OBJECTIVES: Attention-deficit hyperactivity disorder (ADHD) is a common disorder that is associated with broad functional impairment among both children and adults. The purpose of this project was to review literature on the economic costs of ADHD, as well as potential economic benefits of treating this condition.

METHODS: A literature search was performed using MEDLINE to identify all published articles on the economic implications of ADHD, and authors were contacted to locate conference abstracts and articles in press that were not yet indexed. In total, 22 relevant items were located including published original studies, economic review articles, conference presentations, and reports available on the Internet. RESULTS: Results of medical cost studies consistently indicated that children with ADHD had higher annual medical costs than either matched controls (difference ranged from $303 to $1343) or non-matched controls (difference ranged from $207 to $1560) without ADHD. Two studies of adult samples found similar results. A limited number of studies have examined other economic implications of ADHD including costs to families; costs of criminality among individuals with ADHD; costs related to common psychiatric and medical comorbidities of ADHD; and costs of accidents among individuals with ADHD. Treatment cost-effectiveness studies have primarily focused on methylphenidate, which is a cost-effective treatment option with cost-effectiveness ratios ranging from $15,509 to $27,766 per quality-adjusted life year (QALY) gained. CONCLUSIONS: A growing body of literature, primarily published in the United States, has demonstrated that ADHD places a substantial economic burden on patients, families, and third-party payers. Recognition, diagnosis and treatment of ADHD are increasing in Europe and Australia, and future studies may document the economic burden of ADHD in these areas. As new treatments are introduced, it will be important to evaluate their cost-effectiveness to provide an indication of their potential value.

MENTAL HEALTH—BI-Polar Disorder

ESTIMATING THE BUDGET IMPACT OF QUETIAPINE FOR THE TREATMENT OF ACUTE MANIA AMONG HOSPITALIZED PATIENTS

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OBJECTIVES: To develop a tool to allow estimation of the budget impact of treatments for acute mania in bipolar I disorder from a US health care payer perspective. METHODS: Course of each individual is simulated beginning with hospitalization. Discharge depends on the level of symptoms as measured by the Young Mania Rating Scale (YMRS). The effect of treatment is determined using time dependent regression equations derived from trial data, and decision rules obtained from clinical experts. Outcomes include: time to response and symptom resolution; proportion of subjects reaching each outcome; number of adverse events. Medical care costs were obtained from hospital discharge databases, the National Medicare Physician Fee Schedule and RedBook. Different scenarios are examined, each describing the proportion of subjects on the various treatments (lithium; divalproex sodium; olanzapine, risperidone and quetiapine—monotherapy and in combination with lithium). The base case scenario was derived from the distribution of treatments observed in a state Medicaid population. Subjects may switch treatment at any point, but analyses are intention-to-treat over 100 days, corresponding to follow-up in mania trials. RESULTS: Scenarios with a greater proportion of quetiapine users (5% vs. 40% and 100%) result in a smaller impact on the health care budget ($6912, $6277 and $5525 per patient, respectively) and improvements in patient outcomes (e.g., 43%, 47% and 54% responding at day 21; 74%, 77% and 80% remitting by day 84). Quetiapine is cost-saving compared to olanzapine (about $250 per patient), mainly due to fewer side-effects. Sensitivity analyses showed the budget impact is influenced by drug prices, discharge criteria and side-effect management. CONCLUSIONS: Results suggest that increased use of quetiapine for mania in the US is economically sound and will improve health outcomes. In addition, this model illustrates that discrete event simulation is a very useful and versatile tool for budget impact analyses.

Mental Health Cost Comparison Among Patients With Bipolar Disorder Treated with Risperidone Versus Olanzapine or Quetiapine in a Managed Care Setting: A Propensity-Matched Cohort Study

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OBJECTIVE: To compare mental health-related costs among patients with bipolar disorder treated with atypical antipsychotics in a managed care setting. METHODS: This was a retrospective cohort study using administrative claims data from a national managed care organization. Participants initiated treatment with risperidone, olanzapine, or quetiapine between July 1, 2000 and December 31, 2002, and had a bipolar disorder diagnosis within six months of the index prescription for an atypical antipsychotic. Subjects treated with more than one antipsychotic at index were excluded. Subjects were matched one to one on the propensity to receive risperidone using a score estimated from a logistic regression model, which included age, gender, psychiatric comorbidities, plan type, geographic region and mood stabilizer use. Once matched, 12 months of follow-up mental health-related costs and utilization data were compared using univariate statistics. RESULTS: The olanzapine cohort accounted for half of the study patients (n = 1660, 50%) followed by the risperidone (n = 951, 29%) and quetiapine cohorts (n = 699, 21%). After adjusting for treatment selection bias through propensity matching, risperidone- and olanzapine-treated subjects had similar mental health costs ($5728 vs. $5908, respectively, NS). The cost of psychotropic therapy was significantly higher for the olanzapine versus risperidone cohort ($3363 vs. $2969, p = 0.001) and was the only significant difference between these cohorts. Risperidone patients had significantly lower mental health costs compared to subjects treated with quetiapine ($5666 vs. $6579, respectively, p = 0.007). Subjects treated with risperidone also had significantly lower psychotropic therapy costs compared to quetiapine subjects ($2929 vs. $3492 respectively, p < 0.0001). CONCLUSION: In a managed care setting, patients with bipolar disorder treated with risperidone had similar mental health costs compared to patients receiving olanzapine, and lower mental health costs compared to those treated with quetiapine. This study provides important comparative information on the real world cost of bipolar patients treated with atypical antipsychotics.

Antipsychotic Use and Hospitalization in Bipolar or Manic Patients

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