**Aim:** Following re-commissioning to physiotherapy services in the locality of a busy district general hospital in 2013, fracture clinic physiotherapy services were adversely affected. There was no provision of physiotherapy services for crutches, gait, mobilisation following plaster and simple rehabilitation exercises apart from elective referral forms made to the local community services. A pilot project was designed to include a 'Walk in Physiotherapy Service' at the hospital's fracture clinic. We aimed to assess: (i) quality of the new service provision (ii) satisfaction regarding the new service (iii) time effectiveness.

**Methods:** Data was prospectively collected analysing a cohort of 37 patients over a six-week period January 2014 onwards by means of qualitative questionnaires completed by patients, orthopaedic surgeons and physiotherapists at the combined fracture clinic service.

**Results:** Over 80% of patients, orthopaedic surgeons and physiotherapist strongly agreed that the combined service was beneficial and rated the service provision as excellent. 100% of patients agreed that enough time was given to address their needs and 97% agreed that the new service had saved them time.

**Conclusion:** We aim to continue services given patient satisfaction, 'excellent' rating and time effectiveness as well as recommend the model on a regional level.

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**0201: THE SCANDINAVIAN TOTAL ANKLE REPLACEMENT VERSUS MOBILITY**

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**Aim:** To compare Scandinavian Total Ankle Replacement (S.T.A.R.) and Mobility implants according to patient satisfaction, complication rates and implant survivorship, to determine which is the more superior choice.

**Methods:** A systematic review of fifteen peer-reviewed studies published between 2003 and 2014 was conducted. Arthroplasty patients at The University Hospital of South Manchester were also interviewed regarding post-operative complications, range of movement and overall satisfaction.

**Results:** Survival rates and patient satisfaction for the S.T.A.R. are comparable with the Mobility prosthesis. Both implants offer a mean AOFAS score improvement of 40 points. The S.T.A.R. cohort experienced a complication rate of 11% whilst Mobility complication rate reached 26.7%. Post-operative pain over the medial side of the ankle was commonly reported complications in Mobility cohorts and aseptic loosening rates reached 14%.

**Conclusion:** Overall the S.T.A.R. is associated with fewer complications and therefore should be the first choice prosthesis in total ankle replacement surgery. A randomised controlled trial involving STAR and Mobility implants would allow for a more effective and direct comparison from which accurate conclusions regarding which is the definitive choice could be made.

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**0203: THE FIRST OUTPATIENT APPOINTMENT WITHIN TWO WEEKS FOLLOWING MANIPULATION AND PERCUTANEOUS PINNING OF SUPRACONDYLAR HUMERUS FRACTURES IN CHILDREN. IS IT NECESSARY?**

A. Razak 1, M. Hossain, F. Ali. Royal Manchester Children's Hospital, UK

**Aim:** Supracondylar humerus fractures are common in children. Manipulation under anaesthesia and percutaneous pinning is the commonest operation. The Kirschner (K) wires are usually removed at four weeks following surgery. The timing for the first clinic appointment usually varies between one and five weeks post surgery. The aim of the study was to determine whether it was necessary for these patients to be seen within two weeks following surgery.

**Methods:** 44 children had supracondylar fracture manipulation and percutaneous pinning between August 2013 and July 2014. The relevant data such as patient details and first outpatient appointment was collected from Picture Archiving and Communication System (PACS) and MediSec (digital dictation software).

**Results:** Majority of patients (38/44) were seen within two weeks following surgery at outpatient clinic for clinical assessment and radiographic evaluation. There was no change in management at the clinic appointment. The other six patients were first seen at least three weeks following surgery and they did not have any complication.

**Conclusion:** It was not necessary to see these patients within two weeks following surgery. It is safe to delay the first outpatient appointment to at least four weeks following surgery when the K wires and plaster can be removed.

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**0207: 3-CYCLE AUDIT LOOP: ORTHOPAEDIC CLERKING PROFORMA IMPROVES THE QUALITY OF DOCUMENTATION FOR PATIENT SAFETY**

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**Aim:** The aim of the initial audit was to report a baseline in the quality of orthopaedic admission clerking, following concerns amongst junior doctors that poor documentation had implications for patient safety, compounded by frequent handover between junior doctors. A clerking proforma was introduced and subsequent audits measured compliance with standards of documentation, as well as uptake in use of the proforma.

**Methods:** A 3-cycle audit loop was performed at a single orthopaedic unit during 2012–2014. The standards set were Royal College of Surgeons Guidelines (1994) and Good Surgical Practice (2008). Additional local guidelines were agreed by the multi-disciplinary team.

**Results:** The initial audit (44 patients) reported an overall compliance with standards of 60%. Using the clerking proforma, compliance with standards in the 2nd cycle (12 patients) increased to 81% and this was sustained in the 3rd cycle (22 patients) at 80%. Between the 2nd and 3rd cycles, there was an increase in the use of the proforma over clerking on continuation sheets, from 52% (12/23 patients) to 96% (22/23 patients).

**Conclusion:** The importance of documentation was highlighted by the National Patient Safety Agency and this audit shows a clerking proforma has successfully resulted in quality improvement for documentation.

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**0214: PLANNED SEMI-ELECTIVE FIXATION OF DISPLACED INTRA-ARTICULAR CALCANEAL FRACTURES MAY REDUCE POST-OPERATIVE INFECTION AND WOUND COMPLICATION RATES**

M. Alnaib, M. Ali, P. Patterson. Queen Elizabeth Hospital, UK

**Aim:** Displaced intra-articular calcaneal fractures are often associated with significant medium and long-term disabilities. Many of those fractures are treated surgically. However, Infection rate and wound complications following open reduction and internal fixation for calcaneal fractures could be as high as 30%. This study aims to evaluate the effect of planned semi-elective fixation on rate of post-operative infection and wound complications.

**Methods:** This is a retrospective comparative study. A database search identified 32 patients with displaced intra articular fractures of the Calcaneum. Patients were allocated into two groups. Surgery was performed within 3 days (Group One) or two-three weeks (Group Two). Both groups had internal fixation using an extended lateral approach.

**Results:** There were 15 patients in Group One and 17 patients in Group Two. Average age was 31 years (Range 25–50). Wound complication rate was 20% (3 patients) in Group One. No wound complications were found in Group Two. All patients in both groups had fracture union at 12 weeks post operatively.

**Conclusions:** Planned semi-elective fixation of displaced intra-articular calcaneal fractures may reduce post-operative infection and wound complications. We recognise the small number of patients in this study and acknowledge that surgical infection is multi-fatorial.

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**0218: IMPROVING THE IMPLEMENTATION OF COMPRESSION STOCKINGS AS THROMBOPROPHYLAXIS**

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**Aim:** Despite the considerable evidence base for mechanical thromboprophylaxis it is still poorly implemented. Early audit of practice found that there were significant discrepancies in patients actually wearing GCS despite meeting admission VTE risk-assessment targets. One
differentiating factor we noticed was some doctors prescribing the GCS on prescription charts.  
Methods: After identifying this aspect as a possible area for improvement, all surgical junior doctors were formally trained to prescribe GCS. Nursing staff then actively inspect six-hourly and prompt patients if necessary, signing off prescription charts in the process. Senior ward managers and surgical consultants were also trained. A single-centre sample of 208 orthopaedic patients over 3 months was examined. Parameters included whether patients were wearing GCS if advised and if they were prescribed.  
Results: The proportion of patients having GCS prescribed increased substantially after interventions in comparison to initial audit; 67% vs 21%. Of those patients who required GCS and had them prescribed 71.2% were wearing them, compared with 50.4% (p < 0.05) who had GCS advised, but not prescribed at that given time.  
Conclusion: Aforementioned interventions greatly improve practice of prescribing GCS. Standardised prescribing of GCS significantly improves successful application of GCS, thus aiding reduction in venous-thromboembolic events in surgical patients.

0223: AN AUDIT OF THE QUALITY OF FULL-LENGTH LEG RADIOGRAPHS AT GREAT ORMOND STREET HOSPITAL (GOSH) FOR CHILDREN

A. Porter*, Newcastle University, UK  
Aim: Full-length leg radiographs are used to assess leg length discrepancy and lower limb deformity. Radiographs must fulfil certain criteria to ensure they can be accurately interpreted and clinically useful. Our aim is to assess whether full-length leg radiographs taken at GOSH adhere to trust guidelines.  
Methods: This is a registered, retrospective study examining 100 full-length leg radiographs performed between 15/09/2013 and 30/12/2013. Patients were identified using the PACS computer system. Radiographs were evaluated to determine if they fulfilled the following criteria:  
1. Radiograph taken on one film  
2. Complete hip and ankle view  
3. Patellae pointing forward  
4. Calibration ball present  
5. Pelvis levelled  
Results: The proportion of radiographs that fulfilled guideline criteria are shown below:  
1. Radiographs on one film-97/100 (97%)  
2. Complete hip and ankle view-97/100 (97%)  
3. Patellae pointing forward-90 (90%)  
4. Calibration ball present-84/100 (84%)  
5. Pelvis levelled-67/100 (67%)  
Conclusion: Most full-length leg radiographs fulfilled criteria, except the pelvis levelled without the pelvis level. To rectify this problem, radiographers need further training on how to level the pelvis, or the requesting surgeon must state the height of block required under which limb. Once a change is put into place, this audit should be repeated to assess the effect of the change.

0238: ACETABULAR RECONSTRUCTION USING 3D PRINTING IN REVISION HIP ARTHROPLASTY

A. Hughes*, B. O’Donnchadha, A. Tanser, C. McMahon, C. Hurson, St. Vincent’s University Hospital, Ireland; Talloigath Institute of Technology, Ireland; Cappagh National Orthopaedic Hospital, Ireland  
Aim: Revision hip arthroplasty requires a comprehensive appreciation of abnormal bony anatomy. Advances in radiology and manufacturing technology have made 3D representation of actual osseous anatomy obtainable. These models provide a visual and tactile reproduction of the patient’s bony abnormality.  
Methods: Life size three-dimensional models were manufactured from CT scans of two patients with pelvic discontinuities and deficiencies. Specific metal reduction protocols were used to reduce artefact. The dicom images were imported into Mimics, and the models were manufactured using the rapid prototyping process, Selective Laser Sintering.  
Results: The models allowed accurate templating using the actual prosthesis templates prior to surgery. Acetabular cup size, augment and buttress sizes, as well as as cage dimensions were selected, adjusted and sterilised in advance. This reduced operative time, blood loss and improved surgical decision-making. Screw trajectory simulation was also carried out on the models, thus reducing the chance of neurovascular injury.  
Conclusion: With 3D printing technology, complex pelvic deformities can be better evaluated and can be treated with improved precision. Life size models allow accurate surgical simulation, improving anatomical appreciation and pre-operative planning. The accuracy and cost-effectiveness of the technique were impressive and its use should prove invaluable as a tool to aid clinical practice.

0240: THE USE OF OUTPATIENT PARENTERAL ANTIBiotic ADMINISTRATION IN BONE AND JOINT INFECTIONS

A. Hughes, D. Dalton, D. Broderick, S. Fitzgerald, E. Feeney, P. Curtin, C. Hurson. St. Vincent’s University Hospital, Ireland  
Aim: Outpatient parenteral antibiotic therapy (OPAT) was introduced over 30 years ago to facilitate early discharge from acute hospitals. Musculoskeletal infections can be troublesome, with septic arthritis and osteomyelitis requiring extended periods of antibiotics. Tightened hospital budgets and increased demand for hospital beds has lead to the introduction of OPAT in our hospital.  
Methods: All patients with musculoskeletal infections, treated under orthopaedic surgery in St. Vincent’s University Hospital in 2013 and 2014 were identified from a prospectively maintained database. Patients treated for osteomyelitis with severe peripheral vascular disease were excluded from the study.  
Results: There were 46 referrals to the service in 34 patients. The mean age was 54 (range 19-82). The mean length of treatment was 21 (range 3-61) days, which led to 964 hospital days being saved (over 28 days per patient). The most common diagnosis was septic arthritis, followed by osteomyelitis. The most commonly used antibiotic was Cefazolin.  
Conclusion: 3 patients experienced adverse outcomes during the period studied which were indentified and managed appropriately. Such complications were recognized early, and highlight the need for a designated OPAT clinic, which would provide a more focused, streamlined service.

0281: CEMENTED HIP HEMIARTROPLASTY – HAS TRAINEE COMPETENCE BEEN ASSURED?

C. Deal1, P. Craig. Royal Stoke University Hospital, UK  
Aim: Ability to perform hip hemiarthroplasty safely and competently is an essential part of an orthopaedic surgeon’s training. Clinical knowledge requiring focussed attention includes: correct branching of the femoral canal, the methods used in modern cementation technique and understanding of adverse sequelae such as bone cement implantation syndrome (BCIS). We set out to quantify current understanding of trainees to determine whether targeted teaching was needed.  
Methods: An unannounced test questionnaire was given to a group of 30 orthopaedic trainees (ST3-7) in the West Midlands, to ascertain experience in hemiarthroplasty surgery, to register their techniques and knowledge.  
Results: Average number of hemiarthroplasties, performed as primary surgeon, was 40 per registrar. 43% of trainees were unaware of the correct technique needed to prepare the femoral canal for cement. Over 70% were unable to state the components of 3rd generation cement technique. BCIS was either not recognised or misunderstood by over 80% of trainees.  
Conclusion: Clearly trainees need to improve their knowledge and operating technique for cemented hip hemiarthroplasty. Our findings are surprising given how commonly this operation is performed and the senior