

SHAPE Briefing

Chronic health conditions among Hennepin County children



1998
2002
2006

Number 5

Trends and insights from SHAPE, the Survey of the Health of All the Population and the Environment

Highlights

- Among Hennepin County children aged 0 to 17, 9.4 percent were reported as currently having asthma. This is equivalent to 25,000 children living in Hennepin County.
- Among Hennepin County children aged 4 to 17, 8.2 percent have been diagnosed with ADD or ADHD. The rate for boys is significantly higher than for girls (11.5 and 4.8 percent, respectively).
- Among Hennepin County children aged 4 to 17, 6.2 percent have ever been diagnosed with depression or anxiety. Among adolescents aged 13 to 17, 10.8 percent have ever been diagnosed with depression or anxiety, a rate which is significantly higher than both the state and national statistics (7.5 and 7.4 percent, respectively).

Upcoming Issues

- ◆ Health insurance
- ◆ Nutrition and exercise
- ◆ Family connectedness and health

Introduction

This briefing provides key findings on chronic conditions among children in Hennepin County. Where possible, it also provides comparisons to state- and national-level data and examines whether there are statistically significant differences on the basis of gender, age or place of residence. **SHAPE 2006** is the third in a series of surveys collecting information on the health of Hennepin County residents and factors that affect their health. More than 10,000 households in Hennepin County participated in **SHAPE 2006**, providing information on more than 8,000 adults and 4,000 children.

Background

The **SHAPE 2006 - Child Survey** was designed to meet the critical need for county-level data on children's health. Data on the health status of children aged 0 to 17 were collected by conducting telephone interviews with the adult most knowledgeable about the health of a randomly selected child within the household. An overview of the questionnaire and the data collection strategy for the **SHAPE 2006 - Child Survey** is available in *SHAPE Briefing, Number 3*.

Chronic conditions affecting childhood health

The **SHAPE 2006 - Child Survey** asked adults to report on several chronic health conditions their child might have.¹ The survey included questions on asthma, diabetes, autism, attention deficit disorders (ADD or ADHD), and depression or anxiety. These particular conditions were selected because they are commonly known and diagnosed among children, and because there are potential public health prevention or intervention strategies associated with them. The percentages of Hennepin County children diagnosed with these conditions are presented in Figure 1.

Figure 1. Chronic health conditions among Hennepin County children, 2006

SHAPE 2006 – Child Survey estimates	
Asthma	9.4% of children aged 0 to 17 currently have asthma
Diabetes	0.3% of children aged 0 to 17 were ever diagnosed with diabetes
Autism	1.3% of children aged 0 to 17 were ever diagnosed with autism
ADD/ADHD	8.2% of children aged 4 to 17 were ever diagnosed with ADD/ADHD
Depression or anxiety	6.2% of children aged 4 to 17 were ever diagnosed with depression or anxiety

Asthma: Hennepin County higher than state-wide rate

Participants in the *SHAPE 2006 - Child Survey* were asked several questions about the impact of asthma on their children. The results for these items appear in Figure 2, where they are displayed with parallel findings drawn from the National Survey of Children's Health (NSCH, 2003).²

Among Hennepin County children, 13.1 percent were reported to have been ever diagnosed with asthma; 9.4 percent were identified as currently having asthma. Both findings on asthma were significantly higher than recent figures for the state of Minnesota (8.3 percent for ever diagnosed; 6.2 percent for currently having asthma). However, the rates found among Hennepin County children were not statistically different from the overall findings for the nation. The percentage of Hennepin County children who currently have asthma is equivalent to approximately 25,000 children aged 0 to 17.³

During the past twelve months, 5.3 percent of all Hennepin County children experienced at least one episode or attack of asthma. This finding is not significantly different from the state and national rates, and is equivalent to 14,000 children having at least one episode or attack of asthma in the past year. Also during the past twelve months, 1.9 percent of all Hennepin County children required medical attention in a hospital emergency room or urgent care center for an asthma attack. This is equivalent to 5,000 children requiring some form of emergency treatment for asthma attacks in Hennepin County in the past year.

Boys were significantly more likely to currently have asthma than were girls (the rates are 11.3 percent and 7.4 percent, respectively). Additionally, children in the youngest age group (0 to 5 year olds) were significantly less likely to currently have asthma when compared to the two groups of older children (6 to 11 and 12 to 17 year olds). The rates were 5.6 percent for the youngest group of children compared to rates of over 10 percent for the groups of older children and adolescents. However, no significant difference in the rates of children currently having asthma was detected for those residing in Minneapolis versus suburban Hennepin County (see Figure 3).

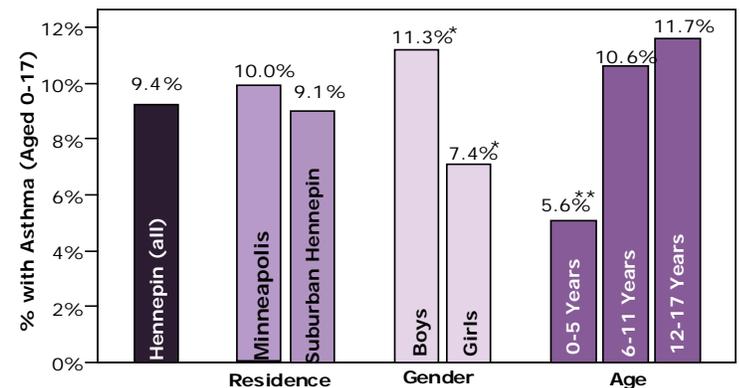
Autism: Findings comparable to state and national rates

For Hennepin County, the overall rate of children identified with autism is 1.3 percent, or equivalent to approximately 4,000 children. The *SHAPE 2006 - Child Survey* findings on autism did not yield statistically significant differences by gender, age, or place of residence. In addition, the overall rate was not statistically different from the overall state- and national-level rates for autism found by analyzing the 2003 NSCH data.

Figure 2. Asthma rates for Hennepin County children aged 0 to 17, 2006; national-level rates, 2003

Asthma status of children aged 0 to 17	Hennepin County (SHAPE 2006 - Child Survey)	United States (NSCH 2003)
Has a doctor or other health professional ever told you that your child has asthma?	13.1%	12.5%
Does your child still have asthma?	9.4%	8.9%
During the past 12 months, has your child had an episode of asthma or an asthma attack?	5.3%	5.4%

Figure 3. Percent of Hennepin County children who currently have asthma by residence, by gender and by age, 2006



* Difference in rates between boys and girls is statistically significant at $p < 0.05$.

** Difference in rates between 0-5 year-olds and older age groups is statistically significant at $p < 0.05$.

SOURCE: SHAPE 2006

Diabetes: Overall rate similar to state and national findings

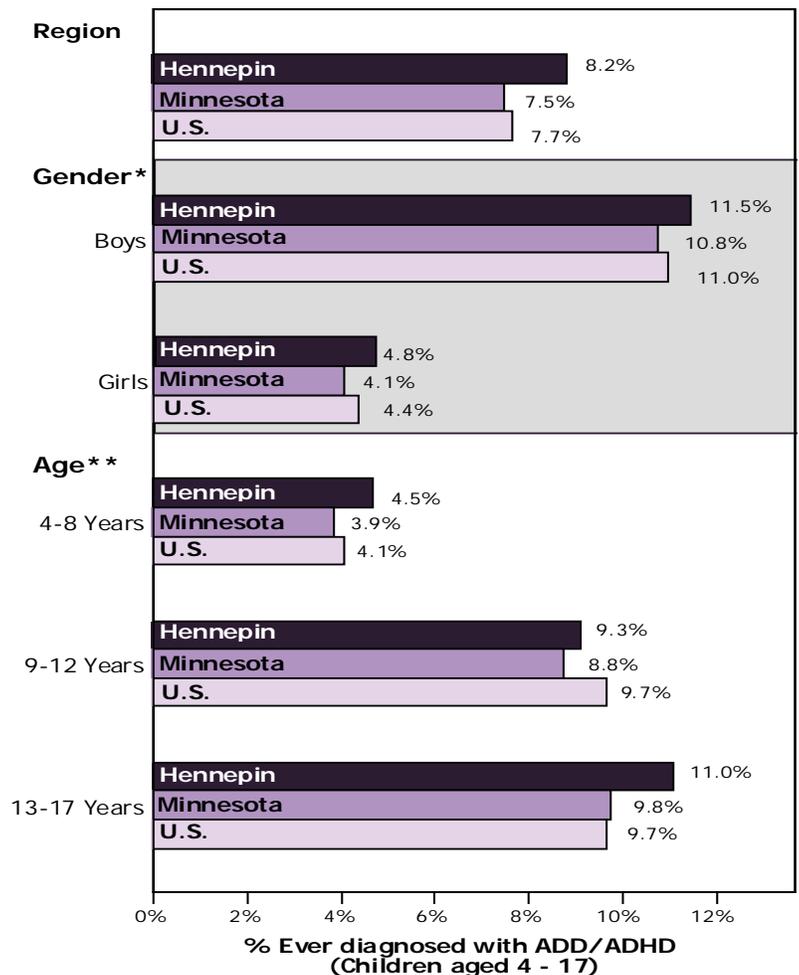
Among Hennepin County children aged 17 and under, 0.3 percent were reported as having either Type I or Type II diabetes. This is equivalent to approximately 1,000 children with diabetes in Hennepin County. This rate was similar to the overall state- and national-level rates for diabetes found by analyzing the 2003 NSCH data. Given the relatively low prevalence of diabetes among children (less than one-half of one percent), the total number of cases captured in the *SHAPE 2006 – Child Survey* was not sufficient to permit further analyses by age, gender or residence.

ADD/ADHD: More frequent among boys and older children

Questions concerning the chronic conditions known as Attention Deficit Disorder (ADD) and Attention Deficit Hyperactivity Disorder (ADHD) were also included in the *SHAPE 2006 - Child Survey*. Since the assessment and diagnosis of ADD/ADHD before a child reaches school age is relatively rare, the analysis here has been restricted to children at least four years of age. The overall rate of ADD/ADHD for Hennepin County children aged 4 to 17 was 8.2 percent, or equivalent to over 17,000 children county-wide. Within Hennepin County, the rates for Minneapolis and suburban Hennepin County children were similar to the overall rate and no statistically significant differences were detected by place of residence.

State- and national-level data on ADD/ADHD for children aged 4 to 17 were obtained from the 2003 National Survey of Children's Health.⁵ The overall rates reported for the US (7.7 percent) and the state of Minnesota (7.5 percent), are similar to the overall rate found in the *SHAPE 2006 - Child Survey* (see Figure 4). The pattern of statistically significant differences found for ADD/ADHD also closely match the state- and national-level findings. For example, the county, state and national findings all detected significantly higher rates of ADD/ADHD for boys. In Hennepin County, the rate of ADD/ADHD reported among boys was 11.5 percent; for girls, the rate was 4.8 percent. Likewise, the analysis of age groups also found a pattern of significant differences similar to the state- and national-level findings. For the group of younger children (4 to 8 year olds), the rate of ADD/ADHD was significantly lower than the rates for the groups of older children (9 to 12 year olds) and adolescents (13 to 17 year olds). In Hennepin County, the rate of ADD/ADHD reported among younger children was 4.5 percent, whereas for the groups of older children and adolescents the rates were 9.3 and 11.0 percent, respectively.

Figure 4. Percent of Hennepin County children with ADD/ADHD by gender and age groups, 2006; state- and national-level percentages, 2003



* Difference in rates between boys and girls is statistically significant for all three geographies at $p < 0.05$.

** Difference in rates between the 4-8 year-old sample and the older age groups is statistically significant for all three geographies at $p < 0.05$.

SOURCE: SHAPE 2006, NSCH 2003

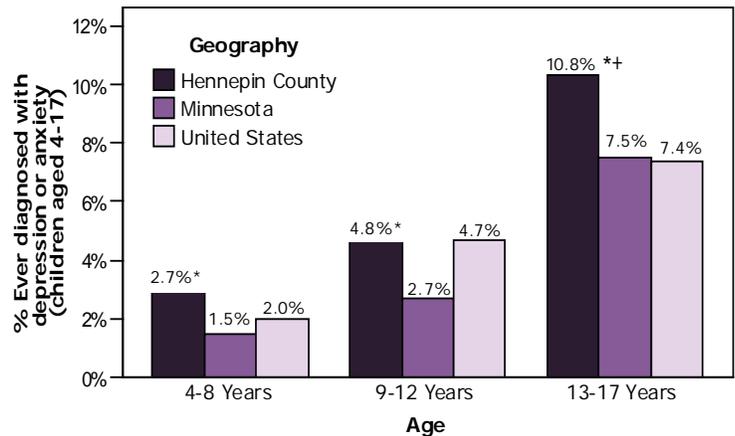
Depression and Anxiety significantly affect children in Hennepin County

The percentage of Hennepin County children reported as having ever been diagnosed with either depression or anxiety was 6.2 percent, which is equivalent to approximately 13,000 children aged 4 to 17. The age-based percentages of children identified with depression or anxiety in Hennepin County were as follows: 2.3 percent of children aged 4 to 8 years; 5.3 percent of children aged 9 to 12 years; and 10.3 percent of adolescents aged 13 to 17 years.

Statistically significant differences were found by age groups. Adolescents (aged 13 to 17) were significantly more likely to have ever been diagnosed with depression or anxiety than were the groups of younger children. Hennepin County children of every age group were also significantly more likely to have ever been diagnosed with depression or anxiety when their rates were compared to their statewide counterparts. Furthermore, the rates for adolescents (aged 13 to 17) were also significantly higher than the national rates reported by the NSCH.

Although the rate of depression and anxiety for girls is slightly higher than that reported for boys (6.7 percent and 5.8 percent respectively) this difference was not statistically significant. Furthermore, there was no difference detected between the rates of depression and anxiety for children residing in Minneapolis versus suburban Hennepin County (the rates were 6.2 and 6.3 percent, respectively).

Figure 5. Percent of Hennepin County children ever diagnosed with depression or anxiety by age, 2006; state- and national-level percentages, 2003



* Differences in rates between Hennepin County and Minnesota are statistically significant at $p < 0.05$.

+ Differences in rates between adolescents in Hennepin County and those of the same age in the Minnesota and the US are statistically significant at $p < 0.05$.

SOURCE: SHAPE 2006, NSCH 2003

Acknowledgments

The **SHAPE** project would like to thank the many individuals, community organizations, and subject-area experts who provided advice and support for the development of **SHAPE 2006**. A partial list of those who provided assistance to the **SHAPE 2006** project can be found on the **SHAPE** Web site listed below. The **SHAPE** project would especially like to thank the more than 10,000 residents of Hennepin County who generously took the time to complete the **SHAPE** survey.

For More Information

SHAPE 2006 is a collaborative project between the Hennepin County Human Services and Public Health Department and the University of Minnesota School of Public Health.

For more information on this *Briefing* or other topics related to the **SHAPE** project, or to receive this information in an alternate format, please contact SHAPE@co.hennepin.mn.us or 612-348-6150.

www.co.hennepin.mn.us
Search keyword: **SHAPE2006**

Notes:

1. The **SHAPE 2006 - Child Survey** asked adults to report on several chronic health conditions their child might have. The general format for these questions was: Has a doctor or other health professional ever told you that your child has... [health condition]? This approach to measuring the chronic health conditions requires that the child has been assessed by a health professional and that the adult responding to the survey is aware of the diagnosis. Thus, it is possible that there are some children who have not been assessed by a health professional (for various reasons), or that the adult responding to the survey was not fully aware of the child's health status.
2. The state and national statistics reported here and throughout are from the 2003 National Survey of Children's Health - Public Use File (NSCH-PUF). The data were downloaded and analyzed by the SHAPE Team. Some of these findings were previously reported in: *The Health and Well-being of Children: A Portrait of States and the Nation*, US Department of Health and Human Services, Health Resources & Services Administration, 2005. Minnesota statistics appear on page 71. (Available at: www.cdc.gov/nchs/slaits.htm.)
3. Here and throughout, statistically significant differences were identified at $p < 0.05$.
4. Here and throughout, estimates of the numbers of children with these conditions were based on US Census 2000 population figures (by age) for Hennepin County and rounded to the nearest 1,000.
5. National findings on ADD/ADHD were reported in: *Mental Health in the United States: Prevalence of Diagnosis and Medication Treatment for ADD/ADHD*, The Centers for Disease Control, *MMWR Weekly*, September 2, 2005, 54(34): 842-847. (Available at: www.cdc.gov/mmwr/prview/mmwrhtml/mm5434a2.htm; downloaded on August 9, 2007.)



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