

Tweens and teens double use of diabetes drugs

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America's tweens and teens more than doubled their use of type 2 diabetes medications between 2002 and 2005, with girls between 10 and 14 years of age showing a 166 percent increase. One likely cause: Obesity, which is closely associated with type 2 diabetes.

The finding is included in a study of chronic medication use in children ages 5 to 19 released today in the journal *Pediatrics* by researchers from the Saint Louis University School of Medicine, pharmacy benefit manager Express Scripts (Nasdaq: ESRX) and the Kansas Health Institute.

In addition to diabetes, the study found that utilization patterns for blood pressure, cholesterol, attention-deficit disorder and attention-deficit/hyperactivity disorder (ADD/ADHD), asthma and depression medications increased at varying levels during the four year period.

"Our study findings indicate that these increased levels of chronic medication use are symptoms of broader underlying issues affecting children today," said Emily R. Cox, Ph.D., RPh, senior director of research at Express Scripts. "These trends are worrisome given that many of these therapies are treating conditions with modifiable risk factors and if not addressed, many of these children will carry these chronic conditions into adulthood."

For example, the use of asthma medications increased 46.5 percent and ADD/ADHD medication use increased 40.4 percent. Cholesterol and

blood pressure medications saw a more moderate growth of 15 percent and 1.8 percent, respectively.

Except for asthma medication, older teens age 15-19 years old account for the largest percentage of children taking these medications.

The bad news, according to Donna R. Halloran, M.D., MSPH, assistant professor of pediatrics at Saint Louis University School of Medicine, is that there is more disease, due in large part to the increasing prevalence of childhood obesity.

"Our findings show that childhood obesity not only has long-term health implications, but also impacts children's immediate health," Halloran said.

However, she says, the rise of prescription use also indicates that more children are being diagnosed and doctors are increasingly using medication to treat these conditions.

"Our findings indicate that we, the doctors, are doing a better job of screening children and diagnosing chronic conditions," Halloran said. "A great example of this is blood pressure, where there has been a big push to identify and treat children in need."

In several cases, the rates of growth were dramatically higher among girls than boys. While boys still take more medications for chronic conditions, the gap has become narrower due to these increases.

The huge increase in type 2 diabetes medication use was driven largely by girls who saw a 147 percent increase over the four year period, compared to boys who saw a 39 percent increase in medicine use. Researchers say they cannot explain this pattern, which is not consistent with the patterns of obesity among boys and girls. However, increased

physician office visits and therefore screening rates – particularly for females – could be one contributing factor.

Researchers say the greater increase of girls prescribed ADD/ADHD medication (63 percent versus 33 percent) may be attributed to increased efforts by physicians to identify ADHD in females following studies that suggested that inattentive ADHD, which is much less likely to be identified and treated, was more common in girls than boys.

Another example of a higher increase among females was seen in antidepressants where the number of females between 15 and 19 taking the medicine increased by 6.8 percent, while for males in the same age group, utilization declined slightly. This increase in antidepressant use among older teen girls was a striking exception to decreases for boys and girls ages 5 to 9 and boys ages 10 to 14. It also occurred despite a public health advisory released by the Food and Drug Administration in October 2003 regarding antidepressant use by children. Among all children, the prevalence of antidepressant use had been increasing prior to the advisory, after which it decreased.

Unlike the other medications studied, children ages 5 to 9 accounted for the largest increase in the use of asthma controller medication among the three age groups at 67.3 percent as compared to 38.8 percent for the 10 to 14 age group and 34.7 percent for the 15 to 19 age group.

The researchers noted that this exception could be explained by concerns over the long-term side effects of these medications in children and/or greater physician office visits, and therefore greater likelihood of prescribing.

Source: Saint Louis University

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