Aim: The surgical wound is routinely infiltrated with local anaesthetic in minor and major orthopaedic procedures. Increasingly, all-comers are treated with volar locking plates. Local anaesthetic (LA) can be infiltrated as a single dose or via a wound catheter at the end of the procedure with low or negligible side effects. We audited the use of LA in patients who underwent open reduction and internal fixation for distal forearm fractures over a six month period in our designated orthopaedic theatre and performed a cost analysis.
Methods: Data was collected on patients who underwent insertion of a volar locking plate for a distal forearm fracture in the preceding 6 months. Prior to closure, incisions were subcutaneously infiltrated with 10mls of 0.5% bupivacaine using a 10 ml syringe.
Results: n = 89 patients (61 women & 28 men) who met the audit criteria. Age ranged from 14 -71, with average age at the time of injury 57. Total cost was calculated for the use of needle, syringe & 0.5% bupivacaine.
Conclusion: Total cost of local anaesthesia was €138.84. There were no needle stick injuries. Future studies based from this audit will evaluate LA lavage of surgical incision and compare cost, opiate consumption and pain scores.

0609: IMPROVING WEEKEND HANDOVER IN TRAUMA AND ORTHOPAEDICS: A FOUR CYCLE AUDIT

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Aim: Handover between teams has been highlighted as a point of vulnerability in a patient's pathway. The Royal College of Surgeons (RCS) has published guidance on recommended handover practices. We aimed to assess the quality of weekend handover practices in our department, implement changes and re-assess for improvement.
Methods: Data for 14 domains, based on RCS guidelines, were retrospectively collected from weekend handovers. The four cycles took place in June, July, August and November 2014 respectively (n = 50, 58, 61, 55). Following the first cycle an electronic proforma for weekend handover was developed.
Results: Overall compliance in each cycle was 73, 94, 72 and 95% respectively. Median handover scores were 9, 13, 10 and 13 in each cycle with a maximum possible score of 14. Improvement was demonstrated after implementation of electronic proforma, however this reversed in the third audit following the change over of doctors. Following education of the team, further improvement was demonstrated in the fourth audit cycle.
Conclusion: Development and implementation of a simple proforma can improve the quality and effectiveness of patient handovers, however education of incoming doctors is essential in maintaining these standards.

0622: AN INTERNAL AUDIT ON EXOGEN USE IN THE EAST MIDLANDS

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Aim: EXOGEN is a portable medical device which utilises ultrasound to stimulate bone remodelling in cases of fracture non-union. Published healing rates are as high as 86%. We evaluated the outcomes of all EXOGEN use at two East Midlands centres – Northampton (NGH) and Leicester (LRI).
Methods: Indications for EXOGEN initiation were analysed and compared against published gold standards using clinical notes and imaging.
Results: 27 Patients were analysed at the LRI and 20 patients at NGH. 33% of LRI patients initiated on EXOGEN showed bone consolidation at 6 months and 25% at NGH. 26% of LRI patients underwent subsequent definitive surgery after trial and failure of EXOGEN, similarly 25% at NGH. Overall 26% of LRI patients did not meet the criteria for use.
Conclusion: The published success of EXOGEN was not reproducible at either centre. The relative success of EXOGEN is heavily dependent on patient selection/adherence. The cost per unit is £2562.50 with an estimated spend of £74,123.50 at the LRI between Jul 2011 and Jan 2014. This Audit demonstrates the importance of establishing a protocol for EXOGEN use and monitoring adherence using a database. This is vital as the cost of the device can reimbursed in certain cases of clinical failure.

0630: RADIOGRAPHIC AND FUNCTIONAL OUTCOMES FOLLOWING KNEE ARTHRODESIS USING THE WICHITA FUSION NAIL IN IRELAND

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Aim: Knee arthrodesis is a salvage procedure whose predominant indication is irretrievably failed total knee arthroplasty. Previous publications on the Wichita Fusion Nail have reported arthrodesis rates as high as 95–100%. The purpose of this study was to report both the radiographic and functional outcomes of patients undergoing knee arthrodesis with the Wichita Fusion Nail within the Republic of Ireland and compare the results to those published.
Methods: Patient charts and radiographs were reviewed on all patients who had a Wichita Fusion Nail implanted in Ireland to date. Patients were invited to complete a WOMAC score (Western Ontario and McMaster Universities Osteoarthritis Index) as a functional assessment.
Results: 23 patients were identified. Statistical analyses were conducted in R/RStudio 3.1.1/0.98. The most common indication was failed arthroplasty due to recalcitrant infection (69.5%). Successful fusion occurred in 60.8% of patients. The mean time to fusion was 9.21 months (range 2–24). The mean WOMAC score was 58.55 (range 30–96).
Conclusion: We found a lower rate of arthrodesis than that reported in other published series. The rate of major complications however was comparable to those published previously. Despite these findings, overall functional outcome (WOMAC) in this series was comparable to the published literature.

0641: WE PRESENT OUR EXPERIENCE (THE FIRST IN THE UK) USING THE HUMELOCK HEMIARTHROPLASTY DEVICE FOR BOTH PRIMARY AND FAILED MANAGEMENT OF PROXIMAL HUMERUS FRACTURES

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Aim: We present four cases where we have used this device to highlight its versatility in the management of proximal humeral fractures.
Methods: Patients were operated in the beech chair position using a deltopectoral approach. The salient feature is the aid of an external jig, which aligns the height and version for each individual patient according to their anatomy.
Results: The types of cases where we have used the Humelock include; Failure in the use of a proximal humeral internal locking system (PHILOS) plate due to cut out. Failure in union of fracture with the use of a proximal humeral T2 nail poly trauma patient with significant medical comorbidities including end-stage renal failure, type 1 diabetes and osteoporosis. Failure in non-operative management, in a patient with a history of mastectomy and axillary node clearance for breast cancer.
Conclusion: The Humelock provides a multipurpose tool in the arsenal for an orthopaedic surgeon. Managing the operative and non-operative complications of proximal humeral fractures in a district general hospital we have shown the learning curve for the Humelock is attainable for colleagues working in these centres, thus reducing the need for patient transfer to a tertiary referral centre for management or revision surgery.

0642: SHOULD PATIENTS PRESENTING WITH ACUTELY SWOLLEN KNEE JOINTS BE MANAGED INITIALLY SOLELY WITHIN THE EMERGENCY DEPARTMENT?

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Aim: Acutely swollen joints are commonly referred to Orthopaedics from A & E as suspected septic arthritis. Although the diagnosis is an orthopaedic emergency it is relatively uncommon in comparison to alternatives such as crystal arthropathies. We analysed outcomes for patients referred with acutely swollen joints to allow review of current practices.