Aim: The introduction of daily Board Rounds in the Neurosurgical Department at Southmead Hospital, Bristol using the Six Sigma approach.

Methods: Board Rounds were run early morning prior to formal ward rounds to highlight key issues early. Two standardised questionnaires (TeamSTEPPS Teamwork Perceptions and GRPI Team Assessment Questionnaires) were used to measure staff perceptions of the team before and after Board Rounds. VTE fill rates before and after Board Rounds were accessed on the hospital intranet database.

Results: The mean Board Round duration was 25 minutes (StdDev = 5.1) over 6 weeks. VTE form fill rate went from 79.1% in August to 91.1% in December when Board Rounds had been running for at least 2 months. The TeamSTEPPS questionnaire showed significant improvements in scores (p < 0.001 in 4/5 categories and p < 0.005 in 1/5 categories). The GRPI questionnaire also showed significant improvements in scores (p < 0.005).

Conclusion: Board Rounds can act as an effective and time-efficient tool to improve two key aspects of the modern hospital environment - patient safety and team-working. This is demonstrated by improved VTE fill rates and improved teamwork scores on both questionnaires. Planned future improvements include trying to attract more key allied healthcare professionals (e.g. pharmacists) to attend regularly.

0629: LONG-TERM SURGICAL OUTCOMES FOR REFRACTORY EPILEPSY

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Aim: To determine the relationship between post-operative seizure status in patients with medically refractory epilepsy, with respect to the type of operation. A secondary aim was to establish the seizure status of patients who attended epilepsy surgery clinic however were rejected or did not commence to surgery.

Methods: A retrospective review of clinic letters that was available on the computer database at the Walton Centre NHS Foundation Trust, Liverpool. Kaplan-Meier survival analysis, log rank and fisher's exact test was performed.

Results: 133 operated patients and 142 non-operated patients were available for the study. Operation type did not have an affect on seizure freedom (log rank test; p = 0.083). Operated patients had higher seizure freedom rates (27.8%) compared to patients who were rejected or did not commence with surgery (4.93%) (fisher's exact test; p = 0.0001).

Conclusion: Operation type does not influence post-operative seizure freedom. Epilepsy surgery offers higher seizure freedom rates compared to the cohort of patients who were rejected or did not commence with surgery.

0893: META-ANALYSIS COMPARING SUBTHALAMIC AND PALLIDAL DEEP BRAIN STIMULATION FOR PATIENTS WITH PARKINSON’S DISEASE

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Aim: This meta-analysis aims at comparing motor improvement after subthalamic (STN) and pallidal (GPi) deep brain stimulation (DBS) for patients with Parkinson’s disease (PD).

Methods: We searched PubMed through November 2014 for prospective controlled studies comparing STN DBS and GPi DBS for PD patients. Changes in UPDRS motor score, activities of daily life, verbal fluency score and levodopa equivalent dose were pooled as standardized mean difference between two groups in a meta-analysis model using RevMan 5.3.

Results: Nine controlled trials with a total of 497 patients were eligible for this study. The overall effect did not favor either of the two groups in terms of improvement in UPDRS motor score (off medication SMD = –0.11, 95% CI = [–0.30, 0.09]) and on medication SMD = 0.04, 95% CI = [–0.15, 0.23]), activities of daily life (SMD = –0.10, 95% CI = [–0.31, 0.11]), semantic verbal fluency (SMD = –0.04, 95% CI = [–0.25, 0.16]) and phonemic verbal fluency (SMD = –0.15, 95% CI = [–0.35, 0.06]). The levodopa equivalent dose was less in patients undergoing STN DBS than GPi DBS (SMD = –0.29, 95% CI = [–0.48, –0.10]).

Conclusion: STN DBS allows more reduction in medication than GPi DBS. Subthalamic and Pallidal DBS achieved the same motor improvement in PD patients, so we recommend that choosing surgical target in PD patients should be based on other non-motor outcomes.

0966: EFFECTS OF INTRA-OPERATIVE LANGUAGE MAPPING AND SPEECH AND LANGUAGE THERAPY (SALT) ON AWAKE CRANIOTOMY TUMOUR RESECTION: A CASE SERIES

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Aim: Language mapping during awake craniotomy is commonly used to guide tumour resection, but there is little description of its outcome. We present a case series of 12 patients who underwent awake craniotomies for glioma resection between 2007 and 2013.

Methods: 13 patients were retrospectively analysed, and data collected on patient demographics, tumour type/grade/location, speech and language (SALT) assessments, treatments, and outcomes.

Results: Tumours involved mostly the frontal (n = 6), temporal (5) and parietal (2) lobes. Majority were primary tumours (8), and WHO Grade 1-2 (8). 4 were astrocytomas, and the remainders were oligodendrogliomas (3), mixed astrocytoma/oligodendroglioma (3), and glioblastomas (3). Pre-operative SALT assessment identified word-finding difficulties in 9 patients. Language mapping was negative in 4 patients, and the extent of tumour resection was guided by intra-operative speech disturbances in 7 patients. Post-operatively, 9 patients’ speech remained unchanged, 3 developed worsening speech, and 1 had improved speech. There was no difference in intra- or post-operative complications between patients with positive and negative intra-operative speech disturbances.

Conclusion: Language mapping is primarily used to guide the extent of low grade glioma resection from eloquent brain areas. From our experience and this case series, this operative approach can reduce speech complication from surgery.

Posters: Orthopaedics

0005: MEDIAL PATELLOFEMORAL LIGAMENT RECONSTRUCTION USING SUTURE BUTTON GRAFT FIXATION ON PATELLA

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Aim: Medial patellofemoral ligament (MPFL) rupture is usually caused by traumatic patella dislocation. MPFL reconstruction involves replacing the ruptured ligament with autograft such as hamstring tendon. There are several types of graft fixation implant that can be used (endobutton, interference screws and transosseous sutures). The aim of our study was to assess the clinical outcome of MPFL reconstruction using Arthrex Retro-Button as suture button fixation on patella.

Methods: A retrospective analysis was done on patients who had MPFL reconstruction surgery using autograft hamstring tendon. Two senior knee surgeons performed the operations. The clinical outcome of surgery was determined at subsequent outpatient follow-ups.

Results: Between October 2007 and February 2014, a total of 50 patients (mean age of 24 years) underwent 54 MPFL reconstruction surgeries. Majority were females. All patients had Arthrex RetroButton fixation on patella. Nine RetroButtons were eventually removed due to anterior knee pain. The revision rate was 7%. Patella fracture, graft failure, infection and saphenous nerve injury were amongst other complications.

Conclusion: Arthrex RetroButton can be used in MPFL reconstruction with good graft fixation on patella. However it can potentially cause anterior knee pain due to its prominence underneath the skin. It can easily be removed if necessary.

0007: LATERAL TROCHANTERIC PAIN FOLLOWING TOTAL HIP ARTHROPLASTY: RADILOGIC ASSESSMENT OF ALTERED BIOMECHANICS AS A POTENTIAL AETIOLOGY
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Aim: To evaluate the effect of femoral offset and femoral head centre of rotation on the incidence lateral trochanteric pain (LTP) post total hip arthroplasty.

Methods: Retrospective case control study was developed from 158 patients who underwent total hip arthroplasty over a two-year period to form two patient cohorts. 29 patients diagnosed with lateral trochanteric pain were matched with 110 control subjects. The direct lateral approach was used in all cases. Anterior-posterior pelvis radiographs pre and post surgery were compared to assess the femoral, cup and global offsets and limb length discrepancies. Statistical analyses were performed using the Mann-Whitney U test and independent samples t-test.

Results: 29 diagnosed with LTP. 62% of symptomatic patients were female (p = 0.13). The differences (pre-post) of the femoral (p = 0.17), cup (p = 0.5) and global offsets (p = 0.99) and mean of limb length discrepancy (p = 0.83) were not significant between the two groups.

Conclusion: No relationship was found between LTP and femoral offset or centre of rotation. Disruption of the soft tissues during a lateral approach with resultant abductor tear, tendon defects and tendinitis might play a role in LTP. Lateral trochanteric pain may be considered along a spectrum of abductor tendon pathology.

0008: BACTERIAL CONTAMINATION OF DIATHERMY TIPS USED DURING ORTHOPAEDIC PROCEDURES

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Aim: The role of diathermy in orthopaedic surgical practice has increased since its introduction. We aim to determine the prevalence of bacterial contamination of diathermy tips during orthopaedic surgery and to assess any correlation with surgical site infections.

Methods: Diathermy tips from 86 consecutive orthopaedic procedures using diathermy were cultured using direct and enriched media. All patients underwent an orthopaedic procedure for a non-infected condition. For each procedure an unused control diathermy tip was placed on the instrument table at the beginning of the procedure and processed similarly. All patients were followed for any postoperative complications.

Results: 108 diathermy tips from 86 orthopaedic procedures were cultured. None of the tips cultured directly on blood agar demonstrated bacterial growth. Following enrichment culture, 6 (5.6%) of the procedure diathermy tips and 1 (0.92%) of the control tips demonstrated bacterial growth. Coagulase-negative staphylococci (83.3%) and propionibacterium (16.7%) were cultured from the tips. 1 of the patients who had bacterial growth from the diathermy tip developed a superficial surgical site infection.

Conclusion: Diathermy tips may not be as sterile as previously thought. There may be benefit in changing the diathermy tips during orthopaedic procedures as they may represent a possible source of bacterial contamination.

0008: AGRICULTURAL AND EQUESTRIAN ORTHOPAEDIC INJURY PRESENTATIONS TO A REGIONAL TRAUMA CENTRE IN IRELAND: A RETROSPECTIVE STUDY

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Aim: Our study sets out to evaluate the incidence of agricultural and equestrian related injury presentations to the regional trauma centre in Ireland, characterising common orthopaedic injury patterns and subsequent management.

Methods: Retrospective analysis of the 30,700 patients who presented to the hospital’s Emergency Department between January 2013 and December 2013. Statistical analyses conducted using the t-test and chi-square test.

Results: 196 agricultural-related injuries were recorded. 97% were male (p < 0.01) with a mean age of 48 years. Livestock related injuries were most common, 47 (24%). Machinery and falls related injuries accounted for 33 (17%) and 23 (12%) of injuries, respectively. 149 equestrian-related injuries were recorded with a monthly variation in their incidence observed. 58% of patients were female (p < 0.05) and had a mean age of 28 years. 82% of those injured were recreational horse riders (p < 0.01). Falls were the most frequent mechanism of injury at 68% (p < 0.01). No deaths were recorded in either group.

Conclusion: Specific trends of injuries have been identified. These findings are consistent with those previously reported in the literature. With specific populations at risk of now characterised injuries and their mechanisms, our study should serve to develop safety awareness and promote public health strategies.

0012: EQUESTRIAN INJURIES IN RURAL ENGLAND

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Aim: With an abundance of rolling countryside the Shropshire area has a high prevalence of horse-related injury. This paper highlights the significant impact horse riding injuries can have on a hospital service through an epidemiological study at a district general hospital.

Methods: Our study was conducted in Shropshire, UK, at a district general hospital serving a population of around 284,000. The inclusion criteria for participants was an injury sustained during equestrian activity and treated between February 2012 and February 2013.

Results: Seventy injuries were identified, amongst patients aged from 6 to 70 years. 28% were paediatric patients. Extremity injury was found to be the most common, both as fractures and soft tissue injuries (74%). The incidence of upper limb injury was greater than previous studies, at 69%, with over half of these being fractures. We also saw a disproportionately high paediatric involvement.

Conclusion: Equestrian sport continues to be popular in the rural setting, accounting for a notable incidence of hospital admissions. Our study found a very high incidence of upper limb injury. In addition, it is worth noting the large number of paediatric patients. Consequently, further research is needed into the use of upper limb protective gear, and safeguarding factors for children participating in equestrian sport.

0014: WHERE’S THE ANTIDOTE? THE DANGERS OF LOCAL ANAESTHETIC TOXICITY KNOWLEDGE OF MANAGEMENT OF LOCAL ANAESTHETIC TOXICITY IN ORTHOPAEDIC SPECIALTY TRAINEES IN THE NORTHERN DEANERY

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Aim: Local anaesthetic toxicity can cause be life threatening however the antidote, lipid emulsion is readily available. A regional audit was conducted to assess trainees’ knowledge of toxicity.

Methods: A survey was emailed to all trainees and analysed. The Association of Anaesthetists of Great Britain and Ireland (AAGBI) management of severe local anaesthetic toxicity guideline was then emailed and a re-audit conducted.

Results: 26 out of 57 trainees completed the initial audit and 22 completed the repeat survey. 66% of trainees that completed the initial survey were ST5 and below. 64% of trainees had heard of the AAGBI guidelines compared with 95% following education. Knowledge of initial management and the antidote improved from 96% to 100% and 73% to 95% respectively. Knowledge of the initial treatment dose improved from 44% to 82% and further management from 44% to 73%. What to do if the patient remained unstable also improved from 33% to 91%. Awareness of antidote storage reduced from 52% to 50%.

Conclusion: Whilst the majority of trainees knew that lipid emulsion was the antidote to toxicity and the basic initial management, a high number of trainees where unaware of the treatment dose or the continuing management of these patients.

0008: IMPROVING INFORMED CONSENT IN ORTHOPAEDIC SURGERY

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