Cost–utility analysis of methylphenidate and amphetamine/dexamphetamine in adults with attention-deficit hyperactivity disorder

Surbhi Shah, Hongye Wei, Jayani Jayawardhana, Matthew Perri, Ewan Cobran and Henry N. Young

JOURNAL OF PHARMACEUTICAL HEALTH SERVICES RESEARCH, March 2017
DOI : 10.1111/jphs.12173

Abstract

Objectives
Methylphenidate (MPH) and amphetamine/dexamphetamine (AMP/DEX) are the two most common stimulants used to treat attention-deficit hyperactivity disorder (ADHD). Previous economic evaluations of these treatments mainly focused on children and adolescents. The objective of this study was to conduct a cost–utility analysis of MPH and AMP/DEX treatments in adults with ADHD.

Methods
This study was conducted from a third-party payer perspective using the Medical Expenditure Panel Survey from 2011 to 2013. Patients taking MPH or AMP/DEX were identified from the Prescribed Medicines files. The Short Form-12 version 2 questionnaire scores were used to calculate quality-adjusted life years (QALYs). Only direct costs were evaluated from payer's perspective. Incremental cost–utility ratios were calculated, and sensitivity analyses were performed to assess the robustness of the findings at different willingness to pay (WTP) assumptions.

Key findings
Of 305 patients, 68.8% were in the AMP/DEX group and 31.2% were in MPH group. The mean annual cost for the MPH group was $4355.31, and the cost for the AMP/DEX group was $6026.40. The mean utilities for MPH and AMP/DEX groups were 0.622 and 0.598 respectively. Sensitivity analyses showed that MPH exceeded AMP/DEX at all WTP values.

Conclusion
Methylphenidate was clearly a dominating therapy over AMP/DEX; however, the QALY difference was found to be 0.024. Further research is needed to assess the long-term impact of using these treatments on various clinical and economic outcomes.