individuals with high serum HIV loads, responsive to optimal anti-retroviral treatment. Published cases of ALS-like disease in HIV are mostly newly diagnosed and untreated cases of HIV. Bowen et al recently described 5 cases of HIV-MND in men, mostly young, where the ALS manifestations improved with ARV treatment and detected activity of an endogenous retrovirus, HERV-K in 4 of 5 cases (Human Endogenous Retro-Virus-K). Here, we describe three cases of MND in HIV positive individuals that differ from previously published cases in having well-controlled HIV on anti-retroviral treatment (ARV) with 0 viral titres in CSF and serum. Interestingly, in one case, a research assay for HERV-K was negative, although this tool is not yet clinically validated. Further research will be required to determine the aetiological relevance of endogenous retroviruses in MND in individuals who are HIV positive or otherwise immunologically-compromised. Likewise, whether endogenous retrovirus activity occurs in sporadic ALS/MND remains to be determined.

PO217 DIAGNOSTIC, INVESTIGATION AND MANAGEMENT STRATEGIES FOR NON EPILEPTIC ATTACK DISORDER

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Purpose Recommendations by International League Against Epilepsy (ILAE) Non-epileptic Seizures Task Force propose a four-level hierarchical approach (using history, witnessed event, electroencephalographic (EEG)) to establish Non-Epileptic Attack Disorder (NEAD) diagnosis. We describe clinical characteristics, diagnostic certainty level, investigation pathways and management strategies of patients at a specialist neuropsychiatry clinic.
Method Medical notes of 148 patients with NEAD attending between September 2012 – 2015 were reviewed.
Results Patient categorisation (Females: n=108, 73.0%; Disease duration: 7.9 years (SD 10.4)) was mainly based on clinical features and EEG findings; only 7 (4.7%) patients had attacks witnessed by a specialist. Largest diagnostic categories were 'possible' (less robust) (n=54; 36.5%), 'clinically-established' (moderately robust) (n=40; 27.0%), then 'documented' (most robust) (n=12; 8.1%), 'probable' (n=5; 3.4%) (moderately robust). EEG was most commonly performed (n=125; 84.4%), then neuro-imaging (MRI: n=100, 67.6%). 48 (32.4%) had further neurological/cardiac/vestibular/sleep testing. There were no differences in pharmacological/behavioural management across categories.
Conclusion Difficulty in witnessing clinical events in person/on video recording/EEG limits clinical application of diagnostic recommendations, and thereby more robust diagnostic categorisation. Displaying video-footage in clinic could improve diagnostic certainty. Adherence to recommendations may help streamline investigation paths, reducing diagnostic delays. Irrespective of categorisation, pharmacological and behavioural interventions are implemented.

PO218 NEUROACCESS: BREAKING THE CYCLE: ZAMBIA 2016

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Neurological disease is responsible for a huge burden of death and disability in sub-Saharan Africa. However, average number of Neurologists in these countries can be as low as 0.3/million. Consequently, most doctors will qualify from medical school without having been taught by a Neurologist. NeuroAccess aims to provide a sustainable programme of targeted clinical neurology education in Zambia and Mozambique. The NeuroAccess team is a small group of Registrars, Clinical Lecturers, and Consultants, who provide a bi-annual intensive clinical teaching programme to doctors and students, in coordination with the local curriculum. With the support of the ABN, the Encephalitis society and the UK-based NeuroPACES course, NeuroAccess is delivered annually since 2013 providing teaching to an estimate of 60 medical students and 20 doctors on each visit. The whole programme is made possible thanks to colleagues working on the ground throughout the year. In collaboration with these locally based, physicians the aim is to incorporate NeuroAccess in a long-term programme of formal post-graduate neurological specialist training. Our aim is to improve the depth and breadth of practical skills in clinical neurology to empower a cadre of local doctors to manage the many neurological problems in these countries.

PO219 GUIDELINES FOR PD PATIENT INVOLVEMENT IN SERVICE DEVELOPMENT

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Involving patients and carers in service improvement projects is an essential aspect of patient-centred care, but happens only rarely. It can bring new perspectives and improve knowledge, health care engagement and health outcomes. While guidelines are available supporting public involvement in service improvement, these do not address the specific needs of patients with PD. The aim of this project is to develop an easy-to-use guide for service development project leads and patients/carers. This will facilitate the involvement of the latter in the development and implementation of PD service improvements. We used a semi-structured interview to capture good practice and barriers to service user involvement at each stage of service development. Local clinicians, patients and carers who have been involved in service improvement projects were invited to participate in telephone interviews. Key themes from initial grounded analysis of the data include: Access, including

physical access to rooms and offering alternatives such as teleconferences or video calls; Representation, ensuring a wide range of patients are able to be involved; and Empowerment, enabling patient voice to be heard. The themes will describe how patients have been involved projects and how this could be done better; they will then inform further discussion by a focus group to define and develop the guide.

PO220 CUTTING OUT CUTTING NEEDLES FOR LUMBAR PUNCTURE: LESSONS LEARNT FROM CLINICAL PRACTICE, AUDIT AND DELIVERY OF AN ATRAUMATIC NEEDLE LUMBAR PUNCTURE WORKSHOP TO TRAINEE DOCTORS AT CHELSEA AND WESTMINSTER HOSPITAL

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Compared with cutting needles, use of atraumatic pencil-point needles significantly reduces incidence of post-lumbar puncture headache. Many physicians still use cutting needles for lumbar puncture (LP), despite the comparatively higher morbidity and consequent monetary cost.

Clinical Case A patient underwent diagnostic lumbar punctures with a cutting needle. The resulting CSF leak identified on MRI required treatment with a blood patch. Following this procedure, he developed a severe systemic inflammatory response. These complications prolonged his admission by 4 weeks.

Audit We audited ward and daycare stock of spinal needles in our Trust, and surveyed local junior doctors regarding their knowledge and experience of different needles for lumbar puncture.

Results 87% of stocked needles were cutting needles. 76% of trainees surveyed knew no differences between atraumatic and cutting needles and only 8% had used atraumatic needles before.

Action A series of LP workshops were delivered to trainees. Benefits of atraumatic needles were explained and LP technique using atraumatic needles was taught on a manikin.

Conclusions Due to the rotational nature of doctors' training, the atraumatic needles LP workshop will need to be delivered again at regular intervals in the future. Other Trusts would benefit from developing similar training sessions.

PO221 PATHOLOGICAL MECHANISMS OF GLYCINE RECEPTOR ANTIBODIES

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Autoantibodies against glycine receptors (GlyRAbs) are found in half of patients with progressive encephalomyelitis with rigidity and myoclonus (PERM), and in patients with related acquired neurological syndromes (Carvajal-Gonzalez, 2014). The clinical features of PERM are consistent with disruption of spinal and brainstem inhibitory circuits. However, the presumed role of GlyRAbs in neurological disease is based largely on circumstantial clinical evidence. Using whole-cell patch-clamp we recorded spontaneous miniature glutamatergic and glycinergic postsynaptic currents from motoneurons in rat spinal cord cultures. We compared the currents in neurons incubated in IgG purified from patients with GlyRAbs or controls. IgG from patients selectively and severely disrupts glycinergic neurotransmission. Such disruption of inhibition *in vivo* would be consistent with many of the clinical features of PERM. Our electrophysiological findings therefore provide strong evidence that the antibodies in these cases are pathogenic. GlyRAbs internalise glycine receptors in HEK293 cells, but we find that they induce failure of glycinergic neurotransmission in neurons within 30 min at room temperature suggesting that they also directly antagonise glycine receptors. Alongside these investigations we are using clinical neurophysiology to identify affected circuits in GlyRAb patients. Findings are compared to patients with genetic defects in glycinergic pathways (hereditary hyperekplexia) and healthy controls.

PO222 INTEGRATING NEUROSCIENCE INTO PSYCHIATRIC TRAINING – AND VICE VERSA

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The Gatsby/Wellcome Neuroscience Project is a Royal College of Psychiatrists (RCPsych) two-year initiative to bridge the gap between psychiatry and neuroscience and introduce a modern neuroscience perspective into psychiatrists' clinical work. The Core Curriculum for psychiatric trainees is being reshaped to incorporate advances from basic and clinical neuroscience research that are dramatically changing our understanding of how the brain works. This will: 1. Equip trainees for the scientific advances that will be made over their working lives by ensuring that they are 'neuroscientifically literate' 2. Better prepare psychiatrists to develop and deliver innovative biomedical approaches to patient care as they become available The first phase of the Project featured extensive consultation among members of the RCPsych, and a recurring theme was a desire among psychiatrists for increased training in neurology. We found a positive environment for collaboration and significant interest in exploring joint initiatives with organisations such as the ABN. A survey of neurologists in the ABN's Cognitive Special Interest Group and of the Chairs of Advisory Groups revealed strong enthusiasm for the inclusion of psychiatry as a routine part of the training of neurology registrars. The Gatsby/Wellcome Neuroscience Project represents the ideal opportunity to develop such initiatives.

PO223 SPINAL DURAL AVF WITH NERVE ROOT ENHANCEMENT

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Spinal Dural Arteriovenous Fistula (SDAVF) is the most common vascular abnormality of the spinal cord; however in clinical practice it is rare with average time to diagnosis of 22 months. SDAVF is a cause of reversible myelopathy, hence the importance of diagnosis and early treatment. Here we present