determine how to "best fit" trauma care in Ireland to international models.
Methods: An estimate of Irish trauma burden and distribution was made using data from the Road Safety Authority (RSA) on serious or fatal RTAs. Models of a restructured trauma service were constructed and compared with international best practice.
Results: Trauma care is currently provided by 26 acute hospitals, with no Level I trauma center. (mean distance to hospital 20.6Km from site of RTAs). Based on our population, Ireland needs two Level 1 MTCs (in the two areas of major population density in the East and South), with robust surrounding trauma networks including level 2 or 3 trauma centers. With this model, the estimated mean number of cases per Level 1 MTC per year would be 628, with a mean distance to MTC of 80.5Km +/-59.2Km, (maximum distance 263.5Km).
Conclusions: Trauma care in Ireland is not in keeping with international models. To reform trauma services Ireland needs major trauma centers with surrounding comprehensive trauma networks and prehospital infrastructure.

1146: DOES THE INTRODUCTION OF AN EMERGENCY SURGICAL UNIT IMPROVE PATIENT WAITING TIMES?

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Introduction: In June 2013 a new Emergency Surgical Unit (EMSU) with a dedicated emergency surgical team was introduced to the Royal Victoria Hospital, Belfast. Our aim was to determine if the introduction of the EMSU improved time from A&E to senior surgical review. Time from decision to operate to surgery was also audited against current standards set out by the Royal College of Surgeons of England (RCS).
Methods: A retrospective review was carried out of patients admitted via A&E who had either an emergency laparotomy or appendicectomy during July and August 2012 (Group 1; n=22). This group was compared to patients who had an emergency laparotomy during June and July 2013 after the introduction of the EMSU (Group 2; n= 24).
Results: The mean time from A&E consult to senior surgical review improved by approximately 30mins after the introduction of the EMSU (194mins vs 166mins). The percentage of patients meeting the RCS target times was 81% in group 1 and 75% in group 2.
Conclusions: The introduction of an EMSU has had a positive impact on patient waiting times to senior surgical review. This audit also identified time delays to theatre as an area that could still be improved upon.

1166: ADULT UPPER LIMB REPLANTATIONS AND REVASCULARISATION OUTCOMES: A 7-YEAR BIRMINGHAM AUDIT

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Introduction: There is limited literature on digital replantation, particularly from UK based centres. We report our experience of hand and digital replant and revascularisation procedures at a Trauma Centre in The West Midlands.
Methods: A retrospective analysis identified digit/hand replantations and revascularisations between October 2004 and September 2011. Mechanism of injury (MOI), operative details and outcomes were recorded from electronic patient records.
Results: 28 patients with mean age 39.4 years had 41 digit and 3 hand replants/revascularisations. Power-saw was the leading MOI (15/28). 9/33 replant and 9/11 revascularisation procedures were successful. All hand replant/revascularisations survived. Of single digit procedures, 8/13 replantations and 3/3 revascularisations survived. Multiple digit procedures had a worse outcome; 3/18 replantations and 2/7 revascularisations survived. No replantation/revascularisation survived if attempted beyond 12 hours ischaemia time and 27 digits ultimately required terminalisation. Complications occurred in 25 digits; 19 of these occurred within 24 hours of surgery. Of the 7 congested digits, all received leeches but only the 3 that commenced this within 24 hours survived.
Conclusions: Power-saw, multiple replanted digits and longer ischaemia time were predictors of poor outcome. Early leech therapy improved survival. Our results may reflect differences in MOI and a lower threshold for attempted replantation.

1190: 30-DAY MORTALITY OF EMERGENCY LAPAROTOMY IN A DISTRICT GENERAL HOSPITAL: A RETROSPECTIVE AUDIT

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Introduction: To compare the 30-day mortality rate (MR) following emergency laparotomy (EL) performed at our institution with the National Emergency Laparotomy Audit (NELA) results published in 2012.
Methods: List of EL performed from November, 2012 to October, 2013 retrieved. Electronic patient records and notes reviewed and demographics, intra-operative (Consultant presence, immediate complications) and post-operative data (Destination, 30-day MR, complications) were noted. Data was analysed using Microsoft Excel 2010 software.
Results: (n=90) patients, age 70 years, 24-90years (Median + IQ). Male to female ratio of 1.25:1. Non risk adjusted 30-day MR was 12% as compared to 14.2% national average. 30-day MR was 12.5% in cases performed during day time, 10.8% in evenings and 20% during night time. 30-day MR was 30.7% among those who required ITU care post-operatively. Median days of hospital stay were 19. Overall mortality was 38.4% in ASA 4 group. Consultant surgeon was present in 98.8% cases while anaesthetic consultant was available in theatre in 75% cases. Overall morbidity was 49%.
Conclusions: EL carries significant risk of morbidity and mortality. Procedures performed with consultant surgeon and anaesthetist's presence carry a favourable outcome. There is growing need of developing a national strategy to improve outcomes of EL in UK.

1206: COMPLIANCE WITH COLLEGE GUIDANCE ON OPERATIVE DOCUMENTATION IN LAPAROSCOPIC APPENDICECTOMY

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Introduction: Appendicitis represents the most common surgical abdominal emergency, affecting 7% of the population during their lifetime and laparoscopic appendicectomy is safe and effective for the treatment of uncomplicated appendicitis. With reducing thresholds for litigation, accurate and appropriate documentation of operative procedures and findings is crucial to minimise the burden to the NHS of legal action. This audit aimed to quantify compliance with i. RCSEng guidance; ii. local consensus on documentation from a medico legal perspective.
Methods: Operative records were assessed from 100 consecutive laparoscopic appendicectomies at a large DGH in 2013. Standards used were RCSEng published guidance and local consensus on important documentation items used in legal challenges.
Results: Seventy-eight records were fully compliant with RCS guidance, but none was fully compliant with medico legal documentation consensus. Documentation was particularly poor regarding perforation (16%), direct vision port insertion (34%), thromboprophylaxis instructions (34%) and comments on other organs (48%). The grade of trainee did not affect the standard of documentation ('SHO' vs 'SpR', p=0.466), but trainees outperformed Consultants (81% vs 33% RCSEng compliance, p=0.02).
Conclusions: Compliance with RCSEng guidance was good, but medico legally pertinent documentation was lacking. Training on medico legal aspects of documentation may be useful for trainees and Consultants alike.

1213: WHAT IS THE DIAGNOSTIC VALUE OF WHITE CELL COUNT, NEUTROPHIL COUNT, C-REACTIVE PROTEIN IN ACUTE AND PERFORATED APPENDICITIS?

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Introduction: White cell count (WCC), neutrophil count (NC) and C-reactive protein (CRP) are used as adjuncts in the diagnosis of appendicitis. The aim of this study was to determine the diagnostic accuracy of the above blood tests in acute and perforated appendicitis.
Methods: We retrospectively reviewed appendicectomies at a district general hospital in 2013. Operative and histology findings were correlated with admission blood tests.

Results: Of the 202 appendicectomies, 23 (11%) were histologically negative for appendicitis and there were 31 (15%) cases of perforated appendix.
When comparing the "negative appendicitis" vs. "inflamed appendix" group, we found no significant difference between the frequency of raised WCC, NC, CRP. The sensitivity and specificity of each blood test for a diagnosis of acute appendicitis were as follows: WCC (62.6% and 52.2%), NC (72.6% and 43.5%), CRP (70.9% and 47.8%), and for ≥2 combined tests (70.9% and 43.5%). When comparing "perforated appendix" vs. "non-perforated" group, there was a significant difference in the number of cases with raised CRP ($p<0.05$). CRP was 90.3% sensitive for perforated appendix.
Conclusions: Inflammatory markers, including WCC, NC and CRP are not accurate enough to diagnose acute appendicitis. However, CRP alone is a sensitive marker for cases of perforated appendix.

1225: OPERATIVE REPORTS AT EMERGENCY INGUINAL HERNIOPLASTY MAY NOT BE COMPREHENSIVE ENOUGH TO AVOID LATER LITIGATION

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Introduction: Chronic groin pain (CGP) after inguinal hernia repair is a multi-factorial problem of variable incidence. Litigation for testicular injury and CGP accounts for up to 40% of claims with settlements averaging over €85,000.
Methods: We scrutinised computerised surgeon-typed reports (ORMIS) of all emergency inguinal hernia repairs in a single DGH during 2013. We specifically sought clear description of spermatic cord handling and inguinal canal nerves.
Results: All repairs (n= 27; all male; mean age 65; range: 25-93 years) were performed by surgeons in training using an open approach. The consent form uniformly described CGP as a possible complication. The majority (23/27; 85%) were primary hernias with well-described operative findings in all cases. Cord handling was documented in 19 patients (70%) and two underwent orchidectomy. The repair was augmented with prosthetic mesh in the majority of cases (89%) but the ilio-inguinal nerve status was described in only two patients. No report mentioned 'seeking but not finding' nerves.
Conclusions: Surgeons in training seem to disregard documenting the status of nerves at urgent repair. Lawyers can be forgiven for arguing negligence ("post hoc, propter hoc") if records omit observations on structures prone to 'inadvertent' damage. This should be emphasised to all trainees.

1288: THE DIAGNOSTIC VALUE OF INFLAMMATORY MARKERS IN PERFORATED APPENDICITIS

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Introduction: The diagnostic value of white cell count (WCC), C-reactive protein (CRP) and bilirubin as identifiers of perforated appendicitis (PA) remains controversial. The aim of this study is to establish a cut-off point in the levels of these markers to diagnose PA.
Methods: A retrospective analysis of 338 patients who underwent appendicectomy and pathological diagnosis of appendicitis was performed. Receiver operating characteristic (ROC) and area under the curve (AUC) analysis were used to establish the diagnostic accuracy and a cut-off point of the preoperative blood levels of WCC, CRP and bilirubin for identifying PA.
Results: 256 (75.7%) and 82 (24.3%) patients were diagnosed with simple appendicitis (SA) and PA respectively. ROC analysis showed that a high CRP level was the best diagnostic marker for SA and PA with AUC of 0.71 (p-value <0.0001, 95% CI 0.64-0.78). High bilirubin level was the second best marker with AUC of 0.64 (p-value <0.0001, CI 0.56-0.72). A cut-off point of CRP level >70 demonstrated a specificity of 80% and sensitivity of 50% for distinguishing PA from SA.
Conclusions: In patients with suspected appendicitis, CRP provides the highest diagnostic accuracy. A CRP level >70 may be a cut-off point for a likely diagnosis of PA.

1382: IMAGING DURING ACUTE SURGICAL RECEIVING, ARE WE TRULY RUNNING AN EMERGENCY SERVICE?

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Introduction: This audit aimed at identifying the time taken from requesting till performing various emergency imaging modalities in a surgical unit within a District General Hospital setting.
Methods: 105 patients admitted over a period of eight weeks under the care of four different consultants were randomly selected. The sample was representative of all age groups. Both sexes were equally represented as well. Data was collected retrospectively by reviewing case-notes and reviewing the information available on the computer based imaging requesting system used within the trust.
Results: 85 patients (81%) were admitted with abdominal pain. The rest of complaints (19%) included vomiting, abdominal distension and jaundice. 70 Ultrasound scans (US), 32 Computerised Tomography scans (CT), 2 Magnetic resonance scans (MRI) and 1 barium follow through were requested during this period. For US scans, the median time was 11h 49m (range 01:01-52:00), for CT scans the median was 4h 42m (range 01:24-48:17) and for MRI scans the range was 04:55-48:20.
Conclusions: Despite running a 24 hour emergency radiology service within our trust, it was found that there was a significant delay in performing various emergency scans. This delay may have an impact on the care of emergency surgical patients and contributes to inefficient use of surgical beds.

1385: TRIAGE TO RESUSCITATION WITH TRAUMA TEAM ACTIVATION AFFECTS OUTCOME IN ELDERLY PATIENTS SUFFERING SEVERE INJURY

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Introduction: Advancing age is associated with differences in anatomy, physiology and injury patterns and mechanisms. Our aim was to compare the incidence of under-triage amongst the elderly (65+ years) and younger adults (16-64 years) suffering severe injury (ISS>15) and to determine whether under-triage in the elderly impacted upon outcome.
Methods: Retrospective review of data submitted to the Trauma and Research Network (TARN) between January 2011 and December 2012. Note was made of whether patients were seen by the trauma team in the resuscitation area or by emergency department staff in majors, as well as outcome. Logistic regression was used to determine whether under-triage of the elderly was associated with in-hospital mortality.
Results: 477 younger adults and 249 elderly patients were identified. One third (30.4%) of elderly patients were triaged to resuscitation with trauma team assessment compared with two thirds (67.2%) of younger adults. Being seen by the trauma team was associated with two-fold decrease mortality amongst the elderly ($p<0.05$).
Conclusions: Our current triage protocol is poorly sensitive in identifying severely injured elderly patients. Being managed by the trauma team on arrival improves the survival of elderly trauma patients. We propose a new triage protocol for use in injured patients aged 65+ years.

1404: IMPROVING RATES OF NEGATIVE LAPAROTOMIES IN SOUTH AFRICA

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Introduction: Penetrating abdominal trauma imposes a difficult decision in balancing the morbidity of negative laparotomy and missing an intra-abdominal injury. In rural South Africa, where trauma rates are high and resources low, we investigate the role of selective conservatism in managing penetrating abdominal injury.
Methods: We collated laparotomy findings for penetrating abdominal trauma between 2010 and 2013 (six months per year). Only cases where the peritoneum was breached were included. Positive laparotomies required surgical intervention, negative laparotomies were when no intra-abdominal injury was identified and non-therapeutic laparotomies were those that had intra-abdominal injury that didn't require surgical intervention and could have been managed conservatively.
Results: 87 laparotomies were performed in 2010, 87 in 2012 and 81 in 2013. The majority required surgical intervention-67%, 73% and 79% respectively. Resources were assessed over this time period and senior staffing levels was the most significant improvement. There was availability of CT and FAST scan throughout.