Cost-Effectiveness of Clinically Proven Treatment Strategies for Attention-Deficit/Hyperactivity Disorder (ADHD) in the United States, Germany, The Netherlands, Sweden, and United Kingdom

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ADHD is a common disorder of childhood and adolescence in the US and Europe. The NIMH MTA Study is a clinical landmark trial, including 579 children age 7-9.9 years with ADHD according to DSM-IV criteria, who were randomly assigned to 14 months of medication management (MedMgt), intense behavioral treatment (Beh), both combined (Comb), or community care (CC).

Objective: To evaluate the cost-effectiveness of clinically proven treatment strategies (neither placebo nor single drugs) for ADHD and Hyperkinetic Disorder (HKD/HKCD, a subgroup meeting ICD-10-based diagnostic criteria used in Europe) in five countries, using patient-level data from the MTA Study over 14 months.

Methods: Medical resource utilization data came from the MTA, excluding its research component. Unit costs (year 2005) were calculated from a societal and from a third-party payer's perspective for Germany, Netherlands, Sweden, United Kingdom, and USA. Corresponding to the primary study endpoint, treatment response was defined as normalization of core symptoms (SNAP-IV teacher/parent scores <1). Utility estimates were derived from expert estimates and parent-proxy-ratings.

Results: Incremental cost-effectiveness ratios (ICERs) were determined for the total study population and subgroups with pure ADHD (without comorbidity, n=184), pure HKD (n=77), or HKD/HKCD (n=145). ICERs per additional patient "normalized" ranged from to dominance to 4,200€ for MedMgt versus CC and from 21,000€ to 100,000€ for Comb versus MedMgt. MedMgt dominated Beh and exhibited extended dominance over CC compared to a hypothetical "Do Nothing" alternative. Results were supported by cost-effectiveness acceptability and sensitivity analyses.

Conclusions: Despite international differences regarding standards of care, diagnostic criteria, and unit costs, key findings for European jurisdictions were consistent with US results. Although cost-utility estimates for this pediatric population should be interpreted with caution, results indicate acceptable to attractive cost-effectiveness of an intense MedMgt strategy. Further analyses will have to explore the impact of psychiatric comorbidity and broader clinical endpoints.

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