

Cost-utility Analysis of Lisdexamfetamine Dimesylate in the Treatment of Adults with Attention-deficit/hyperactivity Disorder in the United Kingdom

E.A. Zimovetz¹, M. Bischof², **A. Joseph**³, J.A. Mauskopf⁴

¹Market Access and Outcomes Strategy, RTI Health Solutions, Manchester, United Kingdom ; ²Global Market Access Centres of Excellence, Shire, Zug, Switzerland ; ³Global HEOR and Epidemiology, Shire, Zug, Switzerland ; ⁴Health Economics, RTI Health Solutions, Research Triangle Park, USA

INTRODUCTION: Attention-deficit/hyperactivity disorder (ADHD) is a chronic neurobehavioural disorder with considerable costs. Lisdexamfetamine dimesylate (LDX) is approved in the UK for ADHD treatment in children and adolescents.

OBJECTIVES: To perform an economic analysis of LDX for adults with ADHD from the UK National Health Service (NHS) perspective.

AIMS: To estimate cost-effectiveness of LDX compared with methylphenidate (MPH) and atomoxetine (ATX).

METHODS: A 1-year decision-analytic model was developed. Health events included response, non-response and unable to tolerate. Efficacy data were taken from a mixed-treatment comparison (MTC) analysis of all clinical trials. Response was defined as a score of 1 or 2 on the Clinical Global Impression-Improvement scale. Tolerability was assessed by discontinuation rates due to adverse events. Utility weights were identified via a systematic literature review. Healthcare resource use estimates were obtained via a survey of clinicians. Daily drug costs were based on mean doses reported in the trials used in the MTC. One-way and probabilistic sensitivity analyses were performed.

RESULTS: The comparison of LDX and MPH for 100 people resulted in an increased annual cost of £34 and quality-adjusted life-years (QALYs) of 0.5, with an incremental cost-effectiveness ratio of £64 per QALY. When compared with ATX for 100 people, LDX was a dominant strategy, with lower annual costs (–£26,700) and higher QALYs (1.0). There was a 62% probability of LDX being cost-effective versus MPH-ER at a threshold of £20,000 per QALY.

CONCLUSIONS: From the perspective of the UK NHS, LDX provides a cost-effective treatment option for adults with ADHD.