

Mersey Region Epilepsy Association

Registered Charity Number: 404366



epilepsy research in the Mersey Region

There is a great deal of research on epilepsy taking place within Merseyside, much of it undertaken by the Epilepsy Research Group at the University of Liverpool led by Professor Tony Marson. The research ranges from looking at genetic markers for epilepsy through to examining how healthcare system design. The following are some examples of the work, more information on the work of the group can be found at <https://www.liverpool.ac.uk/translational-medicine/research/epilepsy/>

SANAD 2 (Standard And New Antiepileptic Drugs) is a clinical trial designed to identify the most effective and cost-effective treatment for patients with newly-diagnosed epilepsy. Also examining the quality of life in patients with newly diagnosed epilepsy, SANAD 2 will recruit over 1,500 patients and will be the largest randomised clinical trial for epilepsy in the UK.

The National Audit of Seizure management in Hospitals (NASH) has collected data on over 8,000 patients and shown substantial variation in care provided to people attending emergency hospital departments following a seizure, and also many instances where the care provided is below what one would (or should) expect. Most seizure admissions are not being referred for the help that could prevent future admissions, the majority of those that are referred are not seen within an appropriate time frame, and service structures are not providing an optimum service for people with epilepsy.

The CAPS (Care After Presenting with Seizures) study is being run as part of the NIHR (National Centre for Health Research) CLAHRC (Collaboration for Leadership in Applied Health Research and Care) NWC (North West Coast) programme and builds on the findings of NASH. CAPS is assessing if a simple seizure pathway (augmented by dedicated nurses) can address one of the key failings identified by the earlier work, viz. the lack of referrals from emergency departments to specialist neurology clinics, and, if so, is this cost effective and something which is found to be useful by patients.

Brain imaging studies on epilepsy in Liverpool cover a range of areas, including the development of novel imaging markers of postoperative outcome in patients with medically intractable epilepsy, which is funded by the Medical Research Council. Current interests also include imaging in patients with a new diagnosis of epilepsy to further understand the mechanisms underlying poor seizure control and cognitive problems. Laboratory research in epilepsy at the University of Liverpool focuses on causes, drug response, and new treatments. We have DNA samples from over 4,000 people with epilepsy, which is one of the largest collections anywhere in the world. These are used to investigate the causes of epilepsy and also in studies that compare the genes of people who are responsive and unresponsive to treatment with antiepileptic drugs. We also use DNA analysis to identify people who might be at risk of serious side effects from their drugs. In addition, we are also exploring the role of brain inflammation in the development of epilepsy and working with colleagues in Physiology to create models of human epilepsy that we use to search for new treatments.

The Cochrane Epilepsy Group which comprises an international network of health care professionals, researchers and consumers preparing, maintaining, and disseminating systematic reviews of randomised controlled trials in the treatment of epilepsy is coordinated from its editorial base in Liverpool.