

Cost-Effectiveness of Clinically Proven Treatment Strategies for Attention-Deficit/Hyperactivity Disorder (ADHD): Impact of Coexisting Conditions

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Most patients with ADHD suffer from coexisting conditions, notably oppositional defiant disorder and conduct disorder (“externalizing”, in ~50-60%) or anxiety and depression (“internalizing”, in 12-26%). Yet, the impact of comorbidity on the cost-effectiveness of clinically proven treatment strategies for ADHD is poorly understood.

Objectives: To combine data on symptom normalization and functional improvement from the NIMH MTA Study (enrolling n=579 children with ADHD according to DSM-IV-criteria) with data on resource utilization, in order to explore the relevance of coexisting conditions for cost-effectiveness of MTA-type treatment strategies, i.e., medication management (MedMgt), intense behavioral management (Beh), and the two combined (Comb), versus (United States) community care (CC) and a hypothetical “Do Nothing” alternative (time horizon 14 months).

Methods: Patient subgroups were defined by coexisting conditions: pure ADHD (n=184, ~32%), ADHD and internalizing (n=81, ~14%) or externalizing (n=172, ~30%) comorbidities only, or ADHD and both comorbidities (n=142, ~25%). Resource utilization data from the MTA Study were combined with country-specific unit costs (Germany, Netherlands, Sweden, United Kingdom, and United States; year 2005). SNAP-IV scores <1 defined symptomatic “responders”, whereas functional improvement was measured as effect size (ES) changes in Columbia Impairment Scale scores. Cost-effectiveness was determined calculating incremental cost-effectiveness ratios (ICERs) and cost-effectiveness acceptability curves (CEACs).

Results: In terms of symptomatic improvement, MedMgt represented the economically most attractive strategy across jurisdictions and comorbidities (ICERs versus CC ranging from 100€ to 5,000€ per patient “normalized”, dominating Beh). In terms of functional improvement, MedMgt was attractive at low levels of willingness-to-pay, whereas Beh was more attractive at moderately higher levels of willingness-to-pay for patients with internalizing comorbidity, and Comb became more attractive in the presence of externalizing comorbidities.

Conclusions: The observed pattern of cost-effectiveness by comorbidity was remarkably similar across jurisdictions. Further research is needed to determine the relative merits of better-targeted, less expensive behavioral interventions.

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