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Stimulant treatment for attention-deficit/hyperactivity disorder and risk of first and repeat criminal offending: a population data linkage cohort study

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Objective

To examine the effect of stimulant treatment on first and repeat criminal offending among children and young adults with attention deficit-hyperactivity disorder (ADHD).

Implications

Adequate treatment may help keep young people with ADHD out of the criminal justice system.

Approach

A population data linkage cohort study of individuals born in New South Wales (NSW), Australia in 1990-2005 and followed until May 2016. Individuals linked to stimulant treatment authorizations for ADHD in the NSW Ministry of Health controlled substance database were frequency matched (1:10) to controls without ADHD. Proven criminal offenses were linked from statewide court records. First and repeat offenses were examined separately using modified cox regression and Prentice, Williams, Peterson (PWP) models, respectively.

Results

The cohort included 75,650 individuals with ADHD and 745,634 controls. A total of 59,658 individuals (7.3%) committed an offense and individuals with ADHD committed 3 times as many offenses. For all age and sex groups, the risk of a first offense was increased among individuals with ADHD but reduced by treatment (Males 10-17 years, untreated Hazard Ratio (HR) 2.02 95% confidence interval (CI) 1.95, 2.10, treated HR 1.52 95% CI 1.41, 1.62). The effect estimates were reduced for repeat offenses (Males 10-17 years, untreated HR 1.09 95% CI 1.05, 1.13, treated HR 0.97 95% CI 0.90, 1.04) with mixed results for the effect of treatment.

Conclusions

Individuals with ADHD had increased risk of offending, but stimulant treatment reduced the risk of first offenses. This association and benefit of treatment were reduced among prior offenders.

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