

Results: mean 53.3% median 51%. Range 17–87%. Mean total laparoscopic simulator task time: Lowest 10% AST score= 1286 seconds, highest 10% = 574 seconds

Conclusions: Early results show the possibility in identifying those individuals who excel on AST and laparoscopic simulator tests. More importantly it can also identify those who might struggle in the technical aspect of surgical training due to their low performance in both tests.

0604 ACCURACY OF TIME-KEEPING IN THE SURGICAL PATIENT PATHWAY AND ITS IMPACT ON OPERATING THEATRE UTILISATION

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Introduction: Optimal operating theatre scheduling plays a crucial role in maximising quality and cost-effectiveness of surgical care. Theatre data management systems are designed to capture real-time patient data pertaining to the surgical pathway, influencing case-scheduling and resource management.

Aim: To assess the accuracy of data captured by theatre staff using TheatreManTM (Trisoft) and its impact on efficient theatre utilisation.

Methods: Independent observers recorded the timings of 7 key steps in the patient pathway for 38 randomly selected operations at a major London Teaching Hospital. The results were compared with data recorded on TheatreManTM and analysed using the student T-test.

Results: Recorded anaesthesia and operation 'start' times were significantly earlier than observed 'start' times ($p=0.0000$ and $p=0.0010$). Recorded operation 'finish' times were significantly later than observed 'finish' times ($p=0.0069$). Total operative time was overestimated by a mean of 6.1 minutes per case (S.D 11.2 mins, 95% CI: 2.4 to 9.8 mins), leading to over-estimation of theatre utilisation by 4.2% over a 12 month period.

Conclusion: Benchmarked times for surgeon-specific-procedure were found to be inaccurately recorded. The cumulative impact of this resulted in an actual utilisation of 65.8% over twelve months as opposed to the 70% perceived utilisation in this hospital.

0607 EXPLORING THE OPINIONS OF HEALTHCARE STAFF REGARDING KEY BARRIERS TO EFFICIENT OPERATING THEATRE UTILISATION

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Introduction: An increasing demand for NHS services requires effective utilisation of existing resources in all areas of healthcare, especially operating theatres. It is well recognised that an 'empty theatre' has a significant impact upon the surgical patient pathway, and contributes to increasing financial burden on hospital and NHS budgets.

Aim: To explore and establish the reasons for sub-optimal operating theatre utilisation from the perspective of key healthcare staff.

Methods: A range of individuals from the medical, nursing, administration and management teams were identified and interviewed using a semi-structured questionnaire. Theoretical saturation was achieved after 14 interviews. The interviews were transcribed, 246 codes were identified and thematic analysis was undertaken to determine our results.

Results: Seven key themes emerged as being central to inefficient theatre utilisation. These were: cancellations; ineffective scheduling; lack of resources; inter-professional relations and communication; staff motivation; bureaucracy and documentation; poor pre-operative planning.

Conclusion: A number of complex, inter-related factors influence effective utilisation of the operating theatre, ranging from systems issues to more intangible aspects. Increasing physical capacity and human resources alone are insufficient to optimise theatre utilisation. What is required is a paradigm shift in organisational culture and working practices.

0608 RADIOLOGICALLY INSERTED BIODEGRADABLE (SX-ELLA) OESOPHAGEAL STENTS TO TREAT DYSPHAGIA DUE TO BENIGN OR MALIGNANT OESOPHAGEAL STRICTURES

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Introduction: Biodegradable (BD) oesophageal stents have only been available commercially since 2008 and previous published research is limited. Our aim was to review the use of BD stents to treat dysphagia in benign or malignant oesophageal strictures.

Methods: Patients were identified from a prospective interventional radiological database.

Results: 18 BD SX-ELLA stents were inserted in 13 males and 3 females. The median age was 68 (range 54–80). Indication for BD stent was dysphagia from benign strictures ($n=6$), or in patients due to have neoadjuvant chemotherapy awaiting oesophagectomy ($n=7$), radical chemo-radiotherapy ($n=4$) or palliative chemotherapy ($n=1$). Median dysphagia score before stent insertion was 3 (range 2–4) compared to 1 post stent insertion (range 0–2). There was a statistically improved dysphagia score after stent insertion ($p=0.001$). Technical success was 94% and clinical success was 76%. 6 patients required subsequent metallic stent insertion. In the neoadjuvant chemotherapy group, 4 patients had irresectable disease and 3 patients were unfit for surgery.

Conclusion: BD stents provide good dysphagia relief for the life time of the stent. However, the reintervention rate is high after the stent dissolves. Patients with severe dysphagia who are potential surgical candidates require careful re-staging.

0613 NOVEL TECHNIQUE OF RECONSTRUCTING THE INGUINAL LIGAMENT USING RECTUS FEMORIS FASCIA

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Introduction: We describe a technique of reconstructing the inguinal ligament using rectus femoris fascia.

A 62-year-old man presented with massive bilateral abdominal wall hernias, six years after developing bilateral inguinal hernias. In the interim, he had undergone six unsuccessful hernia repairs, with wound breakdown on one occasion healing by secondary intention. MRI showed attenuation of both recti and absence of the remainder of the musculoaponeurotic abdominal wall anterior to both mid-axillary lines. The right inguinal ligament had been destroyed.

The missing inguinal ligament was reconstructed using a 4cm wide strip of vascularised rectus femoris fascia pedicled on the anterior superior iliac spine. This was transposed to cover the external iliac vessels, and sutured to the pubic tubercle. Care was taken to avoid compression of the vessels. The musculoaponeurotic abdominal wall was reconstructed with two 20 x 20cm sheets of StratticeTM (porcine acellular dermal matrix) and an overlying sheet of ProleneTM mesh, sutured to the lateral abdominal wall muscles and to both inguinal ligaments. The cutaneous abdominal wall was closed with an abdominoplasty technique. There was no hernia recurrence 6 months post-operatively.

Conclusion: This is a novel technique for the reconstruction of the inguinal ligament.

0618 THE ASSOCIATION BETWEEN WHO SURGICAL SAFETY CHECKLIST AND ANTIBIOTIC PROPHYLAXIS IN ELECTIVE MESH REPAIR OF INGUINAL HERNIA

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Aims: The aim of this study was to examine the impact of WHO Surgical Safety Checklist (SSC) completion on provision of antibiotic prophylaxis in elective mesh repair of inguinal hernia.

Methods: We conducted a prospective study on 100 consecutive elective inguinal hernia mesh repairs over 8 months. We reviewed patient's operative notes, anaesthetic charts and SSC sheets for documentary evidence of compliance to National Patient Safety Agency (NPSA) recommendations and hospital antibiotic guidelines.

Results: The SSC was completed in 64 patients (64%). Antibiotic prophylaxis was provided in 52 patients (52%) and of these, 50 (96%) were given the recommended antibiotics within 30 minutes of induction of anaesthesia. Of those with SSC completed, a significantly higher percentage

were given antibiotics compared to those patients with SSC not completed (79% vs 48%; Chi-squared, $P=0.003$). There was a significant positive correlation between completion of SCC and provision of antibiotic prophylaxis amongst Consultant-led teams (Spearman correlation, r_s 0.90; $P=0.002$).

Conclusions: The results of this study suggest that use of SSC may help to minimise the risk of inadequate peri-operative antibiotic prophylaxis. We recommend mandatory use of SSC as per NPSA policy in all general surgical operations as it may promote high standards of surgical practice.

0619 A MULTI-DISCIPLINARY APPROACH TO IMPROVING BLOOD TRANSFUSION PRACTICE IN PAEDIATRIC SCOLIOSIS CORRECTION SURGERY

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Introduction: Spinal correction surgery is associated with significant perioperative blood loss, often necessitating transfusion. Given the potential risks of blood transfusion we have introduced a pathway with the aim of reducing transfusion requirements.

Method: A Spinal Surgery Care Pathway was developed. Its implementation involved a multi-disciplinary programme of several different interventions: nurse-led clinics allowing pre-operative haemoglobin levels to be optimised; intra operative cell-salvage, and a transfusion criteria awareness programme. The records of all paediatric patients undergoing spinal correction surgery between 2000 and 2010 were reviewed: haemoglobin levels; blood products administered; demographic and surgical details were recorded.

Results: Data from 466 patients were analysed: 166 from before introduction of the pathway and 300 after. The proportion of patients undergoing transfusion dropped from 69.3% to 16.7% ($p < 0.0001$), risk ratio 0.24 (95% CI 0.18 - 0.32). Where transfusion was required, the mean volume transfused fell from 8.2 to 4.5 units ($p < 0.001$).

Discussion: Implementation of this multifaceted pathway has significantly reduced blood product requirements. In addition to the reduction in morbidity this is likely to have implications upon length of stay and cost. We propose that other units undertaking such surgery consider the use of a similar pathway.

0620 MULTIDISCIPLINARY EDUCATION IMPROVES PRESCRIPTION OF BALANCED CRYSTALLOIDS

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Aim: The British Consensus Guidelines on Intravenous Fluid Therapy for Adult Surgical Patients (GIFTASUP) detail guidance on prescription of balanced crystalloids. Unbalanced crystalloids (e.g. 0.9% saline) have previously been shown to be the commonest surgical fluid, despite evidence advocating balanced crystalloids. However, no studies have appraised current UK practice or compliance with these guidelines. This study aimed to quantify this in one institution, and the effect of multidisciplinary educational intervention.

Method: All emergency adult surgical admissions were studied prospectively in three discrete periods. Compliance with GIFTASUP guidelines was ascertained. Intervention comprised multidisciplinary teaching sessions and workplace reminder posters.

Results: 171 patients received fluids and were included. Prior to intervention 36.4% of patients received inappropriate saline for volume replacement and 26.9% for maintenance. Following intervention this was 0.0% ($p=0.01$) and 3.4% ($p=0.03$) respectively. At 6 month follow up continued improvement was seen: 2.0% ($p < 0.0001$) and 0.0% ($p=0.01$).

Conclusions: Our study suggests that despite mounting evidence and ASGBI guidance, 0.9% saline continues to be commonly and inappropriately prescribed to emergency surgical patients. We found multidisciplinary education (comprising visual workplace reminders and short teaching sessions), to be an effective means of improving prescription of balanced crystalloid in the short term and medium term.

0621 SURGICAL CASE MIX IN UPPER GI CLINICS – A SURVEY

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Aim: Our aim was to analyse the surgical case mix in a specialist Upper GI clinic and to determine the most appropriate speciality for each of the referrals seen.

Methods: This is a 4-week prospective study. All newly referred patients attending specialist upper GI clinic were included. Data was collected from the referral letter and patient casenotes.

Results: In this period, 167 new patients were reviewed in 22 clinic sessions. In 111 patients (66.5%) the referral was considered appropriate. In the remaining 56 patients (33.5%) the referrals were considered inappropriate. They include, chronic nonspecific abdominal pain ($n=13$); dyspepsia secondary to peptic ulcer disease and gastritis ($n=9$); chronic anemia ($n=8$); malaena ($n=4$); colorectal and anal conditions ($n=9$); non general surgical lump ($n=6$); shortness of breath ($n=2$) and chronic back-ache ($n=1$). Based on presenting symptoms gastroenterology was the most appropriate speciality in 34 patients (20.4%) and colorectal surgery in 9 patients (5.4%). Further referral was necessary in 23 patients. Each new patient is allowed 10 minutes per appointment, hence 230 minutes of clinic time, equivalent to 1.3 clinic session could have been better utilised.

Conclusion: Patients with gastrointestinal symptoms should first be assessed by gastroenterologists and where indicated referred to the surgeon. The surgeon's time thus freed is better utilised to do more operating with fewer, but more focused clinics.

0622 MRI OF THE INTERNAL ACOUSTIC MEATUS: AN AUDIT OF INDICATIONS AND FINDINGS

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Introduction: Audiovestibular symptoms are common in the general population, but only rarely do they indicate serious pathologies such as acoustic neuroma. MRI of the internal acoustic meatus (MRI IAM) is frequently performed to assess the auditory tract for such lesions. Various suggested protocols have rationalised the use of MRI IAM as a screening tool. We audited our concordance with these protocols.

Methods: 1,000 MRI IAM investigations were reviewed. Patient demographics, indications and findings were recorded. Audiological data was correlated with the indications for imaging. The data were then analysed.

Results: 87% of patients met criteria from one of three published UK protocols. However, there was low concordance between these protocols; for example 55% of requests met UK Department of Health criteria for asymmetrical hearing loss. 62% of scans displayed no demonstrable abnormalities. 9 acoustic neuromas were identified.

Conclusions: The nature of the presenting symptoms and the lack of consensus on audiological protocols mean that MRI IAM studies are a burden on all radiology services that work with ENT departments. The relative benefits of protocols are discussed. Methods for improving our practice are discussed with the results of a repeat audit.

0623 ENDOVENOUS LASER THERAPY: EVOLUTION OF PRACTICE

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Aim: Endovenous Laser Therapy (EVLT) is a popular treatment for varicose veins typically carried out in an office setting. We aimed to assess the evolution of EVLT practice in a tertiary care vascular surgical unit.

Methods: The study was a retrospective review of prospectively collected database. 200 patients who underwent EVLT for refluxing unilateral GSV during 2005–09 were categorized into 4 groups of 50 each for inter & intra-