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**

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**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 was level only on 2/3 of films. Films cannot be interpreted accurately 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**

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**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 Mimos, 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 cage dimensions were selected, adjusted and re-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**

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**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 led 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 unidentified 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 HEMIARTHROPLASTY – HAS TRAINEE COMPETENCE BEEN ASSUMED?**

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**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 surgery, 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