

ATYPICAL ANTIPSYCHOTIC USE PATTERNS IN CHILDREN IN ARKANSAS, 2000 - 2006

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Background

The use of atypical antipsychotic (AAP) medications in the pediatric population is reported to be increasing. Due to data source limitations in other reports, an overall assessment of the increasing use of these products over a significant time span has not previously been available.

Older antipsychotic agents have approved indications and long safety experience in children. Older agents have rarely been prescribed for children since the availability of the newer AAPs. However, with one exception all use of AAP medications in children is "off-label." The exception is risperidone which received FDA approval in October 2006 for use in children with autism and disruptive behavior. Data supporting safety and effectiveness of these agents in pediatrics is lacking, or very limited. Numerous reports have expressed concern over the lack of safety and effectiveness evidence for AAPs when used in children

Using administrative claims data we assessed treatment patterns over time for population of children insured through the Arkansas Medicaid program. Currently this group is half of all children under age 18 in the state of Arkansas.

Objectives

Our aim was to assess the prevalence of use and growth pattern of AAP medications used to treat children in the Arkansas Medicaid population. Assessment of use prevalence reveals the true rate of increase in the use of these agents over time. Examination of the patterns of medications chosen provides clues as to whether or not treatment is grounded on published evidence of safety or effectiveness.

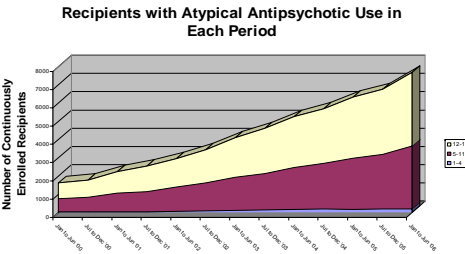
Methods

Pharmacy claims data for Arkansas Medicaid recipients filling an AAP prescription between January 2000 and June 2006 were extracted from a comprehensive database of all Arkansas Medicaid claims. Recipients were grouped into age categories based on their age at the end of each time period. Age categories were arbitrarily assigned to correspond to preschool, early grade school and adolescent populations.

To calculate prevalence, the population was controlled for continuous Medicaid benefit eligibility. The results are descriptive analyses of aggregate AAP prescribing patterns for roughly one half of all Arkansas children.

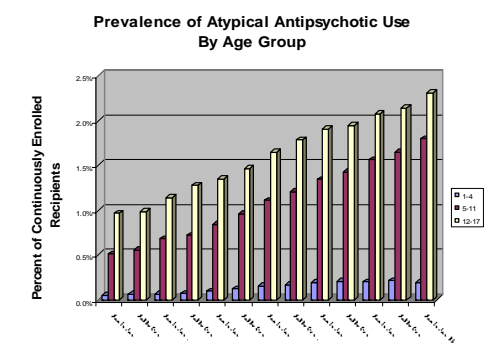
Results

Comparing the first six months in 2000 and 2006 revealed a 4.75-fold increase in total number of Arkansas children treated with AAP medications. By January 2005, total Medicaid purchases of AAP medications for pediatric patients had surpassed the number of AAP purchases for adults in Medicaid. In June 2006, children represented 53% of the total number of Medicaid recipients treated with AAP medications.

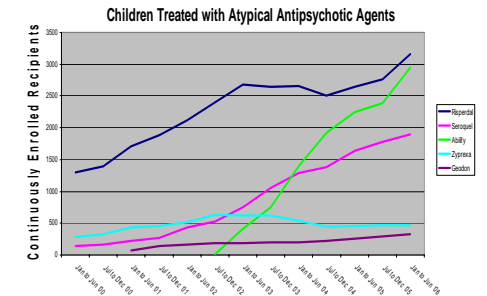


Results

Prevalence calculations were made controlling for continuous Medicaid benefit enrollment. In the time periods studied, continuously enrolled children increased from ~288,000 to ~468,000. The rate of use of AAPs in children more than doubled since 2000. Young school-age children between 5 years of age and the 12th birthday showed the greatest increase in the prevalence of AAP use. In the first half of 2000, 5 in 1000 children in this group received an AAP. This rate more than tripled to 18 per 1000 in the first half of 2006.



The most frequently prescribed AAP for children has been risperidone. However, after introduction of aripiprazole, rapid adoption of "off-label" use of this product in children was seen. Data for safety and effectiveness of aripiprazole in children is particularly lacking. Interestingly, aripiprazole is used in the Arkansas Medicaid population more for the treatment of children than for adults. Children treated with aripiprazole accounted for 70% of the patients covered by Arkansas Medicaid who received that medication.



AAP medications costs are roughly 15% of total Arkansas Medicaid pharmacy costs. In the latest Fiscal Year, pharmacy payments exceeded \$40 million with approximately half that cost for treatment of children.

Conclusions

The rate of AAP use in children enrolled in this population has increased significantly despite limited supporting research. No AAP was FDA approved for use in children during the time frame studied. Although risperidone was recently approved for narrow use in autism, Medicaid eligible children in Arkansas are prescribed AAP medicines more often than the recently reported prevalence of autism (1 in 166 in the pediatric population, or 0.6%). For school aged children, roughly 2 out of every 100 children enrolled in an Arkansas Medicaid program receive treatment with an AAP. Research is needed to address questions on the use and consequences of these agents in children.