

ANTIPSYCHOTIC PRESCRIBING TO YOUTH: A NATIONAL REVIEW OF TRENDS

WHAT WE ASKED:

Second-generation antipsychotics (antipsychotics) have increasingly been prescribed to Medicaid-enrolled youth; however, the nature and frequency of antipsychotic prescribing concurrently with other psychotropic medications is not well described. Antipsychotic use has been associated with serious metabolic side effects in children and the safety and efficacy of concurrent antipsychotic treatments are poorly understood.

We conducted a national analysis to better understand how antipsychotics are prescribed with other psychotropic medication classes to Medicaid-enrolled youth aged 6-18, as well as the average duration of concurrent antipsychotic use. Population-level data describing the trends in antipsychotic prescribing, including the use of concurrent antipsychotics, can help to ensure that future research prioritizes the norms of emerging prescribing practices around concurrent psychotropic medication therapy in youth.

WHAT WE DID:

We used national Medicaid data from the Centers for Medicare and Medicaid Services for years 2004, 2006, and 2008. First, we calculated the number and proportion of youth who received concurrent antipsychotic with four other psychotropic medication classes (stimulants, antidepressants, mood stabilizers, and alpha agonists). Next, we calculated the average annual number of days of use of each psychotropic medication class and of concurrent antipsychotic use.

Among an annual average of 10.6 million Medicaid-enrolled youth, we calculated the rates over time of antipsychotic use alone, the rates of concurrent antipsychotic use with the four other psychotropic medication classes, and the duration of use of each medication class and of concurrent antipsychotic.*

* FOR DETAILED STUDY METHODS, SEE THE BACK OF THIS SHEET.

WHAT WE FOUND:

- ▶ Antipsychotic use increased by 22% over time, from 2.7% of Medicaid-enrolled youth in 2004 to 3.3% in 2008. The majority of youth (85%) with antipsychotic use during a year received antipsychotics concurrently with another psychotropic medication class.
- ▶ Among youth using other psychotropic medication classes, the proportion using concurrent antipsychotics increased over time. By 2008, 22% of stimulant users received antipsychotics concurrently, along with 32% of antidepressant users, 37% of alpha agonist users, and 52% of mood stabilizer users.
- ▶ The duration of antipsychotic use concurrently with another medication class was not short-term. For youth with concurrent antipsychotic, the concurrent use was present on at least 70% of the youth's medication days within a given year, on average.

Demographic and Clinical Trends:

- ▶ The rates of concurrent antipsychotic use were highest among youth in foster care and youth with disability-related Medicaid eligibility (SSI). However, the largest growth over time in use of concurrent antipsychotics was among income-eligible youth who represent the majority of youth in Medicaid.
- ▶ Youth with ADHD experienced disproportionate increases in concurrent antipsychotic prescribing over time, including youth with a sole behavioral health diagnosis of ADHD, who experienced a 15% increase in concurrent antipsychotic use.

85% of youth who used antipsychotics received these medications concurrently with another psychotropic medication class.



WHAT IT MEANS:

Most youth prescribed antipsychotics are also users of other psychotropic medication classes. The findings indicate that the increase in antipsychotic prescribing to youth is largely occurring within the context of concurrent psychotropic prescribing.

The duration of **antipsychotic use within multiple medication therapy is not short-term.** With growing numbers of youth receiving this therapy and often for long durations, identifying the safest combinations, doses, and monitoring protocols for concurrent antipsychotic therapy is critical.

Less-impaired youth and those with diagnoses for which antipsychotics are not clinically indicated, such as ADHD, are prescribed antipsychotics with growing frequency. **As antipsychotic use reaches beyond youth with serious mental illness, policy and practice should prioritize the use of appropriate monitoring guidelines and create adequate access to alternate evidence-based therapies for treatment of behavioral concerns.**

STUDY METHODS:

The data source was Medicaid Analytic Extract (MAX) data files for 42 states for years 2004, 2006, and 2008. Child-level demographic, eligibility, encounter, and pharmacy data were extracted from MAX files. The sample was drawn from a nationally representative population of youth aged 6-18 years continuously enrolled in Medicaid (defined as at least 10 of 12 months per year). Seven states and the District of Columbia were deemed ineligible for use in this study (CT, ME, FL, HI, NV, OH, PA) due to data quality issues.

The dependent variable was use of a psychotropic medication meeting criteria as a “pattern.” A “pattern” was identified when one or more psychotropic medication classes were used for at least 14 consecutive days. A child was identified as a user of psychotropic medications if she had at least one psychotropic treatment pattern within a year. Patterns were representative of five major psychotropic therapeutic classes, including: stimulants, antidepressants, antipsychotics, alpha agonists, and mood stabilizers. Independent variables included year, sociodemographic information (age, sex, state of residence, and Medicaid eligibility status as foster care, SSI, or income), psychiatric diagnoses, and inpatient hospitalization. Psychiatric diagnoses were encoded into 10 primary diagnosis profiles: attention-deficit disorder, autism, anxiety disorder, bipolar disorder, conduct disorder, depression, intellectual disability, learning disability and/or developmental delay, miscellaneous behavioral health, and schizophrenia.

Multivariate logistic regression estimated the log odds of use of each therapeutic class and of concurrent antipsychotic. Duration of pattern use was estimated within each study year, based on the total days supply of medication; concurrent use was calculated as the days of overlap between antipsychotic and another psychotropic class. Duration was estimated using Poisson models, with an offset for the child’s Medicaid-eligible days, to estimate the number of days of use of the pattern(s) of interest.

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- RELATED WORK: <http://policylab.chop.edu/project/growing-use-and-safety-concerns-antipsychotic-medication-among-medicad-enrolled-children>
- BLOG LINK: <http://policylab.chop.edu/blog/numbers-youth-antipsychotics-what-does-it-all-mean>

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