NEW METHOD FOR EXAMINING COST-EFFECTIVENESS OF NEW DRUGS VERSUS ESTABLISHED 
DRUGS FOR CHRONIC ILLNESSES

Thousand Oaks, CA, USA (November 8, 2005) – In a comprehensive analysis and mathematical model of the available scientific data, researchers at the University of York on behalf of the National Institute of Health and Clinical Excellence (NICE) in the United Kingdom found that newer drugs used in treating the most common forms of epilepsy are more expensive than older drugs but produce similar health benefits. The analysis, published in the September 2005 issue of Medical Decision Making (MDM), a publication of the Society for Medical Decision Making, focuses on the cost-effectiveness of epileptic drugs licensed for adults in three specific situations. The objective of the study was to consolidate available evidence, to bring it together within a decision model, and to quantify the uncertainty associated with cost-effectiveness.

Comparing different drugs for epilepsy has been difficult because there are few head-to-head trials of different agents and because the observed rates of patient withdrawal from the drugs change over time. The investigators applied new methods of analyzing drug effectiveness data to overcome these problems. These methods, they argue, will be of value for evaluating the effectiveness and cost of drug therapies for other chronic conditions.

Epilepsy affects almost 3,000,000 people in the US and UK alone. The study by Hawkins et al compared these situations: monotherapy for newly diagnosed patients, monotherapy for refractory patients, and combination therapy for refractory patients. The analysis separately considers partial and generalized seizures. Drug therapy is the main treatment for epilepsy, but there is not a uniform approach to the selection or sequencing of anti-epileptic drug (AED) therapies.

The analysis showed that, based on existing studies, two older drugs, valproate and carbamazepine, are likely to be more cost-effective than newer agents for newly diagnosed patients with partial seizures. Valproate was shown to be most cost-effective for newly diagnosed patients with generalized seizures. For some other groups of patients, such as those who did not respond well to a single agent, newer drugs such as topiramate, oxcarbazepine, or lamotrigine, were cost-effective. For example, oxcarbazepine is probably the most cost-effective adjunctive therapy for refractory patients with partial seizures, and adjunctive topiramate was more cost-effective than monotherapy for refractory patients with generalized seizures.

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