Results of the 2005 Oral Health Survey of Alaskan Kindergarten Children

Alaska Oral Health Basic Screening Survey

– a visual, oral health assessment of kindergarten children from a sample of Alaska sites for oral health disease surveillance

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2005 Alaska State Oral Health Assessment: Kindergarten Children

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Alaska State Oral Health Assessment, Kindergarten 2005

Assessment description:

This assessment consisted of two parts: a consent form/questionnaire for parents/guardians to complete and a school-based clinical assessment provided by dentists operating under standardized ASTDD survey guidelines. The consents were distributed according to individual school preferences: some schools/districts placed the consents in registration packets, and some sent them home as individual paperwork or as a part of student's weekly packets. Response rates are reported separately for questionnaire results (all children who returned questionnaires), and for children who participated in both components (questionnaire and clinical screening) of the assessment. There were a small percentage of Respondents who completed questionnaires but did not want their children to have the clinical assessment (2.6%) and an additional small percentage of children who had consents returned with permission to examine but who were absent on the day of the exam (5.7%).

All analyses were performed using EpiInfo2000 software; confidence intervals for means were computed by hand using software tabulated variances.

For a sample subset (255 children), height (in inches) and weight (in pounds) information was collected to assess Body Mass Index (BMI). EpiInfo 2000 software was used to calculate BMI for age and related percentiles and Z-scores, using CDC 2000 growth chart references.

Response Tables:

For these preliminary dataset calculations, sample weights were not available. Response rates were averaged at the School level and are presented in Table 1.

Table 1.

Ratio of returned, completed questionnaires to enrolled kindergarten children at selected schools, 2005

School	Number of children in kindergarten	Number of children returning completed questionnaires	% participation
Goose Bay Elementary	69	50	72.5
Alpenglow Elementary	57	46	80.7
Chinook Elementary	70	29	41.4
Wonder Park Elementary	62	24	38.7
Academy Charter School	24	18	75.0
Meadow Lakes Elementary	66	42	63.6
Swanson Elementary	122	66	54.1
Willow Crest Elementary	62	61	98.4
Gastineau Elementary	54	35	64.8
Chief Ivan Blunka School	12	7	58.3
Togiak School	10	5	50.0
Kuinerramiut Elementary	19	19	100.0
University Park Elementary	85	66	77.6
Weller Elementary	61	37	60.7
Sample Total	**773**	**505**	**65.3**

Response rates for the questionnaire portion of the assessment ranged from 39 to 100 percent participation at selected schools.

Table 2.

Ratio of children who returned completed questionnaires and had a clinical assessment to enrolled Alaskan kindergarten children at selected schools, 2005

School	Number of children in kindergarten	Number of children returning completed questionnaires and participating in clinical assessment	% participation
Goose Bay Elementary	69	46	66.7
Alpenglow Elementary	57	44	77.2
Chinook Elementary	70	27	38.6
Wonder Park Elementary	62	21	33.9
Academy Charter School	24	16	66.7
Meadow Lakes Elementary	66	42	63.6
Swanson Elementary	122	59	48.4
Willow Crest Elementary	62	58	93.5
Gastineau Elementary	54	33	61.1
Chief Ivan Blunka School	12	7	58.3
Togiak School	10	5	50.0
Kuinerramiut Elementary	19	15	78.9
University Park Elementary	85	54	63.5
Weller Elementary	61	36	59.0
Sample Total	**773**	**463**	**59.9**

Response rates for the clinical portion of the assessment ranged from 34 to 94 percent participation at selected schools. Rates for participation at this level were lower than at the questionnaire only level due to non-consent for this portion and absenteeism on the date of assessment.

Based on a very rough extrapolation of Year 2000 Census data, this sample comprises approximately 8.3 % of Alaskan kindergarten children. After factoring in response rates, approximately 5.4% of Alaskan kindergarten children ultimately represented their cohort in this assessment.

Table 3.

Distribution of participants by screener, Alaskan kindergarten children, 2005

Screener	Number of participants	Percent of participants
BLL	7	1.4
DW	5	1.0
JDH	355	70.3
JE	35	6.9
JQL	103	20.4
Total	**505**	**100.0**

Five screeners collected data for this survey, providing between 5 and 355 exams each. One screener (JDH) provided over 70% of exams.

Demographic Variables:

Table 4.

Mean age (in months) of respondents participating in the clinical assessment by gender, Alaskan kindergarten children, 2005

Gender	Age in months (range)	Std. Deviation
Male (n=233)	74.0 (65-85)	4.17
Female (n=230)	73.3 (62-85)	3.95
Both (n=463)	**73.7 (62-85)**	**4.07**

Girls were slightly younger than boys, but this difference was not statistically significant (P-Value=0.0809). Birthdates ranged from 3-21-98 to 7-13-2000. Age was computed only for children who participated in the clinical assessment.

Table 5.

Distribution of respondents by gender, Alaskan kindergarten children, 2005

Gender	Number of respondents	Percent	95% CI
Male	250	49.5	(45.1, 54.0)
Female	255	50.5	(46.0, 54.9)
Total	**505**	**100.0**	

Respondents were evenly divided by gender.

Table 6.

Distribution of respondents by BMI-for-age percentile, Alaskan kindergarten children, 2005

BMI-for-age percentile grouping	Frequency	Percent	95% CI
Underweight (<5th percentile)	3	1.2	(0.2, 3.4)
Normal (5th - 85th percentile)	184	72.2	(66.2, 77.6)
At risk of overweight	42	16.5	(12.1, 21.6)
Overweight (> 95th percentile)	26	10.2	(6.8, 14.6)
Total	**255**	**100.0**	

About 10% of children in this sample were “overweight” (in the upper 5th percentile of CDC 2000 BMI-for-age references), with another 16% “at risk of overweight”. Very few were in the lowest 5th percentile (underweight).

Table 7.

Distribution of respondents by BMI-for-age percentile and Gender, Alaskan kindergarten children, 2005

		BMI-for-age Percentile Grouping				
Gender		**Underweight**	**Normal**	**At Risk of Overweight**	**Overweight**	**Total**
Male	n	2	80	29	15	126
	row%	**1.6**	**63.5**	**23.0**	**11.9**	**100.0**
	col%	66.7	43.5	69.0	57.7	49.4
Female	n	1	104	13	11	129
	row%	**0.8**	**80.6**	**10.1**	**8.5**	**100.0**
	col%	33.3	56.5	31.0	42.3	50.6
	n	3	184	42	26	255
Total	**row%**	**1.2**	**72.2**	**16.5**	**10.2**	100.0
	col%	100.0	100.0	100.0	100.0	100.0

Very few children sampled were considered “underweight”; these cells are very small.

There were significant differences in BMI-for-age percentile groupings and gender (Chi-squared = 10.1405, 3 df, P=0.0174): Boys were more likely to be overweight and at risk of being overweight than girls. If underweight children are removed from analysis, the results remain significant (Chi-squared = 9.7800, 2 df, P=0.0075)

Figure 1

BMI for age, Alaskan kindergarten girls, 2005

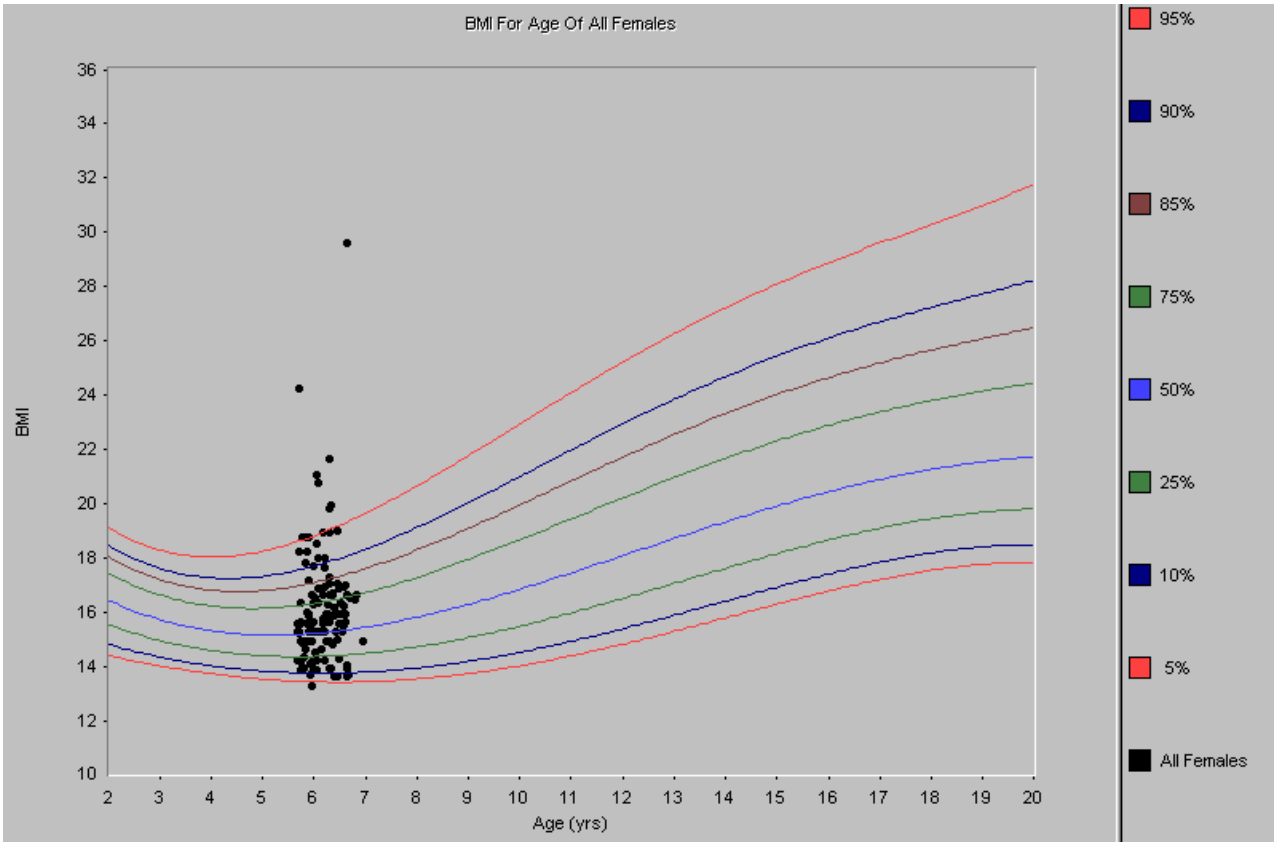

Figure 1 shows the sample distribution by percentile of BMI for age in girls.

Figure 2.

BMI for age, Alaskan kindergarten boys, 2005

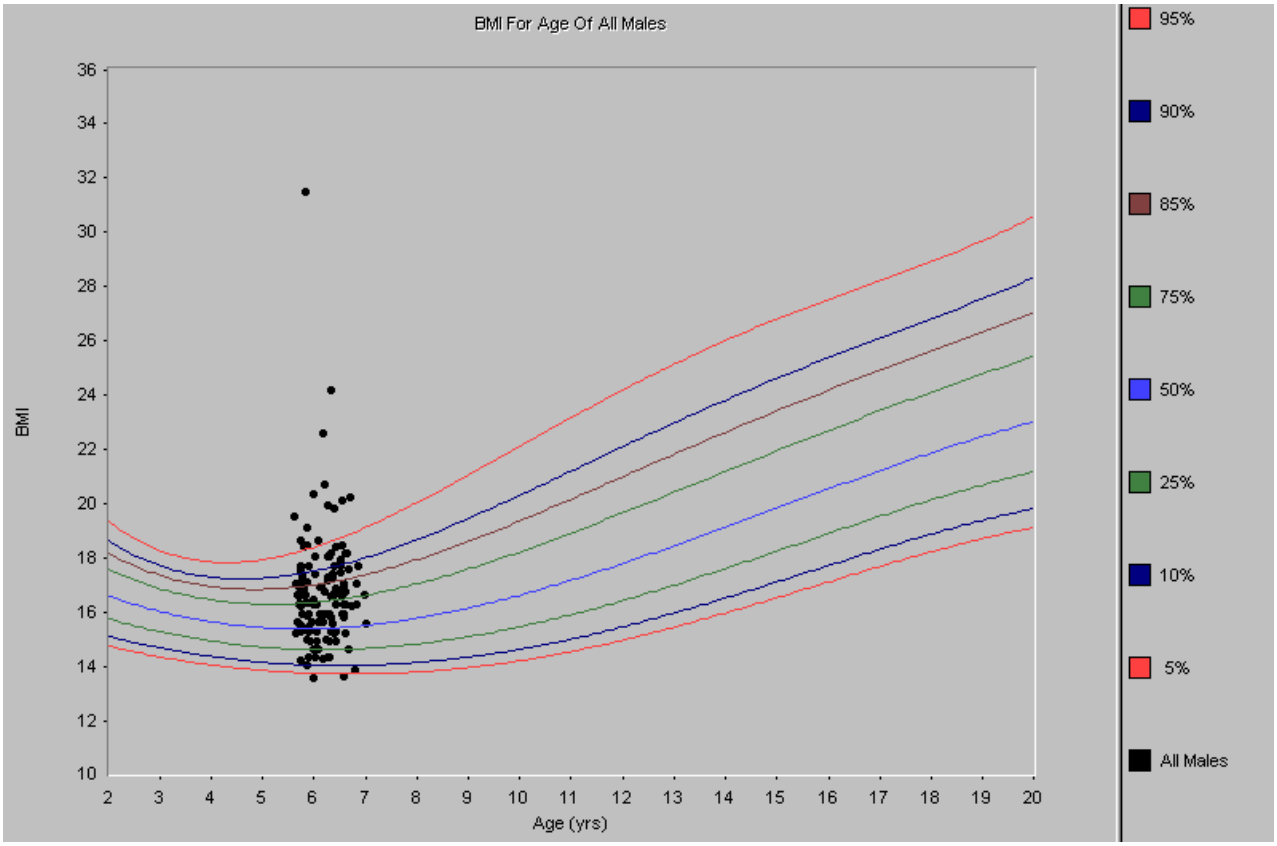

Figure 2 shows the sample distribution by percentile of BMI for age in boys.

Table 8.

Distribution of respondents by race/ethnicity as reported by parent/guardian, Alaskan kindergarten children, 2005

Race/Ethnicity	Code	Number of respondents	Percent of respondents
White	1	288	57.0
Black/African American	2	8	1.6
Hispanic/Latino	3	10	2.0
Asian	4	21	4.2
American Indian/Alaskan Native	5	79	15.6
Native Hawaiian/Pacific Islander	6	6	1.2
Multi-Racial	7	41	8.1
Unknown	9	2	0.4
Blank		50	9.9
Total		**505**	**100.0**

Of the two children scored as “unknown” by their parent/guardian, one classified as “Black/African American”, and the other as “unknown” by the examining dentist. Of the 50 children for whom Race/Ethnicity was not scored by their parent/guardian, 46 were present and had consent for a clinical exam. The examining dentist classified 26 as “white”, one as “Black/African American”, five as “Hispanic/Latino”, one as “Asian”, twelve as “multiracial”, and one as “unknown”.

Table 9.

Revised distribution of respondents by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	Code	Number of respondents	Percent of respondents	95% CI
White	1	314	62.2	(57.8, 66.4)
Black/African American	2	10	2.0	(1.0, 3.7)
Hispanic/Latino	3	15	3.0	(1.7, 5.0)
Asian	4	22	4.4	(2.8, 6.6)
American Indian/Alaskan Native	5	79	15.6	(12.6, 19.2)
Native Hawaiian/Pacific Islander	6	6	1.2	(0.5, 2.7)
Multi-Racial	7	53	10.5	(8.0, 13.6)
Unknown	9 or 99	6	1.2	(0.5, 2.7)
Total		**505**	**100.0**	

This table shows the composite determination of Race/Ethnicity of respondents. If the parent/guardian coded "unknown" or left the coding response blank, the screener was asked to make a Race/Ethnicity judgment by observation or in conjunction with school personnel. This observation was coded separately from that coded by the parent/guardian. When the parental response was "unknown" or blank, the screener's response, when available, was used to revise the categorization of the child. This table shows these recodes, which were used for subsequent analyses.

Table 10.

"Collapsed" distribution of respondents by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	Code	Number of respondents	Percent of respondents	95% CI
White	1	314	62.2	(57.8, 66.4)
American Indian/Alaskan Native	5	79	15.6	(12.6, 19.2)
All others: Black/African American, Hispanic/Latino, Asian, Native Hawaiian/Pacific Islander, Multi-Racial, Unknown	2 3 4 6 7 9,99	112	22.2	(18.7, 26.1)
Total		**505**	**100.0**	

For some analyses, the sample size across the listed choices for Race/Ethnicity was small or non-existent, precluding valid analysis. For these analyses, the groupings were collapsed per the table above, leaving Race/Ethnicity categories of "White", "American Indian/Alaskan Native", and "All Others".

Questionnaire Variables:

Table 11.

Survey respondents reporting tooth pain, Alaskan kindergarten children, 2005

Question 1: During the past 6 months did your child have a toothache more than once when biting or chewing?

Response	Number responding	Percent responding	95% CI
Yes	52	10.3	(79,13.4)
No	405	80.2	(76.4, 83.5)
Don't Know	26	5.1	
(Blank)	22	4.4	
Total	**505**	**100.0**	

About 10% of respondents reported that their child had a toothache more than once in the past 6 months.

Table 12.

Length of time since last reported dental visit, Alaskan kindergarten children, 2005

Question 2: About how long has it been since your child last visited a dentist? (Include all types of dentists such as orthodontists and oral surgeons as well as dental hygienists.) (Please check only one.)

Response	Number responding	Percent responding	95% CI
6 months or less	232	45.9	(41.5, 50.4)
More than 6 months, but not more than 1 year	117	23.2	(19.6, 27.1)
More than 1 year, but not more than 3 years ago	77	15.2	(12.3, 18.8)
More than 3 years ago	6	1.2	(0.5, 2.7)
Never has been to the dentist	44	8.7	(6.5, 11.6)
Don't know/don't remember	5	1.0	
(Blank)	24	4.8	
Total	**505**	**100**	

Slightly less than 70% of respondents reported that their child's last dental visit was within the past year, with most of these children visiting a dentist within the past 6 months. Almost ten percent of parents responded that their child had never been to a dentist.

Table 13.

Main reason for last dental visit, Alaskan kindergarten children, 2005

Question 3. What was the main reason that your child last visited a dentist? (Please check only one.)

Response	Number responding	Percent responding	95% CI
Something was wrong, bothering or hurting	38	7.5	(5.4, 10.3)
Went for treatment of a condition that dentist discovered at earlier check-up or examination	48	9.5	(7.2, 12.5)
Went in on own for check-up, exam or cleaning	300	59.4	(55.0, 63.7)
Was called in by dentist for check-up, exam or cleaning	41	8.1	(6.0, 10.9)
Other	3	0.6	
Don't know	8	1.6	
(Blank)	67	13.3	
Total	**505**	**100**	

Less than 10% of respondents reported that their child's last dental visit was due to pain or discomfort. Nearly 70% went in for examination or cleaning, and about 10% went in for some type of dental treatment that was previously noted by their dentist. "Other" responses were re-coded as a listed response if comments indicated a logical choice was available (i.e. "abscess" was recoded as "Something was wrong, bothering, or hurting."). Only one response was recoded.

Table 14.

Respondents with medical insurance, Alaskan kindergarten children, 2005

Question 4. Do you have any kind of insurance that pays for some or all of your child's Medical or surgical care? Include health insurance obtained through employment or purchased directly as well as government programs like Denali KidCare/Medicaid. (Please check only one.)

Response	Number responding	Percent responding	95% CI
Yes	417	82.6	(78.9, 85.7)
No	60	11.9	(9.3, 15.1)
Don't Know	3	0.6	
(Blank)	25	5.0	
Total	**505**	**100.0**	

Almost 83% of respondents reported that they had some type of medical/surgical insurance.

Table 15.

Inability to obtain dental care in past 12 months, Alaskan kindergarten children, 2005

Question 5. During the past 12 months, was there a time when your child needed dental care but could not get it at that time?

Response	Number Responding	Percent Responding	95% CI
Yes	47	9.3	(7.0, 12.3)
No	417	82.6	(78.9, 85.7)
Don't Know	13	2.6	
(Blank)	28	5.5	
Total	**505**	**100.0**	

Forty-seven parents (9%) reported having difficulty in obtaining needed dental care for their child in the past 12 months.

Table 16.

Main reason for parent's inability to get dental care for their child, Alaskan kindergarten children, 2005 (among those who could not get care)

Question 5 subset: What was the main reason the child couldn't get care? (Please check only one.)

Response	Number responding	Percent responding	95% CI
Dentist did not accept Denali KidCare/Medicaid Insurance	5	10.6	(3.5, 23.1)
No dentist available	3	6.4	(1.3, 17.5)
No way to get there	1	2.1	(0.1 , 11.3)
Difficulty in getting appointment	12	25.5	(13.9, 40.3)
Not serious enough	5	10.6	(3.5, 23.1)
Don't like/trust/believe in dentists	1	2.1	(0.1, 11.3)
Could not afford	19	40.4	(26.4, 55.7)
Other reason	1	2.1	(0.1, 11.3)
Total	**47**	**100.0**	

Of those parent's whose children needed care but could not get it, the most frequent reasons given were that they could not afford care (40%) or had difficulty in getting an appointment (25%).

Table 17.

Respondents with dental insurance, Alaskan kindergarten children, 2005

Question 6. Do you have any kind of insurance that pays for some or all of your child's dental care? (Check only one.)

Response	Number responding	Percent responding	95% CI
Yes	399	79.0	(75.1, 82.4)
No	69	13.7	(10.9, 17.0)
Don't Know	7	1.4	
(Blank)	30	5.9	
Total	**505**	**100.0**	

Almost 80% of respondents reported having some type of dental insurance.

Table 18.

Type of dental insurance coverage carried by respondents, Alaskan kindergarten children, 2005

Question 6 subset. What kind of dental insurance? (Check all that apply)

Response	Number responding	Percent responding	95% CI
Commercial (provided by employer)	160	40.1	(35.3, 45.1)
Private (you bought yourself)	10	2.5	(1.3, 4.7)
Denali KidCare/Medicaid	155	38.8	(34.1, 43.8)
IHS/Native health corporation	26	6.5	(4.4, 9.5)
Military/Tricare (Champus)	32	8.0	(5.6, 11.2)
Don't Know	34	8.5	
Multiple types of insurance selected	20	5.0	(3.2, 7.8)
At least one type of insurance selected	341	85.5	(81.6. 88.8)

Of those covered by some type of dental insurance, most (40%) reported having insurance through their employer. Nearly 40% reported coverage by Denali KidCare or Medicaid. About five percent of children seemed to be covered by more than one type of policy.

Screening Variables:

Parental consent was obtained to examine 492 of the 505 children who returned surveys. Of these, 29 children were absent on the day of exam. 463 (91.7%) of children with returned surveys were examined by a dentist at their school, using a mouth mirror and flashlight. Children were scored for the presence of untreated dental carious lesions, dental caries experience, dental caries experience on primary maxillary anterior teeth, treatment urgency, and the number of quadrants needing treatment for dental caries. Only children who had parental consent, were present, and gave consent for an exam (n=463) were included in clinical response tabulations.

Assessments were performed between 1/19/2005 and 10/6/2005.

Frequencies of Screening Variables:

Table 19.

Untreated dental caries, Alaskan kindergarten children, 2005

Untreated Dental Caries	Number of participants	Percent of participants	95% CI
Yes	114	24.6	(20.8, 28.9)
No	349	75.4	(71.1, 79.2)
Total	**463**	**100.0**	

Almost 25% of children examined had cavitated carious lesions.

Table 20.

Dental caries experience, Alaskan kindergarten children, 2005

Dental Caries Experience	Number of participants	Percent of participants	95% CI
Yes	223	48.2	(43.5, 52.8)
No	240	51.8	(47.2, 56.5)
Total	**463**	**100.0**	

Of children examined, slightly less than half had dental caries experience.

Table 21.

Dental caries experience on primary anterior teeth, Alaskan kindergarten children, 2005

Dental Caries Experience on Primary Anterior Teeth	Number of participants	Percent of participants	95% CI
Yes	65	14.0	(11.1, 17.6)
No	392	84.7	(81.0, 87.8)
Not scored	6	1.3	
Total	**463**	**100.0**	

Fourteen percent of children had a history of dental caries on their primary anterior teeth. A few children were not scored for this variable by their examiner.

Table 22.

Urgency of dental treatment needs, Alaskan kindergarten children, 2005

Urgency of Treatment Need	Number of participants	Percent of participants	95% CI
No obvious problem	345	74.5	(70.2, 78.4)
Early dental care (within weeks)	112	24.2	(20.4, 28.4)
Urgent care (within 24 hours)	6	1.3	(0.5, 2.9)
Total	**463**	**100.0**	

Most children (75%) had no obvious treatment needs, about 24% needed routine care, and 1% needed urgent care.

Table 23.

Number of quadrants needing treatment, Alaskan kindergarten children, 2005

Number of Quadrants Needing Treatment	Number of participants	Percent of participants	95% CI
0	347	74.9	(70.7, 78.8)
1	44	9.5	(7.1, 12.6)
2	34	7.3	(5.2, 10.2)
3	21	4.5	(2.9, 7.0)
4	17	3.7	(2.2, 5.9)
Total	**463**	**100.0**	

Only a few children (4%) needed care in all quadrants. Most who needed quadrant-level care had two or less quadrants in need (17%). Nearly three quarters of those children examined needed no treatment for dental caries.

Differences by Gender

There were no variables that revealed statistical differences in results stratified by gender; variables analyzed are listed in the table below. For both questionnaire and clinical variables, only records with meaningful responses were tabulated (all "unknown" and "blank" responses were ignored when appropriate). This yields varying numbers of records for different variables, as respondents were not required to answer all questions. Males occupied the default table position. P-values (Chi-square) are presented for multi-level variables and Odds Ratios (OR) with 95% Confidence Intervals for two-level variables. ANOVA tests for population means were used for continuous variables.

Table 24.

Variables with insignificant differences between results when compared by gender, Alaskan kindergarten children, 2005

Variable*	P-Value	OR (95% CI)
Age (mean age in months)	0.0809	
Race/Ethnicity	0.1438	
Race/Ethnicity (grouped variable)	0.4497	
Respondents reporting tooth pain		0.84 (0.47, 1.50)
Length of time since last reported dental visit	0.5417	
Main reason for last dental visit	0.7508	
Respondents with medical insurance		1.03 (0.60, 1.78)
Inability to get dental care in past 12 months		0.54 (0.29, 1.01)
Proportion of Respondents with dental insurance		0.91 (0.55, 1.52)
Proportion of Respondents with commercial dental insurance		1.26 (0.85, 1.89)
Proportion of Respondents with private dental insurance		1.62 (0.45, 5.83)
Proportion of Respondents with Denali KidCare/Medicaid		1.14 (0.76, 1.70)
Proportion of Respondents with IHS/Native Health Corporation coverage		0.65 (0.29, 1.47)
Proportion of Respondents with Military/Tricare (Champus) coverage		0.62 (0.29, 1.30)
Untreated dental caries		0.98 (0.64, 1.50)
Dental caries experience		1.31 (0.91, 1.89)
Dental caries experience on primary anterior teeth		0.77 (0.45, 1.30)
Treatment urgency ("0" vs. "1 and 2" combined)*		0.98 (0.65, 1.50)
Number of quadrants needing treatment (categorically analyzed)	0.9637	

The following variables could not be assessed with validity due to small sample size:

Main reason for parent's inability to get care for child (n=47, nine categories of responses)

Treatment urgency (Small cell sizes for children classified and needing care within 24 hours: this variable was assessed by comparing children needing any care with those with no obvious problems. It should be noted however, that all six children needing urgent care were male.)

Alaska State Oral Health Assessment, 2005 Preliminary Data, Kindergarten

Response Differences by Race/Ethnicity

The revised Race/Ethnicity variable described in Table 9 was used for these analyses whenever possible; if cell sizes became too small to evaluate every racial/ethnic category, the "collapsed" Race/Ethnicity variable described in Table 10 was used.

Individual tables are not reported for variables that revealed no statistical differences in results when compared by Race/Ethnicity. These variables are listed in Table 25. For both questionnaire and clinical variables, only records with meaningful responses were tabulated (all "unknown" and "blank" responses were ignored). This yields varying numbers of records for different variables, as respondents were not required to answer all questions.

Table 25.

Variables with insignificant differences between results when compared by race/ethnicity, Alaskan kindergarten children, 2005

Variable*	P-Value
Respondents reporting tooth pain[1]	0.0858
Length of time since last reported dental visit[1,2]	0.2497
Inability to obtain dental care in past 12 months[1]	0.4438
Proportion of Respondents with dental insurance[1]	0.8353
Proportion of Respondents with private dental insurance[1,3,4]	0.1788[3]
Proportion of Respondents with "Military/Tricare (Champus)" dental insurance[1,4]	0.0755

*Unless otherwise noted, all respondent records were assessed.

[1] Grouped Race/Ethnicity variable used due to small cell sizes.
[2] Responses "More than 3 years ago" and "Never has been to the dentist" were combined due to small cell sizes
[3] Very few respondents (10) reported having private dental insurance, and cell sizes fell to 0 and 1 in some categories, precluding valid assumptions.
[4] Only respondents who indicated that they had dental insurance were assessed.

There were too few respondents (167) reporting on Question 5b, reasons for the inability to obtain care (eight choices), to make assessments by Race/Ethnicity meaningful, even when using the grouped Race/Ethnicity variable.

Table 26.

Reason for last dental visit by race/ethnicity, Alaskan kindergarten children, 2005

		Reason for last dental visit				
Race		**Something was wrong**	**Went for treatment**	**Went on own for exam**	**Was called in for exam**	**Total**
White	n	16	27	205	23	271
	row %	**5.9**	**10.0**	**75.6**	**8.5**	**100.0**
	col%	42.1	56.3	68.3	56.1	63.5
American Indian/Alaskan Native	n	13	12	35	8	68
	row %	**19.1**	**17.6**	**51.5**	**11.8**	**100.0**
	col%	34.2	25.0	11.7	19.5	15.9
All others	n	9	9	60	10	88
	row %	**10.2**	**10.2**	**68.2**	**11.4**	**100.0**
	col%	23.7	18.8	20.0	24.4	20.6
All Races	n	38	48	300	41	427
	row %	**8.9**	**11.2**	**70.3**	**9.6**	**100.0**
	col%	100.0	100.0	100	100.0	100.0

There were significant differences in the reason reported for the last dental visit between Race/Ethnicity groupings (Chi-squared = 19.3977, 6 df, P=0.0035). Children classified as “White” were less likely to report that their last visit was because “Something was wrong, bothering or hurting” than children in other race/ethnicity categories. A larger proportion of children that were classified as “American Indian/Alaskan Native” (over17%) reported that their last visit was for some type of treatment than “Whites” (10%) or “Others” (10.2%).

Table 27.

Respondents with medical insurance by race/ethnicity, Alaskan kindergarten children, 2005

		Medical Insurance		
Race		**Yes**	**No**	**Total**
White	n	271	30	301
	row%	**90.0**	**10.0**	**100.0**
	col%	65.0	50.0	63.1
American Indian/Alaskan Native	n	60	16	76
	row%	**78.9**	**21.1**	**100.0**
	col%	14.4	26.7	15.9
All others	n	86	14	100
	row%	**86.0**	**14.0**	**100.0**
	col%	20.6	23.3	21.0
All Races	n	417	60	477
	row%	**87.4**	**12.6**	**100.0**
	col%	100.0	100.0	100.0

American Indian/Alaskan Natives were less likely to report having some type of medical insurance than others (Chi-squared = 7.0140, 2 df, P=0.0300).

Table 28.

Proportion of respondents with "commercial" dental insurance by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	N	Proportion of respondents who have "commercial" dental insurance	95% CI
White	251	.478	(.415, .542)
American Indian/Alaskan Native	65	.138	(.065, .247)
All Others	83	.373	(.270, .487)
All respondents	**399**	**.401**	**(.353, .451)**

A smaller proportion of "American Indian/Alaskan Natives" reported having commercial dental insurance than those in other groupings or Alaskan Kindergarten children as a whole.

Table 29.

Proportion of respondents with Denali KidCare/Medicaid dental coverage by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	N	Proportion of respondents who have "Denali KidCare/Medicaid" dental coverage	95% CI
White	251	.307	(.250, .368)
American Indian/Alaskan Native	65	.615	(.486, .733)
All Others	83	.458	(.348, .571)
All respondents	**399**	**.388**	**(.341, .438)**

A higher proportion of respondents classified as "American Indian/Alaskan Native" had Denali KidCare/Medicaid coverage than children classified as "White".

Table 30.

Proportion of respondents with IHS/Native Health Corporation dental coverage by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	n	Proportion of respondents who have IHS/Native Health Corporation dental coverage	95% CI
White	251	.008	(.001, .028)
American Indian/Alaskan Native	65	.262	(.160, .385)
All Others	83	.084	(.035, .166)
All respondents	**399**	**.065**	**(.044, .095)**

As in other reports, less than one-third of American Indian/Alaskan Native respondents indicate that they have IHS/Native Health Corporation coverage, although all are eligible. These respondents may not consider IHS coverage to be "insurance", or they may not utilize these services.

Table 31.

Proportion of Participants with untreated dental caries by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	n	Proportion of participants who have untreated dental caries	95% CI
White	295	.200	(.156, .250)
American Indian/Alaskan Native	70	.371	(.259, .495)
All others	98	.296	(.208, .397)
All respondents	**463**	**.246**	**(.208, .289)**

A higher proportion of "American Indian/Alaska Native" kindergartners had untreated dental caries than those classified as "White", but were not statistically different than those classified as "All Others".

Table 32.

Proportion of participants with dental caries experience by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	n	Proportion of participants who have dental caries experience	95% CI
White	295	.376	(.321, .434)
American Indian/Alaskan Native	70	.757	(.640, .852)
All Others	98	.602	(.498, .700)
All respondents	**463**	**.482**	**(.435, .528)**

A lower proportion of "Whites" (38%) had dental caries experience than participating children in Alaska as a whole. A higher proportion of "American Indian/Alaskan Natives" (76%) had dental caries experience than Alaskan children as a whole and those classified as "White". A larger proportion of those classified as "All Others" had dental caries experience when compared to those classified as "White", but were not statistically different than those classified as "American Indian/Alaskan Native".

Table 33.

Proportion of participants with dental caries experience on primary anterior teeth by race/ethnicity, Alaskan Kindergarten Children 2005

Race/Ethnicity	N	Proportion of participants who have dental caries experience on primary anterior teeth	95% CI
White	295	.102	(.070, .142)
American Indian/Alaskan Native	64	.281	(.176, .408)
All Others	98	.173	(.104, .263)
All respondents	**457**	**.142**	**(.112, .178)**

A higher proportion of "American Indian/Alaskan Native" children (28%) had dental caries experience on primary anterior teeth than those classified as "White".

Table 34.

Treatment urgency by race/ethnicity, Alaskan kindergarten children, 2005

		Treatment Urgency		
Race		**No obvious problem**	**Early dental care or urgent care**	**Total**
White	n	236	59	295
	row%	**80.0**	**20.0**	**100.0**
	col%	68.4	50.0	63.7
American Indian/Alaskan Native	n	41	29	70
	row%	**58.6**	**41.4**	**100.0**
	col%	11.9	24.6	15.1
All others	n	68	30	98
	row%	**69.4**	**30.6**	**100.0**
	col%	19.7	25.4	21.2
All Races	n	345	118	463
	row%	**74.5**	**25.5**	**100.0**
	col%	100.0	100.0	100.0

There was insufficient cell size to assess even the combined race/ethnicity groupings in all categories of treatment urgency; those needing urgent care were combined with those needing early dental care.

That done, there were significant differences in treatment urgency between Race/Ethnicity groupings (Chi-squared = 15.3998, 2 df, P=0.0005). Children classified as “American Indian/Alaskan Native” were more likely to have treatment needs than others.

Table 35.

Proportion of participants needing treatment by race/ethnicity, Alaskan Kindergarten Children 2005

Race/Ethnicity	N	Proportion of participants needing treatment	95% CI
White	295	.200	(.156, .250)
American Indian/Alaskan Native	70	.414	(.298, .538)
All Others	98	.306	(.217, .407)
All respondents	**463**	**.255**	**(.216, .298)**

This is an alternative presentation to the data presented in Table 34, since with the collapse of the "urgency" groupings this can be presented as the proportion of participants needing treatment.

A significantly larger proportion of "American Indian/Alaskan Native" children needed some type of dental treatment than those classified as "White" or than all Alaskan Kindergartners as a whole.

Table 36.

Number of quadrants needing treatment by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity		0	1	2	3	4	Total
White	n	236	22	18	13	6	295
	row%	**80.0**	**7.5**	**6.1**	**4.4**	**2.0**	**100.0**
	col%	68.0	50.0	52.9	61.9	35.3	63.7
American Indian/Alaskan Native	n	43	12	8	4	3	70
	row%	**61.4**	**17.1**	**11.4**	**5.7**	**4.3**	**100.0**
	col%	12.4	27.3	23.5	19.0	17.6	15.1
All others	n	68	10	8	4	8	98
	row%	**69.4**	**10.2**	**8.2**	**4.1**	**8.2**	**100.0**
	col%	19.6	22.7	23.5	19.0	47.1	21.2
	n	347	44	34	21	17	463
All participants	**row%**	**74.9**	**9.5**	**7.3**	**4.5**	**3.7**	100.0
	col%	100.0	100.0	100.0	100.0	100.0	100.0

The “grouped” Race/Ethnicity variable was again used because there was insufficient cell size in the more distributed variable; and, in fact, cell sizes are still small: they are presented anyway since none were non-existent. This table should be used cautiously.

There were significant differences in the number of quadrants requiring treatment by Race/Ethnicity (Chi-squared = 18.9459, 8 df, P=0.0152).

Eighty percent of children classified as “White” needed no quadrant-level treatment, compared to 61% of “American Indian/Alaskan Natives” and 69% of “All Others”, and they had fewer treatment needs at almost every level of quadrants needing care.

Table 37.

Mean Score for number of quadrants needing treatment by race/ethnicity, Alaskan kindergarten children, 2005

Race/Ethnicity	n	Mean score for number of quadrants needing treatment	Variance	95% CI
"White"	295	0.4102	0.8754	(.0.3034, 0.5170)
"American Indian/Alaskan Native"	70	0.7429	1.2952	(0.4763, 1.0095)
"All Others"	98	0.7143	1.6082	(0.4632, 0.9654)
All participants	**463**	**0.5248**	**1.114**	**(0.4288, 0.6208)**

Means are NOT normally distributed; values are placed and compared here for informational/visualization purposes only. This table highlights Table 36, with "White" children requiring treatment for fewer quadrants than children in other Race/Ethnicity groupings. Although the differences in mean numbers of quadrants needing treatment are not statistically different between the Race/Ethnicity groupings, they are suggestive, and might have become so if the sample had been larger.

Alaska State Oral Health Assessment, 2005 Kindergarten Preliminary Data

Response Differences by Dental Insurance Status

Individual tables are not reported for variables that revealed no statistical differences in results when compared by dental insurance status. These variables are listed in Table 38. For both questionnaire and clinical variables, only records with meaningful responses were tabulated (all "unknown" and "blank" responses were ignored). This yields varying numbers of records for different variables, as respondents were not required to answer all questions. P-values (Chi-square) are presented for multi-level variables and Odds Ratios (OR) with 95% Confidence Intervals for two-level variables. Insurance = "Yes" was placed in the default table position.

Table 38.

Variables with insignificant differences between results when compared by dental insurance status, Alaskan kindergarten children, 2005

Variable*	P-Value	OR (95% CI)
Age (in months)	0.1457	
Race/Ethnicity[1]	0.8353	
Tooth pain[1]		1.53 (0.58, 4.03)
Inability to obtain needed care in past 12 months[1]		0.59 (0.29, 1.26)
Untreated Dental Caries[1]		0.93 (0.50, 1.71)
Dental Caries Experience[1]		0.84 (0.50, 1.42)
Dental Caries Experience on maxillary[1] primary anterior teeth		0.58 (0.29, 1.15)
Treatment Urgency[1,2]		0.88 (0.48, 1.61)
Number of quadrants needing treatment	0.1233	

*Unless otherwise noted, all respondent records were assessed.

[1] Grouped Race/Ethnicity variable used due to small cell sizes
[2] Urgency categories "early dental care" and "urgent care" were combined due to small sample size

There were too few respondents (46) reporting on Question 5b, reasons for the inability to obtain care (eight choices), to make assessments by dental insurance status meaningful.

Table 39.

Length of Time since Last Dental Visit by Dental Insurance Status, Alaskan Kindergarten Children 2005

		Length of Time since last dental visit				
Dental Insurance Status		**6 months or less**	**6 months to 1 year**	**1-3 years**	**> 3years or never has been to dentist**	**Total**
"Yes"	n	205	98	57	34	394
	row %	**52.0**	**24.9**	**14.5**	**8.6**	**100.0**
	col %	89.9	86.7	77.0	70.8	85.1
"No"	n	23	15	17	14	69
	row %	**33.3**	**21.7**	**24.6**	**20.3**	**100.0**
	col %	10.1	13.3	23.0	29.2	14.9
All	n	228	113	74	48	463
	row %	**49.2**	**24.4**	**16.0**	**10.4**	**100.0**
	col %	100.0	100.0	100.0	100.0	100.0

Due to small cell sizes, responses for "More than 3 years ago" and "Never has been to the dentist" were combined.

There were significant differences in the length of time since the last dental visit by insurance status (Chi-squared = 15.9056, 3 df, P=0.001). Children with dental insurance coverage were more apt to have had a dental visit within the past 6 months than children without insurance, and less likely to have had their last visit more than one year previously.

Table 40.

Reason for last dental visit by dental insurance status, Alaskan kindergarten children, 2005

		Reason for last dental visit				
Insurance		**Something was wrong**	**Went for treatment**	**Went on own for exam**	**Was called in for exam**	**Total**
"Yes"	n	27	38	261	37	363
	row%	**7.4**	**10.5**	**71.9**	**10.2**	**100.0**
	col%	73.0	82.6	88.8	90.2	86.8
"No"	n	10	8	33	4	55
	row%	**18.2**	**14.5**	**60.0**	**7.3**	**100.0**
	col%	27.0	17.4	11.2	9.8	13.2
Total	n	37	46	294	41	418
	row%	**8.9**	**11.0**	**70.3**	**9.8**	**100.0**
	col%	100.0	100.0	100	100.0	100.0

There were significant differences in the reason reported for the last dental visit between Insurance status groupings (Chi-squared = 8.3270, 3 df, P=0.0397). Children who had dental insurance were less likely to report that their last visit was because "Something was wrong, bothering or hurting" and more likely to have gone in on their own for an exam than children without insurance.

Table 41.

Medical/Surgical Insurance by Dental Insurance Status, Alaskan kindergarten children, 2005

		Medical Insurance Status		
Dental Insurance Status		**"Yes"**	**"No"**	**Total**
	n	385	12	397
"Yes"	**row%**	**97.0**	**3.0**	**100.0**
	col%	94.6	20.3	85.2
	n	22	47	69
"No"	**row%**	**31.9**	**68.1**	**100.0**
	col%	5.4	79.7	14.8
	n	4.7	59	466
Total	**row%**	**87.3**	**12.7**	**100.0**
	col%	100.0	100.0	100.0

Children who had dental insurance were far, far more likely to have medical/surgical insurance coverage (OR=68.5, (31.9, 147.4)) than children without dental insurance.

Alaska State Oral Health Assessment, 2005 Kindergarten Data Differences by Clinical Variables:

Untreated Dental Caries

Individual tables are not reported for variables that revealed no statistical differences in results when compared by untreated dental caries status. These variables are listed in Table 42. For both questionnaire and clinical variables, only records with meaningful responses were tabulated (all "unknown" and "blank" responses were ignored). This yields varying numbers of records for different variables, as respondents were not required to answer all questions. P-values (Chi-square) are presented for multi-level variables and Odds Ratios (OR) with 95% Confidence Intervals for two-level variables. ANOVA tests for population means were used for continuous variables.

Table 42.

Variables with insignificant differences between results when compared by the presence/absence of untreated dental caries, Alaskan kindergarten children, 2005

Variable*	P-Value	OR (95% CI)
Age (mean age in months)	0.4847	
Respondents with medical insurance		0.62 (0.34, 1.13)
Proportion of Respondents with dental insurance		0.93 (0.50, 1.71)
Proportion of Respondents with commercial dental insurance[1]		0.66 (0.39, 1.10)
Proportion of Respondents with private dental insurance[1]		0.94 (0.19, 4.63)
Proportion of Respondents with IHS/Native Health Corporation coverage[1]		0.45 (0.13, 1.56)

[1] Of those children with dental insurance

There were too few respondents (41) reporting on Question 5b, reasons for the inability to obtain care (eight choices), to make assessments by Untreated Dental Caries status meaningful.

When comparing respondents with "Military/Tricare (Champus)" dental insurance cell size became too small to adequately assess this relationship.

Table 43.

Respondents reporting tooth pain and untreated dental caries status, Alaskan kindergarten children, 2005

Untreated Dental Caries Status		Child reported toothache >1 time in past 6 months		Total
		"Yes"	"No"	
Untreated Dental Caries	n	21	73	94
	row%	**22.3**	**77.7**	**100.0**
	col%	48.8	19.5	22.5
No Untreated Dental Caries	n	22	302	324
	row%	**6.8**	**93.2**	**100.0**
	col%	51.2	80.5	77.5
Total	n	43	375	418
	row%	**10.3**	**89.7**	**100.0**
	col%	100.0	100.0	100.0

Children who had untreated dental caries were almost four times as likely to have reported tooth pain more than once in the past 6 months as children with no untreated dental caries (OR=3.95, 95% confidence interval 2.06, 7.57).

Table 44.

Length of time since last dental visit by untreated dental caries status, Alaskan Kindergarten Children 2005

		Length of Time since last dental visit				
Untreated Dental Caries Status		**6 months or less**	**6 months to 1 year**	**1-3 years**	**> 3years or never has been to dentist**	**Total**
Untreated Dental Caries	n	37	26	23	16	102
	row %	**36.3**	**25.5**	**22.5**	**15.7**	**100.0**
	col%	18.0	23.2	31.5	35.6	23.4
No Untreated Dental Caries	n	169	86	50	29	334
	row %	**50.6**	**25.7**	**15.0**	**8.7**	**100.0**
	col%	82.0	76.8	68.5	64.4	76.6
All	n	206	112	73	45	436
	row %	**47.2**	**25.7**	**16.7**	**103**	**100.0**
	col%	100.0	100.0	100.0	100.0	100.0

Due to small cell sizes, responses for “More than 3 years ago” and “Never has been to the dentist” were combined.

There were significant differences in the length of time since the last dental visit by Insurance Status (Chi-squared = 9.7895, 3 df, P=0.0204). Children with untreated dental caries were less apt to have had a dental visit within the past 6 months than children without untreated caries, and more likely to have had their last visit more than one year previously.

Table 45.

Reason for last dental visit and untreated dental caries status, Alaskan kindergarten children, 2005

Untreated Dental Caries Status		Reason for Last Dental Visit				Total
		Something was wrong	Went for routine treatment	Went on own for exam	Called in for exam	
Untreated Dental Caries	n	15	13	48	7	83
	row%	**18.1**	**15.7**	**57.8**	**8.4**	**100.0**
	col%	46.9	30.2	17.3	17.5	21.2
No Untreated Dental Caries	n	17	30	229	33	309
	row%	**5.5**	**9.7**	**74.1**	**10.7**	**100.0**
	col%	53.1	69.8	82.7	82.5	78.8
Total	n	32	43	277	40	392
	row%	**8.2**	**11.0**	**70.7**	**10.2**	**100.0**
	col%	100.0	100.0	100.0	100.0	100.0

There were significant differences in the reason for the last reported dental visit and untreated dental caries status (Chi-squared = 17.5562, 3 df, P=0.0005). A greater proportion of children with no untreated caries had their last visit for an exam that they (or their parent/guardian) had initiated than children who had untreated caries. A greater proportion of children with untreated dental caries had their last visit because "Something was wrong".

Table 46.

Inability to obtain needed dental care in the past 12 months and untreated dental caries status, Alaskan kindergarten children, 2005

Untreated Dental Caries Status		Unable to obtain needed dental care in the past 12 months		Total
		"Yes"	"No"	
Untreated Dental Caries	n	23	75	98
	row%	**23.5**	**76.5**	**100.0**
	col%	56.1	19.5	23.0
No Untreated Dental Caries	n	18	310	328
	row%	**5.5**	**94.5**	**100.0**
	col%	43.9	80.5	77.0
Total	n	41	385	426
	row%	**9.6**	**90.4**	**100.0**
	col%	100.0	100.0	100.0

Parents/guardians of children who had untreated dental caries were more than five times as likely to have reported difficulty in obtaining dental care when their child needed it in the past 12 months as those of children with no untreated dental caries (OR=5.28, 95% confidence interval 2.71, 10.28).

Table 47.

Proportion of respondents with Denali KidCare/Medicaid dental coverage and untreated dental caries status, Alaskan kindergarten children, 2005

Untreated Dental Caries Status	N	Proportion of Respondents who have "Denali KidCare/Medicaid" Dental Coverage	95% CI
Untreated Dental Caries	84	.536	(.424, .645)
No Untreated Dental Caries	278	.342	(.286, .401)
All respondents	**362**	**.387**	**(.337, .439)**

A higher proportion of respondents with untreated dental caries had Denali KidCare/Medicaid Coverage than children with no untreated dental caries.

Table 48.

Caries experience of participants with no untreated dental caries, Alaskan kindergarten children, 2005

	Frequency	Percent	95% CI
Caries Experience	109	31.2	(26.5, 36.4)
Caries Free	240	68.8	(63.6, 73.6)
Total	**349**	**100.0**	

This table is presented only for informational purposes. About 75% of children assessed (349 of 463) had no untreated caries. It is interesting to note that over two thirds of these (about half of the 463 children scored) were caries free (never had a cavity).

Table 49.

Untreated dental caries status and caries experience on primary maxillary anterior teeth, Alaskan kindergarten children, 2005

Untreated Dental Caries Status		Caries Experience on Primary Maxillary Anterior Teeth		Total
		Yes	No	
Untreated Dental Caries	n	47	65	112
	row%	**42.0**	**58.0**	**100.0**
	col%	72.3	16.6	24.5
No Untreated Dental Caries	n	18	327	345
	row%	**5.2**	**94.8**	**100.0**
	col%	27.7	83.4	75.5
Total	n	65	392	457
	row%	**14.2**	**85.8**	**100.0**
	col%	100.0	100.0	100.0

Participants who had untreated dental caries were 13 times more likely to have caries experience on maxillary anterior teeth than those with no untreated dental caries (OR 13.14 95% CI 7.17, 24.05).

Table 50.

Treatment urgency among children with untreated dental caries, Alaskan kindergarten children, 2005

Treatment Urgency	Number of Respondents	Percent	95% CI
No obvious problem	0	0	
Early dental care (within weeks)	108	94.7	(88.9, 98.0)
Urgent care (within 24 hours)	6	5.3	(2.0, 11.1)
Total	**114**	**100.0**	

Of the 114 children with untreated dental caries, six (5%) required urgent dental care. The vast majority (95%) required more routine care.

Table 51.

Treatment urgency among children with no untreated dental caries, Alaskan kindergarten children, 2005

Treatment Urgency	Number of Respondents	Percent	95% CI
No obvious problem	345	98.9	(96.9, 99.6)
Early dental care (within weeks)	4	1.1	(0.4, 3.1)
Urgent care (within 24 hours)	0	0	
Total	**349**	**100.0**	

Among children with no untreated dental caries, four (one percent) required "Early dental care". Since they had no untreated decay and needed no urgent care, these children probably required some type of preventive treatment or treatment of a low-level non-caries related issue, such as space management.

Table 52.

Untreated dental caries and number of quadrants needing treatment, Alaskan kindergarten children, 2005

Number of quadrants needing treatment	Number of respondents	Percent	95% CI
0	0	0	
1	42	36.8	(28.0, 46.4)
2	34	29.8	(21.6, 39.1)
3	21	18.4	(11.8, 26.8)
4	17	14.9	(8.9, 22.8)
Total	**114**	**100.0**	

Less than 40% of children that had untreated dental caries needed only one quadrant of treatment. The remaining 60% reflect a significant needs burden in this population.

Of the 349 children with no untreated dental caries, two were reported to need one quadrant of dental treatment. The nature of the required treatment is unknown.

Dental Caries Experience

Dental Caries Experience and Race/Ethnicity has already been presented in Table 32, and is not duplicated here.

Additionally, dental caries experience by definition includes untreated dental caries, so no table is presented.

When reviewing these tables, it is important to remember that this variable is inclusive of children with untreated dental caries, which may mask findings for the subset of children who have dental caries experience but no untreated dental caries. Future analyses may choose to focus on this group of children compared to children who are caries free ("Dental Caries Experience" = No)

Table 53.

Variables with insignificant differences between results when compared by the presence/absence of dental caries experience, Alaskan kindergarten children, 2005

Variable*	P-Value	OR (95% CI)
Gender		1.31 (0.91, 1.89)
Length of time since last reported dental visit[1]	0.4009	
Respondents with medical insurance		0.57 (0.32, 1.00)
Proportion of respondents with dental insurance		0.84 (0.50, 1.42)
Proportion of respondents with private dental insurance		0.32 (0.07, 1.57)
Proportion of respondents with IHS/Native Health Corporation coverage		1.67 (0.72, 3.87)

[1] Cell sizes were too small to assess all response categories; children who reported their last visit "More than 3 years ago" and "Never has been to the dentist" were grouped together for analysis.

There were too few respondents (41) reporting on Question 5b, reasons for the inability to obtain care (eight choices), to make assessments by Dental Caries Experience status meaningful.

Table 54.

Mean age (in months) of respondents participating in the clinical assessment by dental caries experience, Alaskan Kindergartners, 2005

Dental Caries Experience	Age in months (range)	Std. Deviation
No (n=240)	73.3 (67-83)	3.37
Yes (n=223)	74.1 (62-85)	4.37
Both (n=463)	**73.7 (62-85)**	**4.07**

Children with dental caries experience tended to be slightly older than their peers who were caries-free. (P-value = 0.0220)

Table 55.

Dental caries experience and tooth pain, Alaskan kindergarten children, 2005

Dental Caries Experience		Child reported toothache >1 time in past 6 months		Total
		"Yes"	"No"	
Yes	n	35	158	193
	row%	**18.1**	**81.9**	**100.0**
	col%	81.4	42.1	46.2
No	n	8	217	225
	row%	**3.6**	**96.4**	**100.0**
	col%	18.6	57.9	53.8
Total	n	43	375	418
	row%	**10.3**	**89.7**	**100.0**
	col%	100.0	100.0	100.0

Children who had dental caries experience were six times as likely to have reported tooth pain more than once in the past 6 months as children that were caries-free (OR=6.01, 95% confidence interval 2.71, 13.31). It is important to remember that dental caries experience="yes" category is inclusive of children with untreated caries, which may influence conclusions based upon this finding.

Table 56.

Dental caries experience and reason for last dental visit, Alaskan kindergarten children, 2005

Dental Caries Experience		Reason for Last Dental Visit				Total
		Something was wrong	Went for routine treatment	Went on own for exam	Called in for exam	
	n	26	35	102	23	186
Yes	**row%**	**14.0**	**18.8**	**54.8**	**12.4**	**100.0**
	col%	81.3	82.5	36.8	57.5	47.4
	n	6	8	175	17	206
No	**row%**	**2.9**	**3.9**	**85.0**	**8.3**	**100.0**
	col%	18.8	18.6	63.2	42.5	52.6
	n	32	43	277	40	392
Total	**row%**	**8.2**	**11.0**	**70.7**	**10.2**	**100.0**
	col%	100.0	100.0	100.0	100.0	100.0

There were significant differences in the reason given for the last reported dental visit and dental caries experience (Chi-squared = 48.6981, 3 df, P=0.0000). A higher proportion of children with dental caries experience had their last dental visit for treatment of symptoms, for routine treatment, or because they were called in for an exam than their peers who had no dental caries experience.

Table 57.

Dental caries experience and inability to obtain needed dental care in last 12 months, Alaskan kindergarten children, 2005

Dental Caries Experience		Unable to Obtain Needed Dental Care in Last 12 months		Total
		"Yes"	"No"	
Yes	n	29	170	199
	row%	**14.6**	**85.4**	**100.0**
	col%	70.7	44.2	46.7
No	n	12	215	227
	row%	**5.3**	**94.7**	**100.0**
	col%	29.3	55.8	53.3
Total	n	41	385	426
	row%	**9.6**	**90.4**	**100.0**
	col%	100.0	100.0	100.0

Children who had dental caries experience were about three times as likely to have reported an inability to obtain needed care in the past 12 months as children with no dental caries experience (OR=3.06, 95% confidence interval 1.51, 6.17). It is again important to remember that this category is inclusive of children with untreated caries, which may influence conclusions based upon this finding.

Table 58.

Dental caries experience and "commercial" dental insurance, Alaskan kindergarten children, 2005

Dental Caries Experience		"Commercial" Dental Insurance		Total
		"Yes"	"No"	
Yes	n	58	110	168
	row%	**34.5**	**65.5**	**100.0**
	col%	39.2	51.4	46.4
No	n	90	104	194
	row%	**46.4**	**53.6**	**100.0**
	col%	60.8	48.6	53.6
Total	n	148	214	362
	row%	**40.9**	**59.1**	**100.0**
	col%	100.0	100.0	100.0

Children who had "commercial" dental insurance were less likely (OR= 0.61 95% confidence interval 0.40, 0.93) to have dental caries experience than those without this coverage.

Table 59.

Dental caries experience and "Denali KidCare/Medicaid" dental coverage, Alaskan kindergarten children, 2005

Dental Caries Experience		"Denali KidCare/Medicaid" Dental Coverage		Total
		"Yes"	"No"	
Yes	n	83	85	168
	row%	**49.4**	**50.6**	**100.0**
	col%	59.3	38.3	46.4
No	n	57	137	194
	row%	**29.4**	**70.6**	**100.0**
	col%	40.7	61.7	53.6
Total	n	140	222	362
	row%	**38.7**	**61.3**	**100.0**
	col%	100.0	100.0	100.0

Children who had "Denali Kid Care/Medicaid" dental coverage were more likely (OR= 2.35 95% confidence interval 1.52, 3.61) to have dental caries experience than those without this coverage.

Table 60.

Dental caries experience and "Military/Tricare (Champus)" dental insurance, Alaskan kindergarten children, 2005

Dental Caries Experience		"Military/Tricare (Champus)" Dental Insurance		Total
		"Yes"	"No"	
Yes	n	5	163	168
	row%	**3.0**	**97.0**	**100.0**
	col%	17.2	48.9	46.4
No	n	24	170	194
	row%	**12.4**	**87.6**	**100.0**
	col%	82.8	51.1	53.6
Total	n	29	333	362
	row%	**8.0**	**92.0**	**100.0**
	col%	100.0	100.0	100.0

Children who had "Military/Tricare (Champus)" dental insurance were less likely (OR= 0.22 95% confidence interval 0.08, 0.58) to have dental caries experience than those without this coverage.

Table 61.

Dental caries experience on maxillary primary teeth and dental caries experience, Alaskan kindergarten children, 2005

Dental Caries Experience on Maxillary Primary Teeth	Number of respondents	Percent	95% CI
Yes	65	30.0	(23.9, 36.5)
No	152	70.0	(63.5, 76.1)
Total	**217**	**100.0**	

By definition, children who had dental caries experience on maxillary primary teeth also had to have dental caries experience on any teeth, so only the 217 children with any caries experience were assessed. Of those children with any dental caries experience, 30% experienced dental caries on maxillary primary teeth. These 65 children represent 14% of all clinical assessment respondents (n=457) for this question.

Table 62.

Dental caries experience and treatment urgency, Alaskan kindergarten children, 2005

Treatment Urgency	Number of respondents	Percent	95% CI
No obvious problem	105	47.1	(40.4, 53.9)
Early dental care (within weeks)	112	50.2	(43.5, 57.0)
Urgent care (within 24 hours)	6	2.7	(1.0, 5.8)
Total	**223**	**100.0**	

For this question, no children that were caries-free required treatment. This table presents the proportion of children with dental caries experience in each "Urgency" grouping.

Table 63.

Dental caries experience and number of quadrants needing treatment, Alaskan kindergarten children, 2005

Number of quadrants needing treatment	Number of respondents	Percent	95% CI
0	107	48.0	(41.3, 54.8)
1	44	19.7	(14.7, 25.6)
2	34	15.2	(10.8, 20.6)
3	21	9.4	(5.9, 14.0)
4	17	7.6	(4.5, 11.9)
Total	**223**	**100.0**	

Nearly half of children with dental caries experience needed no treatment for dental caries at the time of the survey….this is a good thing! The remaining children were those who also had untreated dental caries (see Table 52).

No quadrant treatment needs were reported in caries-free children.

Dental Caries Experience on Primary Maxillary Anterior Teeth

Dental caries experience on primary maxillary anterior teeth and Race/Ethnicity has already been presented in Table 33, and is not duplicated here; the relationship of dental caries experience on primary maxillary anterior teeth and dental caries experience is reported in Table 61 and is also not duplicated here.

Additionally, dental caries experience by definition includes untreated dental caries, so no table is presented.

When reviewing these tables, it is important to remember that this variable is inclusive of children with untreated dental caries, which may mask findings for the subset of children who have dental caries experience but no untreated dental caries.

Table 64.

Variables with insignificant differences between results when compared by the presence/absence of dental caries experience, Alaskan kindergarten children, 2005

Variable*	P-Value	OR (95% CI)
Mean age in months	0.3644	
Gender		0.77 (0.45, 1.30)
Respondents with medical insurance		0.63 (0.31, 1.30)
Respondents with dental insurance		0.58 (0.29, 1.15)
Respondents with “Commercial” dental insurance		0.53 (0.27, 1.05)
Respondents with “Private” dental insurance		0.86 (0.11, 7.05)
Proportion of respondents with IHS/Native Health Corporation coverage		0.61 (0.14, 2.69)

[1] Cell sizes were too small to assess all response categories; children who reported their last visit “More than 3 years ago” and “Never has been to the dentist” were grouped together for analysis.

There were too few respondents (40) reporting on Question 5b, reasons for the inability to obtain care (eight choices), to make assessments by dental caries experience status meaningful.

Cell size fell to 0 for some cells when assessing “Military/Tricare (Champus)” coverage, making these analyses questionable.

Table 65.

Dental caries experience on primary maxillary anterior teeth and tooth pain, Alaskan kindergarten children, 2005

Dental Caries Experience		Child reported toothache >1 time in past 6 months		Total
		"Yes"	"No"	
Yes	n	11	45	56
	row%	**19.6**	**80.4**	**100.0**
	col%	25.6	12.2	13.6
No	n	32	324	356
	row%	**9.0**	**91.0**	**100.0**
	col%	74.4	87.8	53.8
Total	n	43	369	412
	row%	**10.4**	**89.6**	**100.0**
	col%	100.0	100.0	100.0

Children who had dental caries experience on primary maxillary anterior teeth were nearly two and one-half times as likely to have reported tooth pain more than once in the past 6 months as children that did not have caries experience in this tooth group. It is important to remember that any dental caries experience="yes" category is inclusive of children with untreated caries, which may influence conclusions based upon this finding.

Table 66.

Dental Caries Experience on Primary Maxillary Anterior Teeth and Length of Time since Last Dental Visit, Alaskan Kindergarten Children 2005

		Length of Time since last dental visit				
Dental Caries Experience on Primary Maxillary Anterior Teeth		**6 months or less**	**6 months to 1 year**	**1-3 years**	**> 3years or never has been to dentist**	**Total**
"Yes"	n	19	17	16	9	61
	row%	**31.1**	**27.9**	**26.2**	**14.8**	**100.0**
	col%	9.5	15.2	21.9	20.0	14.2
"No"	n	182	95	57	36	370
	row%	**49.2**	**25.7**	**15.4**	**9.7**	**100.0**
	col%	90.5	84.8	78.1	80.0	85.8
All	n	201	112	73	45	431
	row%	**46.6**	**26.0**	**16.9**	**10.4**	**100.0**
	col%	100.0	100.0	100.0	100.0	100.0

Due to small cell sizes, responses for "More than 3 years ago" and "Never has been to the dentist" were combined.

There were significant differences in the length of time since the last dental visit by dental caries experience on primary maxillary anterior teeth (Chi-squared = 8.6404, 3 df, P=0.0345). Children with this history were less likely to have had a dental visit within the past 6 months than children without this experience, and more likely to have had their last visit more than one year previously.

Table 67.

Dental caries experience on primary maxillary anterior teeth and reason for last dental visit, Alaskan kindergarten children, 2005

Dental Caries Experience on Primary Maxillary Anterior Teeth		Reason for Last Dental Visit				Total
		Something was wrong	Went for routine treatment	Went on own for exam	Called in for exam	
Yes	n	12	8	26	6	52
	row%	**23.1**	**15.4**	**50.0**	**11.5**	**100.0**
	col%	38.7	19.5	9.4	15.8	13.5
No	n	19	33	250	32	334
	row%	**5.7**	**9.9**	**74.9**	**9.6**	**100.0**
	col%	61.3	80.5	90.6	84.2	86.5
Total	n	31	41	276	38	386
	row%	**8.0**	**10.6**	**71.5**	**9.8**	**100.0**
	col%	100.0	100.0	100.0	100.0	100.0

There were significant differences in the reason given for the last reported dental visit and dental caries experience on primary maxillary anterior teeth (Chi-squared = 22.2842, 3 df, P=0.0001). A higher proportion of children with dental caries experience had their last dental visit for treatment of symptoms, for routine treatment, or because they were called in for an exam than their peers who had no dental caries experience in this tooth group.

Table 68.

Dental caries experience on primary maxillary anterior teeth and inability to obtain needed dental care in last 12 months, Alaskan kindergarten children, 2005

Dental Caries Experience on Primary Maxillary Anterior Teeth		Unable to Obtain Needed Dental Care in Last 12 months		Total
		"Yes"	"No"	
Yes	n	12	43	55
	row%	**21.8**	**78.2**	**100.0**
	col%	30.0	11.3	13.1
No	n	28	337	365
	row%	**7.7**	**92.3**	**100.0**
	col%	70.0	88.7	86.9
Total	n	40	380	420
	row%	**9.5**	**90.5**	**100.0**
	col%	100.0	100.0	100.0

Children who had dental caries experience on primary maxillary anterior teeth were more than three times as likely to have reported an inability to obtain needed care in the past 12 months as children with no dental caries experience (OR=3.36, 95% confidence interval 1.59, 7.09) in this tooth group.

Table 69.

Dental caries experience on primary maxillary anterior teeth and "Denali KidCare/Medicaid" dental coverage, Alaskan kindergarten children, 2005

Dental Caries Experience on Primary Maxillary Anterior Teeth		"Denali KidCare/Medicaid" Dental Coverage		Total
		"Yes"	"No"	
Yes	n	26	19	45
	row%	**57.8**	**42.2**	**100.0**
	col%	19.1	8.6	12.6
No	n	110	201	311
	row%	**35.4**	**64.6**	**100.0**
	col%	80.9	91.4	87.4
Total	n	136	220	356
	row%	**38.2**	**61.8**	**100.0**
	col%	100.0	100.0	100.0

Children who had "Denali Kid Care/Medicaid" dental coverage were more likely (OR= 2.50 95% confidence interval 1.32, 4.72) to have dental caries experience on primary maxillary anterior teeth than those without this coverage.

Table 70.

Dental caries experience on primary maxillary anterior teeth and treatment urgency, Alaskan kindergarten children, 2005

		Treatment Urgency		
Dental Caries Experience on Primary Maxillary Anterior Teeth		**No obvious problem**	**Early dental care or urgent care**	**Total**
Yes	n	16	49	65
	row%	**24.6**	**75.4**	**100.0**
	col%	4.7	43.0	14.2
No	n	327	65	392
	row%	**83.4**	**16.6**	**100.0**
	col%	95.3	57.0	85.8
Total	n	343	114	457
	row%	**75.1**	**24.9**	**100.0**
	col%	100.0	100.0	100.0

Again, there was insufficient cell size to assess even the combined race/ethnicity groupings in all categories of treatment urgency; those needing urgent care were combined with those needing early dental care.

That done, there were significant differences in treatment urgency between children who did and did not have dental caries experience in maxillary anterior teeth (OR = 15.41, 95% Confidence Interval 8.26, 28.75). Children who had this history were 15 times as likely to need care as those who did not.

Table 71.

Dental caries experience on primary maxillary anterior teeth and number of quadrants needing treatment, Alaskan kindergarten children, 2005

		Number of Quadrants Needing Treatment					
Dental Caries Experience on Primary Maxillary Anterior Teeth		**0**	**1**	**2**	**3**	**4**	**Total**
Yes	n	16	16	8	13	12	65
	row%	**24.6**	**24.6**	**12.3**	**20.0**	**18.5**	**100.0**
	col%	4.7	36.4	24.2	65.0	70.6	85.8
No	n	327	28	25	7	5	392
	row%	**83.4**	**7.1**	**6.4**	**1.8**	**1.3**	**100.0**
	col%	95.3	63.6	75.8	35.0	29.4	85.8
	n	343	44	33	20	17	457
All participants	**row%**	**75.1**	**9.6**	**7.2**	**4.4**	**3.7**	100.0
	col%	100.0	100.0	100.0	100.0	100.0	100.0

There were significant differences in the number of quadrants requiring treatment by dental caries experience on primary maxillary anterior teeth (Chi-squared = 132.6162, 4 df, P=0.000).

Children with this history were more likely to need care at every quantifiable level, and were much less apt to need no care in any quadrant.

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Response Differences by Denali KidCare/Medicaid Status

In previous tables, differences by Denali KidCare/Medicaid status were based upon responses from the subset of participants that indicated that they had some type of dental insurance. For this group of analyses, the entire sample was use for comparisons: children who reported that they had Denali KidCare/Medicaid were compared to all others, regardless of reported status for "insurance". Since the analytical sample was slightly different, results may be slightly skewed as well.

Individual tables are not reported for variables that revealed no statistical differences in results when compared by dental insurance status. These variables are listed in Table 72. For both questionnaire and clinical variables, only records with meaningful responses were tabulated (all "unknown" and "blank" responses were ignored). This yields varying numbers of records for different variables, as respondents were not required to answer all questions. P-values (Chi-square) are presented for multi-level variables and Odds Ratios (OR) with 95% Confidence Intervals for two-level variables. Insurance = "Yes" was placed in the default table position.

Table 72.

Variables with insignificant differences between results when compared by Denali Kid Care/Medicaid status, Alaskan kindergarten children, 2005

Variable*	P-Value	OR (95% CI)
Gender		1.05 (0.72, 1.53)
Mean Age (in months)	0.0809	
Respondents reporting tooth pain		1.23 (0.67, 2.26)
Length of time since last reported dental visit	0.4144	
Reason for last dental visit	0.0626	
Inability to get dental care in past 12 months		1.34 (0.72, 2.50)
IHS/Native Health Corporation Dental Insurance		0.66 (0.26, 1.69)
Dental caries experience on primary anterior maxillary teeth		1.71 (0.99, 2.94)
Number of Quadrants needing treatment	0.0864	

* Unless otherwise noted, all respondent records were included in analysis.

There were too few respondents (47) reporting on Question 5b, reasons for the inability to obtain care (eight choices), to make assessments by Dental Caries Experience meaningful.

There were too few respondents reporting on private dental insurance and military/Tricare (Champus) dental insurance to make assessments meaningful.

Table 73.

Denali Kid Care/Medicaid Status and Race/Ethnicity, Alaskan kindergarten children, 2005

Denali Kid Care/ Medicaid Status		Race/Ethnicity			
		"White"	"American Indian/ Alaskan Native"	All others	Total
"Yes"	n	77	40	38	155
	row%	**49.7**	**25.8**	**24.5**	**100.0**
	col%	24.5	50.6	33.9	30.7
"No"	n	237	39	74	350
	row%	**67.7**	**11.1**	**21.1**	**100.0**
	col%	75.5	49.4	66.1	69.3
Total	n	314	79	112	505
	row%	**62.2**	**15.6**	**22.2**	**100.0**
	col%	100.0	100.0	100.0	100.0

A higher proportion of American Indian/Alaskan Native children (50%) report having Denali Kid Care/Medicaid than children classified as "White" (25%) or "All Others" (34%). (Chi-squared = 20.9376, 2df, p=0.0000)

Table 74.

Denali KidCare/Medicaid status by medical/surgical insurance status, Alaskan kindergarten children, 2005

		Medical Insurance Status		
Denali Kid Care/ Medicaid Status		**"Yes"**	**"No"**	**Total**
"Yes"	n	149	6	155
	row%	**96.1**	**3.9**	**100.0**
	col%	35.7	10.0	32.5
"No"	n	268	54	322
	row%	**83.2**	**16.8**	**100.0**
	col%	64.3	90.0	67.5
Total	n	417	60	477
	row%	**87.4**	**12.6**	**100.0**
	col%	100.0	100.0	100.0

Respondents who had Denali KidCare dental coverage for their children were more likely to report having medical/surgical insurance coverage (OR=5.00, (2.10, 11.91)) than respondents that did not report this coverage, although eligibility rules are the same for medical/dental coverage. This may reflect misunderstanding of the question or indicate use of dental coverage more than medical coverage by Denali Kid Care/Medicaid recipients.

Table 75.

Denali KidCare/Medicaid status and commercial dental insurance coverage, Alaskan kindergarten children, 2005

Denali KidCare/ Medicaid Status		Commercial Dental Insurance "Yes"	Commercial Dental Insurance "No"	Total
Yes	n	7	148	155
	row%	**4.5**	**95.5**	**100.0**
	col%	4.4	42.9	30.7
No	n	153	197	350
	row%	**43.7**	**56.3**	**100.0**
	col%	95.6	57.1	69.3
Total	n	160	345	505
	row%	**31.7**	**68.3**	**100.0**
	col%	100.0	100.0	100.0

Children who had Denali KidCare/Medicaid were less likely to have reported having "commercial" dental insurance than children without this benefit (OR=0.06, 95% confidence interval 0.03, 0.13), as might be expected.

Table 76.

Denali KidCare/Medicaid status and untreated dental caries, Alaskan kindergarten children, 2005

Denali KidCare/ Medicaid Status		Untreated Dental Caries		Total
		"Yes"	"No"	
	n	45	95	140
Yes	**row%**	**32.1**	**67.9**	**100.0**
	col%	39.5	27.2	30.2
	n	69	254	323
No	**row%**	**21.4**	**78.6**	**100.0**
	col%	69.8	72.8	69.8
	n	114	349	463
Total	**row%**	**24.6**	**75.4**	**100.0**
	col%	100.0	100.0	100.0

Children who had Denali KidCare/Medicaid were more likely to have untreated dental caries than children without this benefit (OR=1.74, 95% confidence interval 1.12, 2.72).

Table 77.

Denali KidCare/Medicaid status and dental caries experience, Alaskan kindergarten children, 2005

Denali KidCare/ Medicaid Status		Dental Caries Experience		Total
		"Yes"	"No"	
	n	83	57	140
Yes	**row%**	**59.3**	**40.7**	**100.0**
	col%	37.2	23.8	30.2
	n	140	183	323
No	**row%**	**43.3**	**56.7**	**100.0**
	col%	62.8	76.3	69.8
	n	223	240	463
Total	**row%**	**48.2**	**51.8**	**100.0**
	col%	100.0	100.0	100.0

Children who had Denali KidCare/Medicaid were more likely to have dental caries experience than children without this benefit (OR=1.90, 95% confidence interval 1.27, 2.85).

Table 78.

Denali KidCare/Medicaid status and treatment urgency, Alaskan kindergarten children, 2005

Denali KidCare/ Medicaid Status		Treatment Urgency		Total
		No obvious problem	Early dental care/ urgent care	
	n	94	46	140
Yes	**row%**	**67.1**	**32.9**	**100.0**
	col%	27.2	39.0	30.2
	n	251	72	323
No	**row%**	**77.7**	**22.3**	**100.0**
	col%	72.8	61.0	72.1
	n	345	118	463
Total	**row%**	**74.5**	**25.5**	**100.0**
	col%	100.0	100.0	100.0

Due to small cell sizes, responses for “Early dental care” and “Urgent dental care” were combined for analysis.

There were significant differences in Denali KidCare/Medicaid status and treatment urgency scores (Odds Ratio = 0.59, 95% Confidence Interval (0.38, 0.91)). A higher proportion of children with Denali KidCare/Medicaid coverage dental care, and a smaller proportion had no obvious problems when compared with their peers without this benefit.