

The following abstracts, from medical journals containing literature on epilepsy, were selected for their relevance to this supplement.

Management of Epilepsy in Managed Care Organizations

While attempting to reduce costs and provide an acceptable level of medical care, the clinical practice guidelines of managed care organizations (MCOs) often discourage legitimate referrals to specialists, resulting in poorer patient care and increased costs. Research indicates that the most cost-effective care of patients with seizure disorders is provided by specialists; however, most new onset epilepsy patient care and about 40% of ongoing care is provided by primary care physicians who generally lack expertise in seizure classification and appropriate antiepileptic drug therapy. A better approach to epilepsy patient care is to recognize the complexity of the disease and the necessity of referral to specialists. Primary care physicians can play a central role in a multidisciplinary approach to care, including encouragement of compliance with established treatment regimens, but an epilepsy specialist should manage patient evaluation and implementation of a treatment regimen. Children, women, and the elderly with epilepsy, who often have high risk factors for comorbidities or a need for close monitoring, may require additional specialty care. MCOs can improve patient care by focusing on clinical outcomes rather than on cost management. Cooperative care led by an epilepsy specialist can reduce the incidence of unnecessary emergency care and doctor

visits and prevent the use of inappropriate or inadequate medication regimens.

Montouris GD. How will primary care physicians, specialists, and managed care treat epilepsy in the new millennium? *Neurology* 2000;55(11 suppl 3):S42-44.

A Model of Epilepsy Patient Care

In an attempt to improve clinical outcomes and potentially reduce costs of care, Lovelace Health Systems in Albuquerque, New Mexico, predominantly a staff model health maintenance organization serving approximately 223,000 members, established a disease intervention program for epilepsy in 1996. The program is conducted through a multidisciplinary team approach, which includes reviewing the literature to develop or adopt optimal practice guidelines, creating provider and patient education materials, and implementing specialty clinics. The assessment of current practices by reviewing patient charts and surveying providers and patients identified the providers' need for succinct, clear guidelines for classifying seizures. It also highlights the need for assistance in making decisions about patients suspected of having new onset seizure disorder and as those with ongoing seizure problems. The program also pointed out the need for better patient education materials. Guidelines developed for providers included information about seizure classification, antiepileptic drugs, pregnancy issues, and safety. Although primary care physicians are not required to consult neurologists, they are encouraged to, especially for new onset patients or for patients whose seizures are not controlled. Measurement indicators include patient quality-of-life surveys, case control

studies to review clinical and cost outcomes, and provider satisfaction surveys. Results are being analyzed.

Trost LF. Epilepsy in a managed care organization. *Neurology* 2000;55(11 suppl 3):S34-41.

The Need for Clinical Trials to Support the Use of Newer Antiepileptic Drugs

Personal and group access to antiepileptic drugs (AEDs) is currently limited by cost. Formulary restrictions often promote the use of generic drugs or older brands and discourage the use of newer drugs by assigning them higher copays and requiring the manufacturers of new AEDs to provide evidence of better safety or efficacy compared with existing treatments before new agents will be considered for formulary. By using pharmacoeconomic analyses and documentation of the most clinically effective as well as cost-effective agents for various types of seizures, neurologists will be taking the first step toward influencing the selection of AEDs that will be most beneficial to their patients. Cost-effectiveness studies must include total direct and indirect costs of care, such as emergency department visits, phone calls, laboratory tests, and missed days from work or school, and combine that information with efficacy and tolerability profiles for each drug studied. Until comparison studies that include such cost-effectiveness data are conducted, it will be difficult to persuade formulary decision makers of the superiority of one drug over another. Using clinical trials to help differentiate drugs is the best way for neurologists to justify the need for newer, more expensive therapies.

Bergen DC. Restrictions on the availability of antiepileptic drugs. *Arch Neurol* 2000; 57:273-274.

Managing Epilepsy in the Elderly

Epidemiological studies have shown that the incidence of epilepsy in individuals older than 70 is higher than was once thought, ie, 2 to 3 times that in children, who were once thought to have the highest incidence of epilepsy. Elderly people are more likely to have partial seizures, whose etiology appears to be related to cortical gray matter damage. Seizures occur in up to nearly 16% of elderly patients who have had occlusive strokes and in 23% to nearly 43% of patients who have had embolic strokes. Postictal periods of confusion after complex partial seizures may last for days in elderly patients, adding to the impression of cognitive decline related to other causes. In fact, clinical symptoms of epilepsy in this population are often mistaken for other age-related conditions. Its diagnosis is further complicated by absence of electroencephalogram evidence. When selecting drug treatment for elderly patients, physicians must consider the likelihood of concomitant medications for other illnesses, the increased likelihood of dose-related adverse effects, the possible decrease of renal and hepatic clearance, and the diminishment of plasma protein to which drugs can bind. Understanding the pharmacokinetic and pharmacodynamic profiles of an antiepileptic drug is important so dosage adjustments can be made, if necessary.

Ramsay RE, Pryor F. Epilepsy in the elderly. *Neurology* 2000;55(5 suppl 1):S9-S14.

Issues Facing Women with Epilepsy

In addition to dealing with the social stigma of epilepsy — including the misperception that it is a psychiatric condition rendering them unfit to have children — women with the disease face many physical challenges. For example, treatment with older antiepileptic drugs (AEDs) may produce adverse effects such as weight gain or loss, hair loss, excessive hair

growth on the face and arms, and gingival hypertrophy. If a cosmetic side effect reduces a patient's adherence to therapy, breakthrough seizures may occur. In addition, there seems to be a relationship between hormonal deficiencies in women and the onset of a certain type of epilepsy. The effectiveness of oral contraceptives is also diminished by several AEDs. Perhaps the greatest challenge for women with epilepsy is pregnancy, which presents many complications. Some women will have increased frequency of seizures during pregnancy, possibly as a result of pharmacokinetic changes affecting AED plasma levels. There is greater risk for fetal death, congenital malformations, neonatal hemorrhage, low birth weight, and other problems; however, these risks can be minimized by using folate and AED monotherapy at the lowest effective dose. With communication between their obstetricians and neurologists and careful monitoring, more than 90% of women with epilepsy can bear healthy children.

Yerby MS. Special considerations for women with epilepsy. *Pharmacotherapy* 2000;20(8 Pt 2):159S-170S.

Clinical Pharmacology of Antiepileptic Drugs

A clinical trial directly comparing all antiepileptic drugs (AEDs) is needed to

help clinicians select optimum treatment regimens. The limited information currently available from labeling trials does not provide clinicians with enough information to make informed decisions about the complexities of treatment by patient characteristics and seizure type, especially for less common seizures such as temporal- or frontal-onset partial seizures. Data about the effects of AEDs in children, women, and the elderly are also lacking. To further complicate the evaluation process, drug efficacy is measured differently in various trials, making it difficult to accurately compare AEDs across studies. Studies measure efficacy (ie, seizure control), however, decisions about AED selection are often based on effectiveness, that is, how the drug works in a real-world environment, which takes into consideration quality of life, seizure frequency and severity, and adverse effects, and comes primarily from clinical experience in an uncontrolled setting. New AEDs have provided important new means of treating patients effectively and more safely, but further information about how they differ from each other is needed. A multicenter study that provides more detailed information of efficacy and safety across a wide population of epilepsy patients is recommended.

Devinsky O, Cramer J. Safety and efficacy of standard and new antiepileptic drugs. *Neurology* 2000;55(11 suppl 3):S5-S10.