0290: FINANCIAL IMPLICATION FOR BEING THE NATIONAL CENTRE FOR THE TREATMENT AND MANAGEMENT OF PELVIC AND ACETABULAR FRACTURES IN IRELAND: THE NEED FOR A NEW BUDGET STRATEGY?
Michael Kelly, Mike Leonard, Conor Green, John Mc Elwain, Seamus Morris. The Adelaide and Meath Hospital, Incorporating the National Children’s Hospital, Dublin, Ireland.

Background: Pelvic and acetabular fractures are complex injuries, typically secondary to road traffic and other high velocity trauma. The treatment and management of these injuries are challenging with significant cost. There is strong evidence suggesting that polytrauma involving pelvic and acetabular fracture are best managed in specialist tertiary units. Our institution is the national centre for treatment and management of these injuries.

Aim: To audit all referrals to our institution over a 6-month period and calculate the cost incurred by being the national referral centre.

Methods: Retrospective review of a prospective database, and subsequent allocation of Casemix points to assess total cost of treatment for each patient referred to our institution.

Results: 103 patients referred with pelvic or acetabular fracture for operative management. The furthest referral being 181 miles away. Over-all length of stay was 15.4 days. The average inclusive cost for a referral to our unit for operative management was €16,302.

Conclusion: Pelvic and acetabular fractures are complex injuries requiring specialist care in high volume centres. This study highlights the financial burden of being a national referral unit. Old “fixed” budgeting models are unsustainable. New budgeting models whereby “money follows the patient” would drive productivity and stream-line services.

0304: ORTHOPAEDIC RESEARCH UK PRIZE WINNER: PILOT STUDY: THE USE OF ANTERIOR ULTRASOUND SCANNING TO ASSESS HIP REDUCTION IN DEVELOPMENTAL DYSPLASIA
Timothy Woodacre, Sophie Wienand-Barnett, Graeme Carlisle, Peter Cox. Royal Devon and Exeter Hospital, Devon, UK.

Background: Failure of reduction of dysplastic hips in Pavlik harnesses should be identified early to allow treatment escalation. Graf lateral USS cannot verify reduction in the flexed abducted position of infant hips in a Pavlik harness. Previous research by the authors utilised anterior hip USS to identify the “ischial limb”, correlating to the acetabular tri-radiate cartilage. We assessed the application of this in the human DDH population.

Methods: We prospectively monitored 50 neonates with 79 dislocated/decemented hips, confirmed through Graf US. Following Pavlik harness application weekly anterior USS determined the concentricity of femoral head reduction relative to the “ischial limb”, time to reduction and for failure to achieve reduction.

Results: All 50 patients clearly demonstrated an “ischial limb” and its relation to the femoral head. Anterior USS confirmed immediate concentric reduction in 11 patients, and more gradual reduction over 3 wks in 37 patients. Failure to achieve stable reduction was verified in 2 patients.

Conclusion: Anterior USS can readily identify femoral head reduction relative to the tri-radiate cartilage in neonatal hips. It efficiently assesses hip reduction during Pavlik harness treatment and can differentiate between failure to achieve reduction or maintain stable reduction at an earlier stage than conventional methods.

0306: THE RESULTS OF ANTERIOR ULTRASOUND SCANNING IN SURVEILLANCE OF DEVELOPMENTAL DYSPLASIA OF THE HIP
Timothy Woodacre, Graeme Carlisle, Peter Cox. Royal Devon and Exeter Hospital, Devon, UK.

Background: Lateral ultrasound scanning in surveillance of developmental dysplasia of the hip is well established. It necessitates removal of the limb from an abduction orthosis, risking dislocation in the unstable hip. Anterior USS is undertaken in-situ, and for this reason was introduced locally in 2005.

Methods: Data regarding local treatment of DDH was collected prospectively from 1997. Over twelve years 233 patients required treatment; 118 (166 hips) received lateral USS, 115 (160 hips) received lateral and anterior USS surveillance, performed by the senior author.

Results: Of the 118 patients in the lateral scanning cohort, 103 (140 hips) were treated successfully, mean duration 66 days (range 10-156), with 15 (26 hips) failing (15.6%), mean duration 30 days (range 7-70). In the anterior USS cohort, 115 patients, 107 (150 hips) were treated successfully, mean 53.3 days (range 5-105), with 8 (10 hips) failing (6.25%), mean 35.2 (range 8-56). Subgroup analysis of the most unstable hips revealed little difference in treatment duration for Graf 4 hips and a reduced treatment duration using anterior USS for Graf 3, 55.6 days versus 66.3.

Conclusion: We believe anterior USS is a useful adjunct in surveillance of unstable hips demonstrated by reduced failure rate and treatment duration.

0326: 3-YEAR RETROSPECTIVE REVIEW OF POSTOPERATIVE MORTALITY IN HIGH-RISK PATIENTS FOLLOWING CEMENTED VERSUS UNCEMENTED HEMIARTHROPLASTY FOR DISPLACED INTRACAPSULAR FRACTURED NECK OF FEMUR
James William Butterworth, Jonathan Keenan. Derriford Hospital, Plymouth, UK.

Aim: NICE recommends cemented implants in patients undergoing hip hemiarthroplasty surgery, however controversy remains over their use in patients with cardiopulmonary compromise. Our 3-year retrospective study aims to further assess mortality rates of high-risk patients undergoing cemented versus uncemented hemiarthroplasty for displaced, intracapsular fractured neck of femur.

Method: 851 patients presenting with a fractured neck of femur requiring hemiarthroplasty to Derriford Hospital 2009-2012, were analysed using the national hip fracture database for ASA grade, age, mobility prior to operation and survival at discharge.

Results: Overall mortality rate amongst the 851 patients requiring hemiarthroplasty was 3.6% (n=31). 3.4% (n=25) for cemented hemiarthroplasties and 6.1% (n=36) for uncemented hemiarthroplasties. On sub-analysis patients with ASA grade 4 receiving cemented implants had 13.3% (n=4) mortality in comparison to 0% (n=6) for those receiving uncemented implants. Additionally a high mortality rate of 66.7% (n=2) was identified in patients over 90 years old, with ASA grade 4 and wheelchair bound prior to hemiarthroplasty with cemented implants.

Conclusion: Our study further supports evidence that caution is required in considering cemented implants for high-risk patients requiring hip hemiarthroplasty, particularly those with ASA grade 4, over 90 years old and wheelchair bound prior to surgery.

0395: STUDY OF ROTATOR CUFF PATHOLOGY USING THE HEALTH IMPROVEMENT NETWORK (THIN) DATABASE
Jonathan White1, Andrew Titchener1, Amol Tambe1, Apostolos Fakis2, David Clark3, Richard Hubbard3. 1Department of Trauma and Orthopaedic Surgery, Royal Derby Hospital, Derby, UK; 2Department of Research and Development, Royal Derby Hospital, Derby, UK; 3Division of Epidemiology and Public Health, University of Nottingham, Nottingham, UK.

Background: Little is known about the incidence of rotator cuff pathology in the community. Our study represents the largest general population study of rotator cuff pathology reported to date (32,002 subjects). The results obtained provide the clinician with a better understanding of the epidemiology of rotator cuff pathology in the community.

Methods: Diagnoses of rotator cuff pathology between 1987 and 2006 were used to calculate the incidence stratified by age, gender, deprivation score, UK health authority, and year.

Results: The incidence of rotator cuff pathology was 0.87 per 1000 person-years. This was more common in women than men (women 0.90, men 0.83 per 1000 person-years, p<0.001). Incidence rates increased over the study period and did not demonstrate any signs of plateau. The highest incidence rate was found in the age group 55-60 years. Regional distribution of the incidence rates showed a fairly even spread across thirteen UK Health Authorities with the exception of Wales where incidence rates were significantly higher. The least deprived areas of the population had the highest incidence rates.

Conclusions: Our study represents the largest general population study of rotator cuff pathology reported to date (32,002 subjects). The results obtained provide the clinician with a better understanding of the epidemiology of rotator cuff pathology in the community.

0397: A COMPARISON STUDY OF DIGITAL TEMPLATING METHODS IN TOTAL HIP ARTHROPLASTY
Stephen McCain, Laurence Cusick, Gavan McAlinden. Musgrave Park Hospital, Belfast, UK.

Introduction: Digital templating is used for preoperative planning in Total Hip Arthroplasty (THA). We compared the measurements obtained by
digital templating for femoral stem offset and acetabular cup size with the actual size of implants inserted.

**Methods:** The methods of calibration studied were a standard 115% magnification and radio-opaque markers of a known size. All the x-rays were templated retrospectively and blindly. Study 1 looked at the fixed magnification method in 25 consecutive patients. Following the introduction of the radio-opaque marker we considered 24 patients who had a marker in their pre-operative x-ray. This comprised study 2. In study 3 we used the same patients from study 2 and compared the 115% magnification method to the radio-opaque marker results.

**Results:** In study one, 72% of patients had the same offset measured and 72% had the cup size measured accurately. In study two, 55% of patients had the same offset measured and 85% had an accurate cup size measured. In study three, 57% had the same offset measured and 62% had the acetabular cup component measured correctly.

**Conclusion:** Due to the inaccuracies demonstrated in digital templating, we recommend the use of intra-operative trialling as an adjunct when choosing implants in THA.

**0399: PATIENT PERSPECTIVE ON REGIONAL ANAESTHESIA OF UPPER LIMB SURGERY**
Bafiq Nizari, Rinoza Bafiq, James Harty. Cork University Hospital, Cork, Ireland.

**Aims:** Brachial plexus block is the backbone of upper limb regional anaesthesia. The objectives of our study were to evaluate patients’ perspective on regional anaesthesia in upper limb surgery and to determine the percentage who preferred it.

**Method:** We randomly selected forty two patients who had a regional anaesthesia for an upper limb elective surgery over a six months period. Data was gathered using a proforma during their hospital stay. Results were analysed using statistical tools.

**Results:** Twenty eight patients disliked regional anaesthesia and four preferred it over general anaesthesia (66% vs. 9.5% p = 0.014). Ten patients were indifferent over the type of anaesthesia they received (p = 0.24). Twelve patients thought it was distressing and painful and seven considered it as a bad experience. Out of the four who liked regional anaesthesia, two had severe co-morbidities which restricted them to have general anaesthesia, one thought it provided good pain relief and the fourth patient found it shortened the duration of hospital stay.

**Conclusion:** Majority of patients who underwent upper limb surgery did not prefer regional anaesthesia due to the distress and pain caused by the block. However many found it was a satisfactory mode of post-operative analgesia.

**0408: INVESTIGATION INTO THE OUTCOMES FOLLOWING FIXATION OF FRACTURED NECK OF FEMURS WITH CANNULATED HIP SCREWS**
Aaron Rooney, Nick Rollitt. North Middlesex University Hospital, London, UK.

**Aims:** To investigate which patients had received cannulated hip screws for a fractured neck of femur and identify: Which age groups were receiving this treatment. Functional outcomes following the surgery. Number of patients requiring a second operation.

**Methods:** All patients were identified using the National Hip Fracture Database. All patients receiving a cannulated hip screw for a fractured neck of femur in the North Middlesex Hospital between July 2007 and August 2012 were identified. The hospital’s computerised database was used to access clinical records.

**Results:** 48 patients were identified (21±27%). The largest group of patients was those aged 80-89 years, 35.4%. Most patients coming from their own home/sheltered accommodation returned there after their operation, 97.7%. The majority of patients had their operation within 36 hours, 60.8%. 83.3% of patients had not had a further operation at the time of our study. One patient had their screws removed because of pain. Six patients (12.5%) required a conversion to a total hip replacement.

**Conclusions:** Our conversion rates compare favourably to those reported in the literature. Great consideration has to be given to the choice of patient undergoing this procedure due to the relatively high risk of requiring a second operation.

**0413: FOREFOOT SURGERY AS A DAY CASE: COMPLIANCE OF SAME DAY DISCHARGE AND PATIENT SATISFACTION**
Sarah Al-Himdani, Abubakar Mustafa, Anand Pillai. University Hospital of South Manchester, Manchester, UK.

**Aim:** To evaluate the compliance with same day discharge, post operative pain and patient’s satisfaction following forefoot surgery as day case.

**Method:** Prospective study of 35 patients who underwent various day case forefoot surgery between August to October 2012. Procedures were performed under general or spinal anaesthesia, by a single surgeon and ankle block was used. A standard discharge protocol was followed. Patient satisfaction was assessed using a standardised questionnaire in a 2 week follow up clinic.

**Results:** The study comprised of 6 males (18%) and 29 (82%) females, with a mean age of 54 (25-79) years. The surgical procedures included 1st ray surgery, excision of Morton’s neuroma and lesser toes correction. 62% patient had surgery in morning operative list, 38% in the afternoon. 72% had more than one procedure. Nine patients (26%) required overnight stay. The most common reason was post-operative nausea and vomiting (4 patients, 11%) and pain (2 patients, 5%). Post-operative pain control was adequate in 97%. Overall patient satisfaction was 95%.

**Conclusion:** Forefoot surgery is safe and practical procedure for day surgery with an excellent patient satisfaction rate. Correct patient selection and appropriate anaesthetic protocol to address PONV will improve efficacy of discharge.

**0430: A CROSS SECTIONAL REVIEW OF THE INCIDENCE OF PHANTOM LIMB SENSATION IN A COHORT OF AMPUTES AND THE EFFECT OF VISCERAL STIMULATION (MICTURITION/DEFECATION) ON SENSATION INTENSITY**
Michael Rafferty, Thomas Bennett-Britton, Rhodri Phillip. Defence Medical Rehabilitation Unit, Epsom, Surrey, UK.

**Aim:** To assess the prevalence of phantom limb pain and the effect of visceral stimulation in a cohort of military amputees. A literature review identified just one case study in 2001(1).

**Method:** A cohort of 75 patients with a background of limb amputation completed a questionnaire including a pain visual analogue scale (VAS). Patients recorded the presence and intensity of phantom limb sensation. Secondary outcomes were alteration in sensation associated with a need to micturate, micturition, needing to open bowels and opening bowels.

**Results:** Participants reported phantom limb sensation prevalence of 86% with a mean VAS of 2.66 (SD 2.1). 81% of patients reported a change in the severity of phantom limb sensation with visceral stimuli. The mean change in VAS alteration of phantom limb sensation due to visceral stimulation was 1.32 for bladder stimulation and 1.06 for bowel stimulation (p-value 0.027).65% of patients reported improvement over time. Only 36% reported an improvement of symptoms with neuropathic medications.

**Conclusion:** Phantom limb sensation and the effect of visceral sensation is a greater problem faced by amputees than previously described. The use of pharmacological agents has no benefit to the majority of those questioned; however 65% of patients report improvement over time.

**0451: THE LATARJET PROCEDURE: A RELIABLE AND SAFE PROCEDURE FOR ANTERIOR SHOULDER DISLOCATIONS WITH ANTERIOR BONY GLENOID DEFICIENCY**
Joshua Henry 1, Lennard Funk 2. 1 University of Manchester, Manchester, UK; 2 Wrightington, Wigan and Leigh NHS Trust, Greater Manchester, UK.

**Aims:** The Latarjet procedure was developed to prevent further dislocations through transplantation of the coracoid, creating a reinforcing tendinous sling and repairing the inferior ligamentous complex. This study aimed to assess the overall success of the Latarjet procedure in terms of recurrence of anterior instability and improving shoulder function in the presence of bony glenoid deficiency.

**Patients and Methods:** All patients that had undergone the Latarjet procedure between March 2011 and May 2012 were included. Indication for surgery was anteriorinferior bony glenoid deficiency. All procedures were performed by the senior author. The Oxford Shoulder Instability score, Oxford Shoulder score, Constant Shoulder score, Disabilities of the Arm Shoulder and Hand score and pain and satisfaction assessed outcome.

**Results:** There were 58 patients with a mean age of 25.68 years (range 18.17-44.05) and an average follow up period of 22 months. Recurrence of anterior instability was reported in one patient after a traumatic injury. Shoulder function and pain showed significant improvement in all outcome measures (p<0.05) and >95% of patients that were active sportsmen were able to return to sport.