

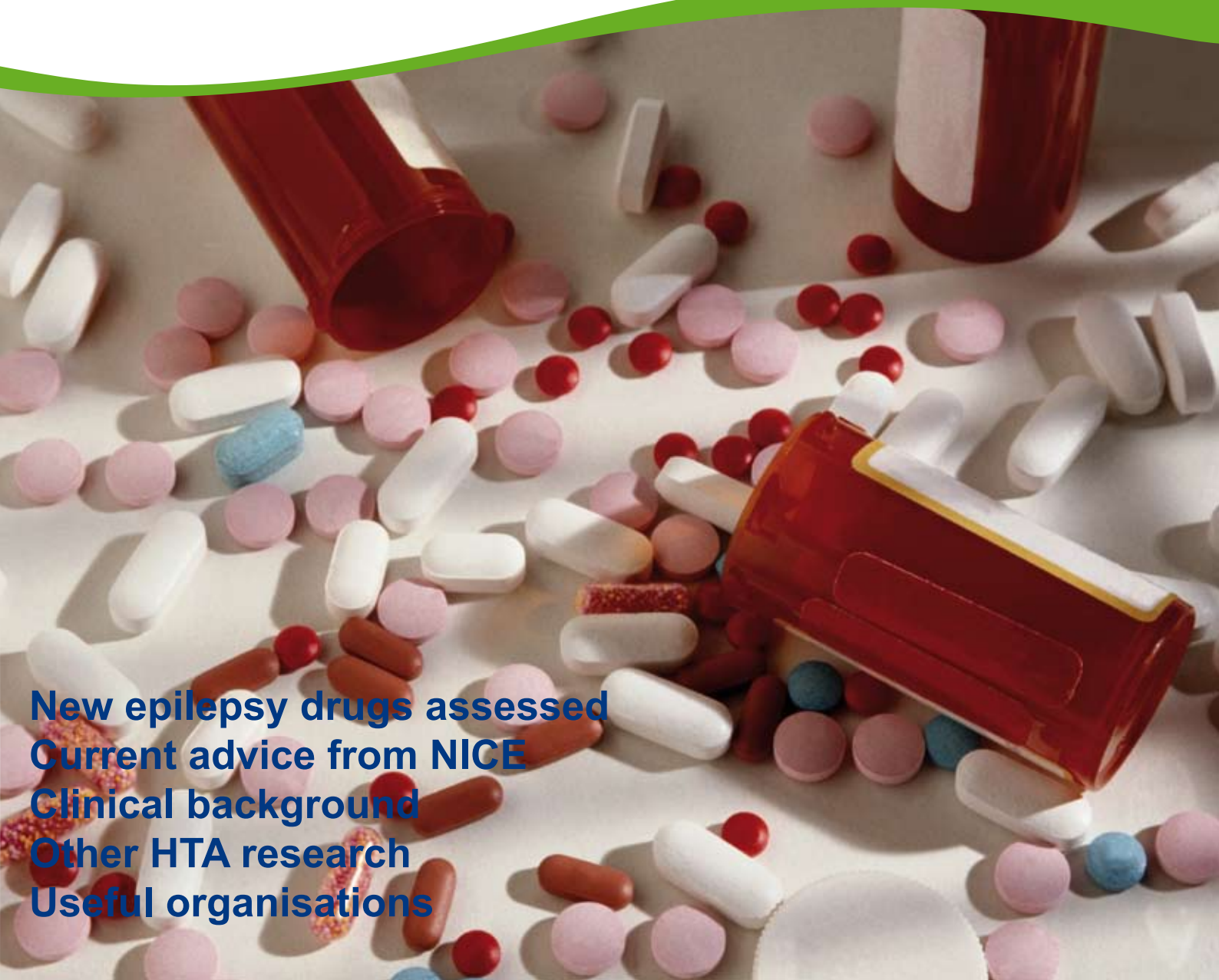


NIHR Health Technology Assessment programme

NHS
National Institute for
Health Research

Spotlight

Epilepsy drugs assessed



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New epilepsy drugs assessed

A newer drug for treatment of partial epilepsy is clinically superior to the existing drug of first choice for the condition, while an older drug is better than new for treatment of generalised seizures, suggests research commissioned by the National Institute for Health Research Health Technology Assessment (NIHR HTA) programme.

The multi-centre 'standard and new antiepileptic drugs (SANAD)' trial, compared newer drugs for epilepsy; gabapentin, lamotrigine, oxcarbazepine

Epilepsy is the most common neurological condition in the world. It affects up to 1% of the UK population.

and topiramate, with carbamazepine and valproate, which have been widely accepted as the drugs of first choice for patients with partial onset and generalised seizures respectively for the last 20 years. Researchers from the University of Liverpool found that a newer drug, lamotrigine, is clinically superior and a cost-effective alternative to carbamazepine for the majority of patients diagnosed with partial seizures. However valproate remains the most clinically effective drug for patients with generalised epilepsy.

Investigating clinical practice

Over the last 15 years there have been a number

Current guidelines from NICE

The current National Institute for Health and Clinical Excellence (NICE) guidelines for the treatment of epilepsy identify carbamazepine and valproate as being first choice treatments for the treatment of epilepsy. If these do not stop a person from having seizures, or if the person experiences side effects or these drugs are unsuitable, one of the newer drugs can be tried as long as it is suitable for the type of epilepsy the person has.

To view the full guidelines visit <http://guidance.nice.org.uk/TA76>

of new antiepileptic drugs licensed, but there is a lack of research evidence about the clinical and cost-effectiveness of these drugs. However there has been an increase in doctors prescribing them.

"It was vital that research was conducted to allow doctors to make informed decisions about the best first line treatment to use before newer, more expensive drugs became the first choice by default," says lead researcher Professor David Chadwick.

The SANAD trial is the largest of its kind involving more than 2,000 patients from hospital out-patient clinics. It recruited patients (both children above the age of five and adults) who had two or more clinically defined unprovoked epileptic seizures



within the past year, and for whom treatment with a single antiepileptic drug was the best option.

The study comprised two arms. In patients with partial epilepsy, carbamazepine was compared to newer drugs gabapentin, lamotrigine,

In 2002 new drugs accounted for 69% of the total costs of antiepileptic drugs to the NHS (£99 million of £142 million).

oxcarbazepine and topiramate. In generalised epilepsy, valproate was compared with lamotrigine and topiramate.

The research team investigated the effect of the different drugs on seizure recurrence, quality of life of patients, and chronic epilepsy, as well as cost-effectiveness over a period of two years.

Newer versus older drugs

In partial onset seizures, lamotrigine was more effective at controlling epilepsy for patients at both one and two years after remission compared to carbamazepine, gabapentin, and topiramate. Lamotrigine was also a cost-effective alternative to carbamazepine, the standard drug, for patients with partial seizures.

In patients with generalised epilepsy or difficult to classify epilepsy, valproate remains the most clinically effective drug, though topiramate may be a cost-effective alternative for some patients. However lamotrigine, which is regarded as a broad-spectrum antiepileptic drug, was the least effective treatment for patients in this arm, and should be reserved for treatment of partial seizures.

“A number of new antiepileptic drugs have been licensed over the past decade, but for several reasons previous trials have failed to inform clinical practice or policy,” says Professor Chadwick.

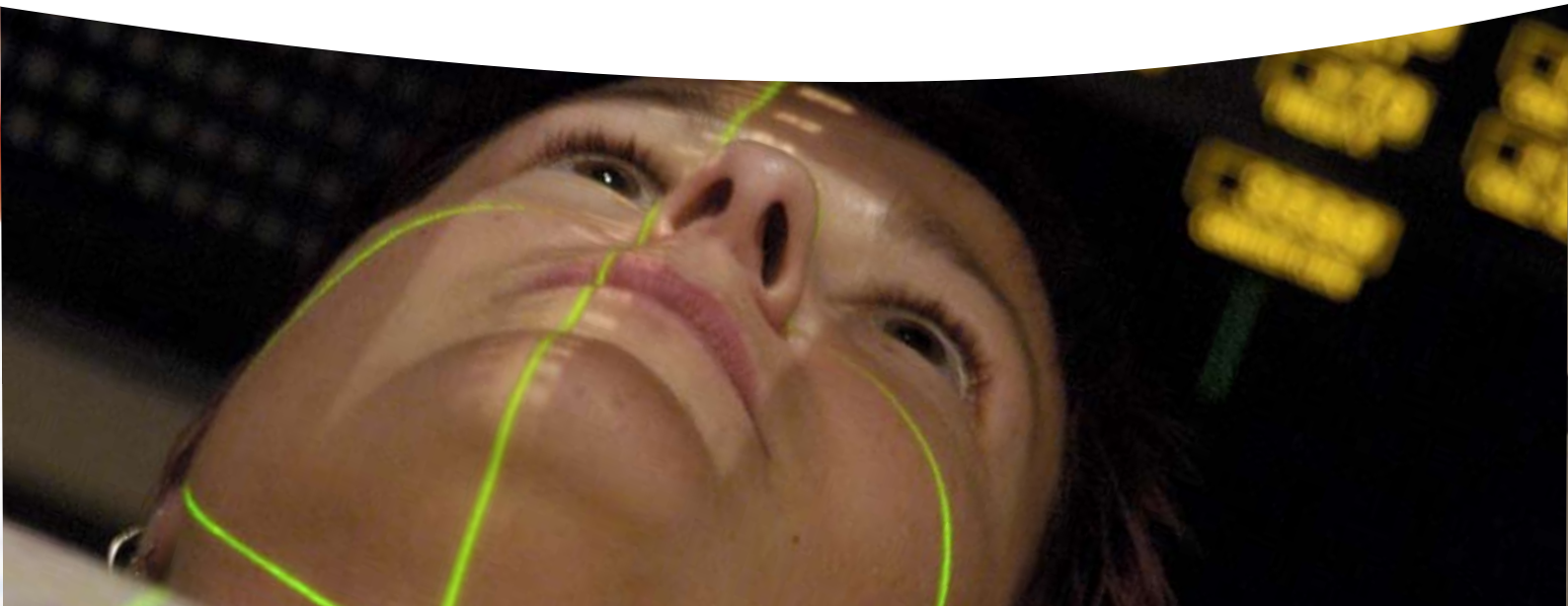
“Given that the majority of patients who develop epilepsy are treated with single drugs and may continue to take them for many years, it was essential that research was conducted to compare standard and new antiepileptic drugs, to establish which is the best first line treatment.”

“Its size and its NHS setting mean that the results of SANAD are highly relevant to clinical practice, allowing doctors and patients to make more informed decisions about what drugs to prescribe and take, and translating directly into benefit for patients.”

The trial was identified by a NICE technology appraisal of new antiepileptic drugs in 2004 as likely to provide crucial information that would allow evidence-based decisions to be made as to what the first choice of treatment for epilepsy in the future will be.

‘A randomised controlled trial of longer-term clinical outcomes and cost-effectiveness of standard and new antiepileptic drugs (SANAD)’ is published in *Health Technol Assess* 2007; 11:37. The full text is available for download free of charge from www.hta.ac.uk/1031

The findings of the trial have also been published in *The Lancet* 2007; 369 (9566): 1000-15, www.thelancet.com/journals/lancet/article/PIIS0140673607604607/abstract



Clinical background

Epilepsy is a neurological condition affecting the nervous system. It significantly impacts upon the quality of life of patients, but as many as 70% of patients enter long term remission shortly after starting drug therapy. However 20-30% of patients have chronic and disabling epilepsy which can have considerable psychological and social consequences for the individual. Even groups of patients in remission may be subject to dose-related side-effects and chronic toxicity from their antiepileptic drugs.

Treatment

Antiepileptic drugs are the primary form of treatment for controlling epilepsy seizures. Most antiepileptic drugs are taken every day and aim to stop seizures from happening, rather than treating a seizure once it has started. The type of drug that someone is prescribed will depend on the type of seizures they have. Epileptic seizures are classified as either partial seizures, where the seizure only affects part of the brain, or generalised seizures, which affect all of the brain at once.

More HTA research

The clinical effectiveness and cost-effectiveness of newer drugs for children with epilepsy. A systematic review *Health Technol Assess* 2006; 10:7

This study reviewed the existing research evidence on the clinical and cost-effectiveness of new antiepileptic drugs for the treatment of epilepsy in children aged up to 15. The review assessed gabapentin, lamotrigine, oxcarbazepine, tiagabine, topiramate and vigabatrin. For full project details visit www.hta.ac.uk/1305

Other titles include:

- ▶ Neuroimaging assessments in people with refractory epilepsy being considered for surgery, *Health Technol Assess* 2006; 10:4
- ▶ Clinical effectiveness, tolerability and cost-effectiveness of newer drugs for epilepsy in adults, *Health Technol Assess* 2005; 9:15

For a full listing of epilepsy related projects funded by the HTA programme, visit the advanced search pages of the website

www.hta.ac.uk/ProjectData/projectsearch.asp



Useful organisations

Epilepsy Action is the largest member-led epilepsy organisation in Britain. They aim to raise awareness of epilepsy through working with medical organisations, the government and service providers.

www.epilepsy.org.uk

The National Society for Epilepsy provides information and support to people with epilepsy. They also provide care for people with epilepsy through medical and residential services.

www.epilepsynse.org.uk

Epilepsy Research UK is a national charity dedicated to epilepsy research. They aim to increase the funding available for research into the treatment and prevention of this condition.

www.epilepsyresearch.org.uk

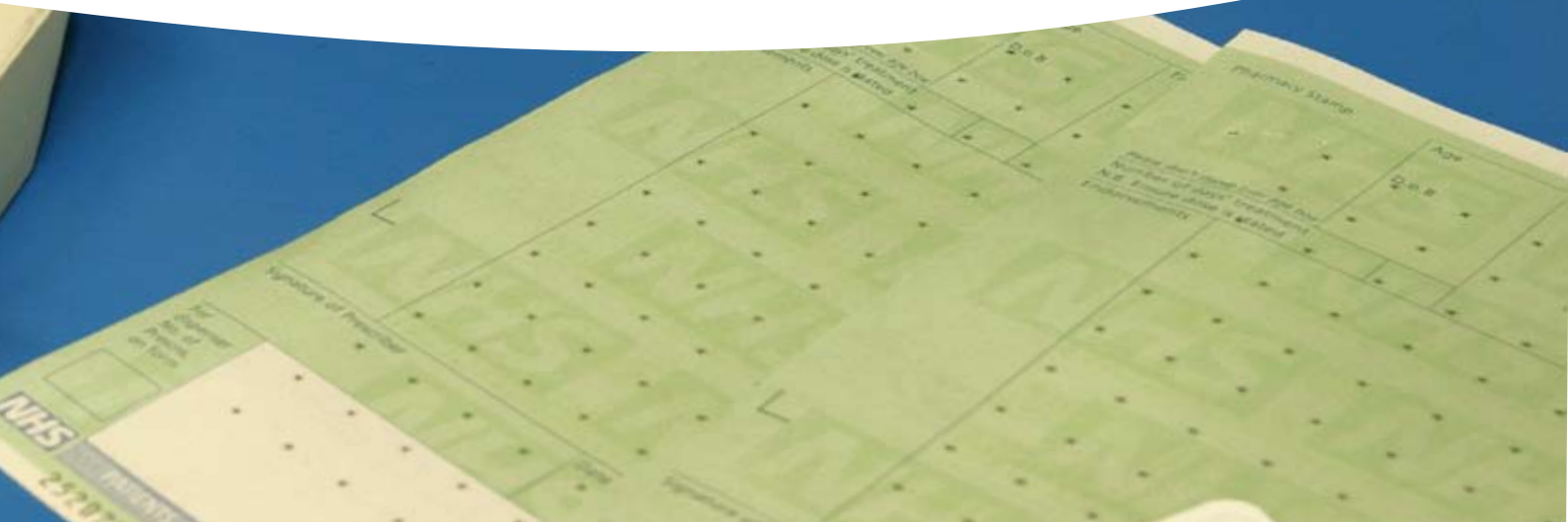
The National Centre for Young People with Epilepsy is a provider of education, assessment, rehabilitation, treatment and care for children and young people aged five to 25 with complex epilepsy and other neurological conditions.

www.ncype.org.uk

The National Institute for Health and Clinical Excellence (NICE) is responsible for providing national guidance on promoting good health and preventing and treating ill health.

www.nice.org.uk

The NIHR Health Technology Assessment programme does not offer endorsement for any of the organisations or practices listed in this publication, nor is this list intended to be exhaustive.





About the NIHR HTA programme

The HTA programme is a programme of the National Institute for Health Research (NIHR) and is funded by the Department of Health. It produces high quality research information about the effectiveness, costs, and broader impact of health technologies for those who use, manage and provide care in the NHS. It is the largest of the NIHR programmes, with

over 400 projects published since its inception in 1993. About 50 are published each year, all available for download free of charge from the website. It is coordinated by the National Coordinating Centre for Health Technology Assessment (NCCHTA), based at the University of Southampton. Visit www.hta.ac.uk for more information.

Written, designed and edited by Naomi Stockley, NCCHTA Communications Team

NCCHTA, Mailpoint 728, Boldrewood, University of Southampton, Southampton SO16 7PX
tel: +44 (0)23 8059 5586 fax: +44 (0)23 8059 5639 email: hta@hta.ac.uk web: www.hta.ac.uk