



Department of Health and Social Services  
Karleen Jackson, Commissioner  
Jay Butler, MD, Chief Medical Officer  
3601 C Street, Suite 540  
Anchorage, Alaska 99503

<http://www.epi.Alaska.gov>

Division of Public Health  
Beverly Wooley, Director

Local telephone number 907-269-8000  
24 Hour Emergency 1-800-478-0084

Editors:  
Joe McLaughlin, MD, MPH  
Bradford D. Gessner, MD, MPH

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## Prevalence of Attention Deficit Hyperactivity Disorder among Medicaid Recipients Less Than 20 Years of Age

### Background

Attention Deficit Hyperactivity Disorder (ADHD) is a neurobehavioral disorder with symptoms that include an inability to focus and maintain attention, hyperactivity, and impulsivity.<sup>1</sup> These outcomes in turn can decrease school performance among affected children.

### Methods

We examined ADHD-related service and pharmacy claims among children aged 4–19 years enrolled in Medicaid between January 1, 2002 and December 31, 2005. An ADHD case was defined as an approved claim for International Classification of Diseases, 9th Revision (ICD-9) codes 314.x plus a claim for an ADHD-associated medication in the same calendar year. For evaluation of prevalence by rural vs. urban status, the urban area included Anchorage, Eagle River, Chugiak, Wasilla, Palmer, Fairbanks and Juneau.

### Results

During the study period, 62,833 persons aged 4–19 years were continuously enrolled in Medicaid. For all evaluated years, the highest prevalence occurred among children aged 9–12 years, followed by those aged 13–17 years (Table).

**Table. ADHD Prevalence among Medicaid-enrolled Children in Alaska and the US**

Age (yrs)	2002	2003	2004	2005	US 2003
4–8	2.9%	2.9%	3.1%	3.1%	2.6%
9–12*	5.5%	6.0%	6.1%	6.2%	6.2%
13–17*	3.0%	3.5%	3.7%	3.8%	4.6%
18–19*	0.8%	1.2%	1.6%	1.8%	-
Overall	3.6%	3.9%	4.1%	4.1%	4.3%

\*Chi-square for linear trend  $p < 0.05$

Rural Alaska Native children had the lowest ADHD prevalences while urban Alaska Native children had the highest prevalences (Figure). No statistically significant change over time in prevalence occurred for any of the four evaluated groups.

### Discussion

Alaska's ADHD prevalence among Medicaid-enrolled children was approximately the same as the 2003 overall national average among children aged 4–17 years currently taking medication (2). ADHD prevalence in Alaska has remained static among the youngest children but has increased among other age groups evaluated, including a 125% increase among those aged 18–19 years. Rural Alaska Native

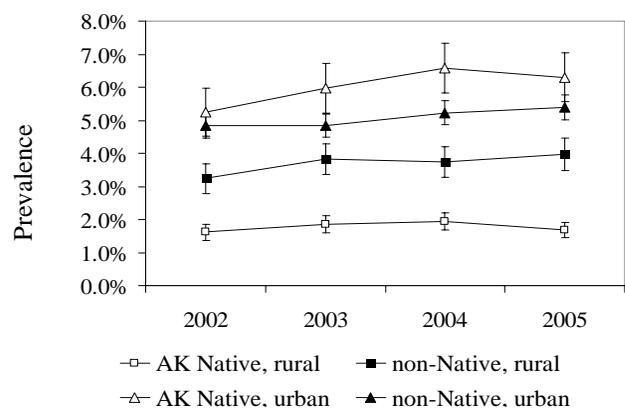
children and to a lesser extent rural children in general had a low ADHD prevalence. Nationwide, lower prevalences of ADHD diagnosis and treatment are associated with lower maternal education, non-white race, and having a primary home language other than English (0.3% compared to 4.9% for English speakers).<sup>2</sup> These findings may reflect true differences in ADHD prevalence or over or under diagnosis and treatment among some groups.

### Recommendations

Health care providers caring for children should familiarize themselves with current ADHD diagnostic criteria and treatment recommendations. Resources include:

- The US Centers for Disease Control and Prevention (<http://www.cdc.gov/ncbddd/adhd/>)
- The National Resource Center on ADHD (<http://www.help4adhd.org/>)
- The American Academy of Pediatrics (<http://www.aap.org/pubserv/adhdtoolkit/>)

**Figure. Prevalence of ADHD among Medicaid-enrolled Children Aged 4–19 Years by Alaska Native and Rural Status—Alaska, 2002–2005.\***



\*Bars represent 95% confidence intervals.

### References

1. American Academy of Pediatrics. Clinical Practice Guideline: Diagnosis and Evaluation of the Child with Attention-Deficit/Hyperactivity Disorder. *Pediatrics* 2000;105:1158.
2. Centers for Disease Control and Prevention. Prevalence of Diagnosis and Medication Treatment for Attention-Deficit/Hyperactivity Disorder – United States, 2003. *MMWR* 2005; 54: 842-847.