

## Abstracts

characterises a cohort of neurosarcoidosis patients with focus on CSF analysis and whether this could help distinguish these two conditions.

**Methods** We enrolled 80 patients with a diagnosis of neurosarcoidosis based on stringent diagnostic criteria. The CSF and serum oligoclonal IgG patterns after iso-electric focusing were compared.

**Results** 80 patients had a probable or definitive diagnosis of neurosarcoidosis. MRI findings were leptomeningeal enhancement (35%) and white matter and spinal cord involvement (30% and 23%). PET was positive in (62%) of isolated neurosarcoidosis. CSF analysis showed that oligoclonal bands were rare (3% had CSF alone, 11% with mirror pattern). No patient with definite neurosarcoidosis had CSF oligoclonal bands. Only 14% of patients with definite neurosarcoidosis had elevated serum ACE, CSF ACE was absent in all.

**Discussion** Large elevations in CSF protein, WCC and ACE occur in neurosarcoidosis, but are rare in MS. However, minimal changes may occur in both conditions. Intrathecal oligoclonal IgG is a powerful discriminator as it is rare in neurosarcoidosis but common in MS (95–98%). We suggest caution in making a diagnosis of neurosarcoidosis when intrathecal oligoclonal IgG synthesis is found.

## Parallel session 2: Quality

## 11.15 ABN SURVEY 2016: GEOGRAPHIC VARIATIONS IN SERVICE PROVISION

<sup>1</sup>Peter Fernandes, <sup>2</sup>Cath Mummery. <sup>1</sup>University of Edinburgh; <sup>2</sup>ABN

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**Introduction** The 2016 ABN Acute Neurology survey provides a wealth of data on geographic variations in the provision of neurological services. In this abstract we discuss differences in access to neurological care and services with respect to the 19 ABN regions.

**Methods** 2016 ABN survey data were analysed by region with bed data obtained from ONS records. Missing data were checked where possible but otherwise assumed to be negative responses.

**Results** Across the UK there are 263 beds/FTE consultant, ranging from 455 (Wales) to 154 (SW Thames). Neurology inpatients as a proportion of total patients differ 16-fold between South West (0.016) and Wales (0.001). There are wide variations in acute neurological services (ward consultants, acute clinics, MAU ward-rounds). Only East Anglia and Northern Ireland regions have on-site stroke thrombolysis in all hospitals. Involvement in acute stroke thrombolysis ranges from 2.5 neurology consultants/hospital (Wessex) to 0 (NW Thames and Mersey). Access to investigations differs widely for 24/7 MRI (35% all hospitals, regional ranges 0% to 83%); EEG (61% [38%-85%]); NCS/EMG (57% [20%-85%]); and on-site neuro-radiology (38% [17%-71%]).

**Conclusion** These data show considerable differences in a variety of metrics between ABN regions, with implications for equitability of care.

## Parallel session 2: Quality

## 11.27 UNDERSTANDING VARIABILITY IN UK ACUTE NEUROLOGY SERVICES: WHAT WORKS, AND WHAT DOESN'T?

<sup>1,2</sup>Jonathan Best, <sup>3</sup>Salwa Kamourieh, <sup>2</sup>Cath Mummery. <sup>1</sup>Stroke Research Centre, Institute of Neurology, University College London; <sup>2</sup>National Hospital for Neurology and Neurosurgery, University College London Hospitals NHS FT; <sup>3</sup>Neurology Department, Charing Cross Hospital, Imperial College Healthcare NHS Trust

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**Background** The 2017 ABN Acute Neurology Survey showed acute neurological services in the United Kingdom to vary widely, even between otherwise-similar departments. Focussing on positive outliers, we conducted qualitative research to understand this.

**Methods** Through the 2017 survey, we identified DGHs and neurology/neuroscience centres which indicated high overall acute neurology service provision or outstanding performance in a particular area. From 39 hospitals meeting our criteria, we asked 15 clinical leads from throughout the UK to complete a questionnaire on their service model and development. We also analysed free text comments from the 2017 survey.

**Results** We received 9 responses, 6 from DGHs. Successful innovations included a neurology take, seven-day consultant-delivered reviews, and an 'acute neurologist of the week'. Respondents viewed a well-functioning acute clinic as important, and we profiled how this was achieved. In DGHs, acute care was mainly delivered by consultants, who described heavy workloads.

Of 120 comments from the 2017 survey, 37.5% described acute clinic arrangements. Overbooking of urgent patients into routine clinics was common. After this, the most frequent themes were understaffing (13.3%) and excessive workload (10%).

**Discussion** Our qualitative data identifies difficulties facing UK acute neurologists, and highlights successful approaches which may inform future service development.

## Parallel session 2: Quality

## 11.39 ASSOCIATION OF BRITISH NEUROLOGISTS SUSTAINABILITY SPECIAL INTEREST GROUP (ABN SUSTAINABILITY SIG): FORMATION, OBJECTIVES AND INVITATION

<sup>1</sup>Ann Cheesman, <sup>2</sup>Daniel Blackburn, <sup>3</sup>Camille Carroll, <sup>4</sup>Anna Cohen, <sup>5</sup>Jan Coebergh, <sup>6</sup>Dilraj Sokhi, <sup>7</sup>Sui H Wong, <sup>8</sup>John Woolmore. <sup>1</sup>Southend University Hospital; <sup>2</sup>Sheffield Institute for Translational Neuroscience; <sup>3</sup>University of Plymouth Faculty of Medicine and Dentistry; <sup>4</sup>Royal Free and Luton and Dunstable Hospitals; <sup>5</sup>St George's University Hospital; <sup>6</sup>Aga Khan University Medical College of East Africa; <sup>7</sup>Moorfield's Eye Hospital; <sup>8</sup>Queen Elizabeth Hospital, Birmingham

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We introduce the ABN Sustainability SIG. We present our aims & objectives, and practical ways of implementing sustainability strategies in Neurology.

At the 2016 ABN annual meeting, a keynote speech by Dr. David Pencheon, then director of the National Health Service Sustainability Development Unit, highlighted the relevance and importance of Sustainability in Neurology. This planted the seed for our SIG's formation. Initial interest was gathered from an ABN newsletter notice, via word-of-mouth and informal discussions at ABN annual meetings (2017, 2018). A series of teleconferences & email discussions enabled the formation of SIG byelaws and application to the ABN council.

#### Our aims and objectives

1. To be a positive force within the ABN to highlight issues surrounding global environmental sustainability.
2. To provide a forum to consider the impact of choices made in neurology practice on global environmental sustainability. This will cover all aspects of neurology including, but not limited to, clinical practice, service provision, technological and digital developments, meetings and ABN resources and investments.
3. To identify areas where the choice made could impact positively on global environmental sustainability and disseminate this information to the ABN membership to inform their decisions.

## Parallel session 2: Quality

### 11.51 INTRODUCING ATRAUMATIC NEEDLES TO THE NEUROLOGY AMBULATORY DAY CASE UNIT – A QUALITY IMPROVEMENT PROJECT

Daniel White, Will Scotton, Zohra Shah, Tagore Nakornchai, Tamsin Critchlow, James Mitchell, Alex Sinclair, John Woolmore. *Queen Elizabeth Hospital Birmingham*

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**Introduction** Atraumatic needles are associated with a decreased incidence of postdural-puncture headache. They also reduce the need for additional treatment and have similar efficacy to conventional needles. The aim of this Quality Improvement Project (QIP) was to encourage the use of atraumatic needles in Neurology ambulatory care by developing a sustainable Lumbar Puncture (LP) training method.

**Methods** A specialised atraumatic needle training video was [guru.kumar@nhs.net](mailto:guru.kumar@nhs.net) created for junior doctors starting in Neurology. This accompanied further teaching and opportunities to practice LPs on a simulation mannequin under supervision. Atraumatic needles were added to standard stock and supply was ensured.

Two audit cycles recorded the number of LPs performed using an atraumatic needle. Patient age, body mass index, length of stay, pain experienced and any need for image guidance were also recorded. Junior doctor confidence was measured before and after training.

**Results** 81 LPs were performed in the first cycle, 83 in the second. Atraumatic needle use increased from 26% to 50% between cycles. Junior doctor confidence increased with training from 2/10 to 8/10 ( $p=0.02$ ).

**Conclusions** Dedicated induction teaching and observed simulation practice increased junior doctors' confidence in, and frequency of, the use of atraumatic needles.

## Parallel session 2: Quality

### 12.03 ACUTE NEUROLOGY: A TWO WEEK SNAPSHOT IN A DISTRICT GENERAL HOSPITAL

Meneka Kanagaratnam, Ajay Boodhoo, Bridget MacDonald, Arani Nitkunan. *Croydon University Hospital*

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Neurological illnesses are a common cause of hospital admissions, yet most patients are not primarily managed by neurologists. Acute neurology services also vary across the UK. During a 2 week period in a district general hospital with a 5 day inreaching neurological service (a consultant delivered service with a neurology nurse coordinator but no inpatient beds), the number of patients admitted with a neurological problem, as well as the proportion of those patients who were seen by the hyperacute neurology team was assessed by reviewing the diagnostic codes. It was established there was a total of 2242 admissions during the study period, and of those, 491 (22%) had neurological codes. Careful analysis of the 491 hospital electronic records revealed that 229 (10%) were truly neurologically relevant. Of those, 14% patients had a neurological opinion – despite a relatively comprehensive service (compared to many other district general hospitals), only a small proportion of acute neurology is being seen by neurologists.

## Parallel session 2: Quality

### 12.15 VARIATION IN NEUROLOGY TRAINING: EXPERIENCES FROM SITES ACROSS THE UK

<sup>1</sup>Samuel Shribman, <sup>2</sup>Sian Alexander, <sup>3</sup>Angelika Zarkali, <sup>1</sup>Thomas T Warner, <sup>4</sup>Anthony Pereira, <sup>5</sup>Tom Hughes, <sup>3</sup>Catherine J Mummary. <sup>1</sup>*Reta Lila Weston Institute, UCL Queen Square Institute of Neurology*; <sup>2</sup>*Department of Neurology, Addenbrooke's Hospital, Cambridge*; <sup>3</sup>*Dementia Research Centre, National Hospital for Neurology and Neurosurgery*; <sup>4</sup>*Department of Neurology, St George's Hospital, London, UK*; <sup>5</sup>*Department of Neurology, University Hospital of Wales, Cardiff*

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There is little evidence-based consensus on how to approach, structure or deliver neurology training. The General Medical Council conducts a National Trainee Survey in the UK on an annual basis and, while the results suggest significant variation in the quality of neurology training, they do not provide an explanation for this variation. In order to better understand how to train a neurologist we used the National Trainee Survey to identify four of the highest and lowest performing sites for neurology training across the UK and visited them to conduct semi-structured interviews with groups of trainees and, separately, local trainers. We identified common themes between the two groups of sites across a range of different aspects of neurology training. These included supervision, competency-based training, clinic attendance, subspecialty exposure, local teaching programmes and the educational culture within departments. Here, we present our findings, including case studies from top performing sites, and provide recommendations with specific examples for how to train a neurologist.