.8	28.1	26.1	88.1
No PHP	51.3*	n/a	38.5*	63.5*	36.5	23.6	39.8	71.5

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,932 children from Washington. Cells marked "n/a" have too few observations to display an estimate.



Reported Condition of Teeth Among West Virginia



# West Virginia

100

80

60

40

20

0

As described by their parents, 42.0% of rural West Virginia children had teeth in excellent condition, compared to 48.4% of urban children. Reported dental insurance was slightly lower among rural children (77.4%) than among urban children (80.1%).

80.1

Urban

West Virginia Children with Dental Insurance by Residence (in percent)

77.4

Rural



- Rural white children had teeth in poorer condition than urban white children.
- Rural children in families living above 200% of the FPL were less likely to have dental insurance than their urban counterparts (72.5% versus 82.9%).
- Rural children who did not have special health care needs had teeth in worse condition and were less likely to have dental insurance than their urban counterparts.
- Among children who had a personal healthcare provider, rural children had teeth in poorer condition than urban children, with 43.1% falling in the "Excellent" category, versus 50.2%.

		R	lural			U	rban	
	C	Condition of to	eeth	Dental	(	Condition of t	eeth	Dental
	Excellent	Very Good	Good - Poor	Insurance	Excellent	Very Good	Good - Poor	Insurance
				Reported				Reported
Overall	42.0	29.7	28.4	77.4	48.4	26.9	24.7	80.1
Race								
White ^	42.1	30.1	27.9	77.1	49.5	25.9	24.7	79.7
Non-White	40.0	23.6*	36.4*	82.4	36.3	38.9	24.8*	83.7
Family Income								
< 200% FPL	33.6	30.8	35.6	80.6	40.1	27.2	32.7	77.4
> 200% FPL	55.5	27.9	16.6	72.5†	55.8	26.3	17.9	82.9
Age of Child								
1 to 5 years	61.5	17.4	21.1	82.1	66.1	21.9	12.0	81.8
6 to 11 years	30.1	33.4	36.6	76.7	38.6	31.9	29.5	80.4
12 to 17 years	38.7	35.0	26.3	74.7	43.7	26.3	30.1	78.3
Special Needs Status								
CSHCN	36.2	21.5	42.3	86.9	39.3	30.7	29.9	79.9
Non-CSHCN ^	43.8	32.2	24.0	74.4†	51.2	25.7	23.1	80.1
Personal Healthcare	Provider (P	HP) Status						
PHP ^	43.1	28.5	28.4	78.5	50.2	27.9	21.8	81.5
No PHP ^	34.7	37.2	28.1*	70.1	34.1	20.4*	45.5	69.7

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 2,022 children from West Virginia.

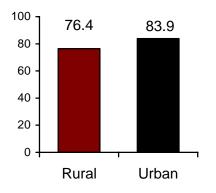


Wisconsin

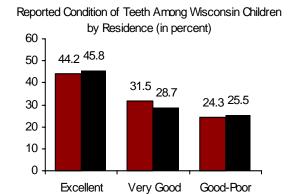
# Wisconsin

As described by their parents, 44.2% of rural Wisconsin children had teeth in excellent condition, compared to 45.8% of urban children. Reported dental insurance was lower among rural children (76.4%), than among urban children (83.9%).

Wisconsin Children with Dental Insurance by Residence (in percent)







Urban

### Highlights

Among white children, rural children were less likely to have dental insurance than were urban children (76.3% versus 83.7%).

Rural

- Among children 6-11 and 12-17 years of age, rural children were less likely to have dental insurance than urban children in the same age group.
- Dental insurance among rural children who did not have special health care needs (74.6%) was lower than among urban children who did not have special health care needs (82.9%).
- Among children who had a personal healthcare provider, rural children were less likely to have dental insurance than their urban counterparts (78.7% versus 85.8%).

		R	lural			Ur	ban	
	Cor	dition of te	eth	Dental	Con	dition of tee	eth	Dental
	Excellent	Very Good	Good - Poor	Insurance Reported	Excellent	Very Good	Good - Poor	Insurance Reported
Overall	44.2	31.5	24.3	76.4	45.8	28.7	25.5	83.9
Race								,
White	45.2	32.4	22.5	76.3†	49.1	30.3	20.6	83.7
Non-White	35.2*	n/a	n/a	77.5	34.3	23.4	42.3	84.8
Family Income								
< 200% FPL	34.2	34.4	31.5	76.6	35.1	26.1	38.8	82.2
> 200% FPL	48.5	30.0	21.5	78.4+	51.1	29.4	19.6	85.2
Age of Child								
1 to 5 years	58.5	26.5	14.9*	78.4	55.6	24.5	19.9	81.5
6 to 11 years	38.4	29.5	32.2	75.8	39.0	29.1	31.9	85.2
12 to 17 years	40.4	36.6	23.0	75.6†	44.5	31.6	23.9	84.7
Special Needs Status								
CSHCN	32.5	40.5	26.9*	84.9	43.8	27.2	29.1	88.2
Non-CSHCN	46.7	29.5	23.8	74.6+	46.3	29.1	24.7	82.9
Personal Healthcare Pr	rovider (PHP	) Status						
PHP	45.8	32.5	21.7	78.7†	47.4	27.3	25.3	85.8
No PHP	36.2*	25.0*	38.8*	63.6	35.2	37.8	27.1	71.2

Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,893 children from Wisconsin.

Cells marked "n/a" have too few observations to display an estimate.



31.8

26.7

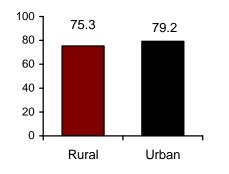
Good-Poor

Reported Condition of Teeth Among Wyoming Children by Residence (in percent)

# Wyoming

As described by their parents, 40.9% of rural Wyoming children had teeth in excellent condition, compared to 47.1% of urban children. Reported dental insurance was lower among rural children (75.3%), than among urban children (79.2%).

Wyoming Children with Dental Insurance by Residence (in percent)



### Highlights

- Among non-white children, 36.3% of rural children had teeth in excellent condition, compared to 46.6% of urban children.
- Among children in families living below 200% of the FPL, • 30.9% of rural children had teeth in excellent condition, compared to 38.7% of urban children.

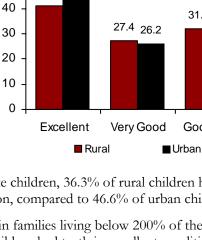
60

50

- Rural children who did not have special health care needs had teeth in poorer condition than urban children who also did not have special health care needs.
- Rural children who did not have a personal healthcare provider were markedly less likely to have dental insurance than their urban counterparts (64.9% versus 82.0%).

	Rural				Urban					
	Condition of teeth			Dental	Condition of teeth			Dental		
	Excellent	Very	Good -	Insurance	Excellent	Very	Good -	Insurance		
		Good	Poor	Reported		Good	Poor	Reported		
Overall	40.9	27.4	31.8	75.3	47.1	26.2	26.7	79.2		
Race										
White	41.6	27.6	30.8	76.3	47.2	26.0	26.9	80.0		
Non-White	36.3	25.7	38.1	68.6	46.6	27.5*	25.9*	74.9		
Family Income										
< 200% FPL	30.9	27.6	41.6	71.3	38.7	27.3	34.1	79.6		
> 200% FPL	47.4	27.2	25.5	78.0	52.1	25.7	22.2	79.9		
Age of Child										
1 to 5 years	57.2	21.1	21.8	76.2	56.1	24.5	19.4	74.4		
6 to 11 years	29.4	27.5	43.2	74.4	39.5	22.6	38.0	79.4		
12 to 17 years	41.0	31.4	27.7	75.5	46.9	30.0	23.1	82.2		
Special Needs Status										
CSHCN	36.0	23.9	40.1	82.4	32.8	35.1	32.1*	85.9		
Non-CSHCN ^	41.9	28.2	29.9	73.7	50.1	24.4	25.6	77.8		
Personal Healthcare Provider (PHP) Status										
РНР	43.6	27.0	29.4	77.3	50.4	24.6	25.1	78.5		
No PHP	26.3	29.3	44.4	64.9†	34.4	32.5	33.1	82.0		

\*Sample size is less than 30. ^ Designates rural is significantly different than urban at p<0.05 for condition of teeth. † Designates rural is significantly different than urban at p<0.05 for dental insurance. Data were drawn from the 2003 National Survey of Children's Health and are based on information for 1,893 children from Wyoming.



47.1

40.9



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# **Technical Notes**

### About the Survey

The National Survey of Children's Health (NSCH) was fielded using the State and Local Area Integrated Telephone Survey (SLAITS) mechanism. SLAITS is conducted by the U.S. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS). Approximately 1.9 million telephone numbers were randomly generated for inclusion in the NSCH. After eliminating numbers that were determined to be nonresidential or nonworking, the remaining numbers were called to identify households with children less than 18 years of age. From each household with children, one was randomly selected to be the focus of the interview. The respondent was the parent or guardian in the household who was most knowledgeable about the health and health care of the children under 18 years of age. For 79 percent of the children, the respondent was the mother. Respondents for the remaining children were fathers (17 percent), grandparents (3 percent), or other relatives or guardians (1 percent).

*Data Collection.* Data collection began on January 29, 2003 and ended on July 1, 2004, with interviews conducted from telephone centers in Chicago, Illinois; Las Vegas, Nevada; and Amherst, Massachusetts. A computer-assisted telephone interviewing system was used to collect the data. A total of 102,353 interviews were completed for the NSCH, with 87 percent of the interviews completed in 2003. The number of completed interviews varied by State, ranging from 1,848 in New Mexico to 2,241 in Louisiana and Ohio, with one exception: Only 1,483 interviews were completed in Utah. More than 2,000 interviews were completed in 25 states.

The cooperation rate, which is the proportion of interviews completed after a household was determined to include a child under age 18, was 68.8 percent. The national weighted response rate, which includes the cooperation rate as well as the resolution rate (the proportion of telephone numbers identified



as residential or nonresidential) and the screening completion rate (the proportion of households successfully screened for children), was 55.3 percent.

*Data Analysis.* Statistical analyses were conducted using SAS-Callable SUDAAN, to account for the weights and the complex survey design. The sampling weights assigned to each data record were based on the probability of selection of each household telephone number within each state, with adjustments that compensate for households that have multiple telephone numbers, for households without telephones, and for non-response. With data from the U.S. Bureau of the Census, the weights were also adjusted by age, sex, race, ethnicity, household size, and educational attainment of the most educated household member to provide a dataset that was more representative of each state's population of noninstitutionalized children less than 18 years of age.

Responses of "don't know" and "refuse to answer" were counted as missing data. Data analysis was performed separately for the national, regional, and state data. The regions were defined according to the CDC classification: Northeast (Connecticut, Massachusetts, Maine, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont); Midwest (Iowa, Illinois, Indiana, Kansas, Michigan, Minnesota, Missouri, North Dakota, Nebraska, Ohio, South Dakota, and Wisconsin); South (Alabama, Arkansas, District of Columbia, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia); and West (Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, and Wyoming). Children's areas of residence were classified at the county level using the 2003 Urban Influence Codes from the U.S. Department of Agriculture's Economic Research Service. The 2003 Urban Influence Codes divide the 3,141 counties, county equivalents, and the independent cities in the United States into 12 groups based on population and commuting data from the



2000 Census of Population, in the case of metropolitan counties, and adjacency to metro area in the case of nonmetropolitan counties. Metro-nonmetro definition is based on the official metro status announced by the Office of Management and Budget on June 1, 2003. The 12 UICs were grouped into two categories for the National, Regional and State profiles. UICs of 1 and 2 were classified as "Urban," while all other UICs were classified as rural. Analysis across levels of rurality used three groups: "micropolitan rural" (UICs 3, 5, and 8), "small rural" (UICs 4, 6, and 7), and "small remote rural" (UICs 9, 10, 11, and 12).

*Outcome Variables.* The four primary outcome variables are condition of teeth, no dental visits, preventive dental visits, and dental insurance. Parents were asked S2Q54 "How would you describe the condition of [CHILD]'s teeth: excellent, very good, good, fair, poor?" This variable was categorized as excellent, very good, and good to poor. Parents were also asked in S2Q56 "About how long has it been since [he/she] last saw a dentist? Include all types of dentists, such as orthodontists, oral surgeons, and all other dental specialists." Responses could include "never," "6 months or less," more than 6 months, but not more than 1 year ago," "more than 1 year, but not more than 2 years ago," "more than 2 years, but not more than 5 years ago," or "more than 5 years ago." For analytical purposes, responses were dichotomously grouped as either having seen, or not having seen, a dentist of any type in the previous 12 months. Preventive dental care was examined based on parental responses to S74Q09, "During the past 12 months/Since[his/her] birth, did [CHILD] see a dentist for any routine preventive dental care, including check-ups, screenings, and sealants?" As with the previous question, responses were dichotomously grouped as yes or no. Finally, dental insurance that helps pay for any routine dental care including cleanings, x-rays and examinations?"

The NSCH asks several questions about perceived need of dental care. These variables are not included in the Chartbook because the research team did not believe them to be reliable. Perceived need is



likely a subjective measure influenced by socioeconomic and demographic variables, which could result in misleading conclusions presented through bivariate analyses.

*Demographic Variables.* Race / ethnicity of children were classified according to the NSCH definitions. All children identified as Hispanic are classified as such, regardless of their race. Non-Hispanic whites (hereafter "whites") and non-Hispanic blacks (hereafter "blacks") are presented separately. All other races are collectively classified as "other." Race/ethnicity was presented differently by state, depending upon the race distribution and sample size for the minorities in a given state. The classifications for Alaska were white, American Indian/Alaska Native, and other combined races. For States like Alabama and South Carolina that have large African American populations, the race and ethnicity variable was classified as white, Hispanic, and other combined races. For all other states, the race and ethnicity variable was classified as white and non-white. In the national profile, the race and ethnicity has been categorized as Hispanic, white, black, and other races.

The household income value was either the actual dollar amount reported by respondents who reported an exact household income or it was obtained through a series of questions asking respondents whether the household income was below, exactly at, or above threshold amounts. Once an income-to-household-size measure was computed, it was compared with DHHS Federal Poverty Guidelines. The household income had been categorized as less than 200% and greater than or equal to 200% of Federal Poverty Guidelines for family income.

*Additional Variables of Interest.* The potentiality of a relationship between having a regular source of care and the outcome variables was considered in development of the Chartbook. Personal healthcare provider status was ascertained from responses to S5Q01 "Do you have one or more persons



you think of as **[CHILD]**'s personal doctor or nurse?" Positive responses resulted in flagging the child as having a personal healthcare provider.

A child was categorized as CSHCN if one of five long term circumstances (greater than 12 months) was present: need for medication; above average need for medical, mental health or educational services; limitation in ability to do age-appropriate activities; need for special therapy, and/or emotional, developmental or behavioral problems. Financial access was measured by whether the child had health insurance (public, private, none) and by whether the child had insurance for dental care (yes/no).

Accuracy of the Results. Data from the NSCH are subject to the usual variability associated with sample surveys. Small differences between survey estimates may be due to random error, and these do not reflect true differences among children or across States. The precision of the survey estimates is based on the sample size and the measure of interest. Estimates at the national level will be more precise than estimates at the urban/rural level, and those for all children will be more precise than estimates for subgroups of children (for example, children 1-5 years of age or children within the same race). Any estimate that had a sample size of 5 or less has been eliminated from this report due to reliability issues. For similar reasons, all estimates based on sample sizes of 30 or less have been marked. A few states, including New Jersey, Massachusetts, and the District of Columbia, have no or an extremely small rural population and, therefore, only urban estimates have been presented for them.

*Data Limitations.* The findings presented here are based entirely on parental reports. However, the majority of questions have been tested for validity when reported by parents. In some cases, data are missing for some respondents for some questions. In addition, certain populations of children, such as those with no telephones at home or those living in an institutional setting, are excluded from the survey. Information on main outcomes in this survey was based on the reports from a parent or guardian who was most knowledgeable about the child. This may be more prone for errors than clinical assessments of children's oral health.



Availability of the Data. All data collected in the NSCH are available to the public on the NCHS (www.cdc.gov/nchs) and MCHB (www.mchb.hrsa.gov) web sites, except for data suppressed to protect the confidentiality of the survey subjects. Data documentation and additional details on the methodology are available from the NCHS: www.cdc.gov/nchs/slaits.htm. Interactive data queries are possible through the Data Resource Center on Child and Adolescent Health (DRC) for the NSCH: www.nschdata.org. The DRC provides immediate access to the survey data, as well as resources and assistance for interpreting and reporting findings.

### Locations of ADA-accredited DDS/DMD Programs (2006)

The map of dental education programs offering DDS/DMD degree programs in the United States that are currently accredited by the American Dental Association (ADA) was created from data acquired on October 3, 2006 from the following ADA website:

http://www.ada.org/prof/ed/programs/search\_ddsdmd\_us.asp .

### Dental Health Professional Shortage Area Designations & Workforce Estimates

The oral health workforce estimates and the Dental Health Professional Shortage Area designation data are drawn from the 2005 edition of the Area Resource File (ARF). The ARF, maintained by Quality Resource Systems, Inc. under contract from the Health Resources and Services Administration (HRSA), contains county-level information on health professions, training, expenditures, and facilities, as well as other relevant demographic, economic, environmental, and administrative classification data. As the Area Resource File contains data that has been collected by other governmental agencies and non-governmental organizations, specific descriptions of the initial data sources are given where applicable. Data was supplied for a total of 3,141 counties (parish or borough where applicable).



The Dental HPSA data found in the 2005 ARF comes from the Bureau of Primary Health Care (BPHC), located within HRSA. Primary Care HPSA designations are calculated using the following provider types: non-Federal doctors of medicine (M.D.) and doctors of osteopathy (D.O.) providing direct patient care in general/family practice, general internal medicine, pediatrics, and obstetrics and gynecology. Dental HPSA designations include non-federal dentists and exclude specialists in pediatric dentistry or those dentists not in general practice. For more information on the designation of Primary Care HPSAs, please visit: <a href="http://bhpr.hrsa.gov/shortage/hpsacritpcm.htm">http://bhpr.hrsa.gov/shortage/hpsacritpcm.htm</a>. For more information on the designation of the designation of 2000-2004 were used to construct the maps in this chartbook.

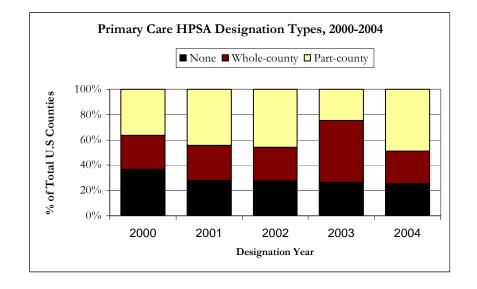
Data used to create the dental workforce map are drawn from the 2005 Area Resource File from data provided by the Survey Center of the American Dental Association, *1998 Distribution of Dentists in the United States by Region and State.* 

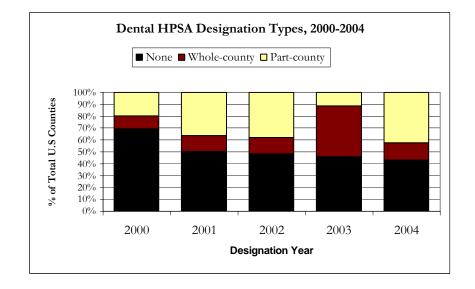
Note on 2001-2004 Health Professional Shortage Area (HPSA) Designations

When examining whole- and part-county HPSA designations from 2000-2004, a curious pattern emerges in both designation types (Dental and Primary Care): there is a general trend of increasing partcounty HPSA designation frequencies (as a percentage of all counties) across the time period analyzed, with the exception of 2003 (see following figures). When comparing the 2003 data against the other years in light of this general trend, it is conceivable that the part- and whole-county designation frequencies could have been mistakenly swapped in the source data. An alternative (but seemingly less likely) explanation could involve a major shift in designation criteria during 2003, though it could be further reasoned that such a shift would have continued during the following year, which is clearly not seen in the 2004 designation frequencies. An inquiry on this matter was made in September 2006 to the developers of the 2005 Area Resource File (Quality Resource Systems, Inc.) about this possible error. They stated they were



aware of this discrepancy and had sought out clarification from their data source (Bureau of Health Professions), but they were unable to arrive at any explanation. Because of this unresolved data issue, the authors chose to only show single-year part-county vs. whole-county Dental and Primary Care HPSA designations for the most recently available and credible year (2004). As this question of the 2003 HPSA designation data accuracy can not be answered fully in favor of either possible hypothesis, the time periodbased HPSA maps and results found here have retained the 2003 data as part of the 2001-2004 data span.







### Note on Dental Workforce Data from the 2005 Area Resource File

National dental provider estimates appearing in this work are derived from dental workforce data contained in the 2005 Area Resource File (ARF). There are two main sources of dental workforce data appearing in the ARF: the 2000 Census, and American Dental Association (ADA) surveys. For the purposes of the analyses found here, the Census-derived data was sufficiently inadequate to allow its use, due to the fact that data was only provided for 721 of 3141 U.S. Counties for the dental workforce variables. According to the documentation accompanying the 2005 ARF, this intentional omission was done for confidentiality reasons:

"In order to protect the confidentiality of respondents, County Sets were developed specifically for the Census 2000 Special EEO Tabulation. The area aggregations of two or more counties, one of which is less than 50,000 population, so that the combined total population of the County Set is 50,000 or more and no county is shown with less than 50,000 population (for further information on County Sets go to <u>www.census.gov/hhes/www/eeoindex.html</u>). Therefore, there will be data for only 721 counties on the ARF." (National Center for Health Workforce Analysis, 2005)



As the data omissions in the Census-supplied data were of a systematic nature (based on population), the use of the ADA survey data is comparatively preferred. However, there is also a caveat of which the reader must be aware concerning the ADA-supplied data. The ADA variables also contain certain omissions, though on a smaller scale than is found in the Census-supplied data. The following table lists the counts of dentists for which the precise county location could not be determined.

Non-Federal Dentists – County Location Unknown, by State									
Alabama	94	Louisiana	96	Ohio	234				
Alaska	5	Maine	11	Oklahoma	58				
Arizona	101	Maryland	171	Oregon	89				
Arkansas	40	Massachusetts	233	Pennsylvania	313				
California	990	Michigan	230	Rhode Island	12				
Colorado	79	Minnesota	120	120 South Carolina					
Connecticut	71	Mississippi	44	South Dakota	13				
Delaware	16	Missouri	77	Tennessee	131				
District of Columbia	25	Montana	10	Texas	431				
Florida	243	Nebraska	51	Utah	81				
Georgia	127	Nevada	23	Vermont	7				
Hawaii	25	New Hampshire	14	Virginia	173				
Idaho	40	New Jersey	251	Washington	151				
Illinois	262	New Mexico	23	West Virginia	33				
Indiana	124	New York	727	Wisconsin	87				
Iowa	69	North Carolina	129	Wyoming	7				
Kansas	46	North Dakota	8	Unknown	14				
Kentucky	120			State/County					

*Source:* National Center for Health Workforce Analysis. (2005). 2005 Area Resource File: Bureau of Health Professions, Health Resources and Services Administration, U.S. Department of Health and Human Services.

