Age of Onset, Duration, and Type of Medication Therapy for Attention-Deficit/Hyperactivity Disorder (ADHD) and Substance Use During Adolescence: A Multi-Cohort National Study

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Abstract

Objective
To examine whether age of onset, duration, or type of medication therapy for attention-deficit/hyperactivity disorder (ADHD) is associated with substance use during adolescence.

Method
Nationally representative samples of high school seniors were surveyed via self-administered questionnaires. The sample consisted of 40,358 individuals from ten independent cohorts (2005-2014) and represented a population that was 52% female, 62% White, 10% African-American, 14% Hispanic, and 14% other. Design-based logistic regression analyses were used to test the associations between age of onset, duration, and type of ADHD medication therapy and recent substance use, controlling for potential confounding factors.

Results
Individuals who initiated stimulant medication therapy for ADHD later (ages 10-14 and 15 years and older) and for shorter duration (2 years or less and 3-5 years) as well as those who reported only non-stimulant medication therapy for ADHD had significantly greater odds of substance use in adolescence relative to individuals who initiated stimulant medication therapy for ADHD earlier (aged 9 or less) and for longer duration (6 or more years). The odds of substance use generally did not differ between population controls (youth without ADHD and unmedicated youth with ADHD) and individuals who initiated stimulant medication for ADHD early (aged 9 or less) and for longer duration (6 or more years).

Conclusion
Relative to later onset and shorter duration of stimulant treatment for ADHD, early onset and longer duration of stimulant treatment for ADHD was associated with a risk of substance use during adolescence that is lower and similar to that in the general population.