that applying to the 'medical training application service' (MTAS) in 2006.

**Methods:** The Association of Surgeons in Training (ASiT) developed an online questionnaire at the time of MMC implementation. A paired, self-reported online survey was re-issued to original respondents in 2013, mapping their working patterns since MMC and utilising Likert scales to assess perceived satisfaction with the MTAS/MMC changeover.

**Results:** Of 1005 primary respondents, 142 were no longer contactable. 195 (23%) completed follow-up (M:F 76:24, median age: 36), 99% of respondents were still working in the medical profession. 80.3% remained in a surgical specialty. 53.3% made >1 unsuccessful application to a national training number (NTN), with 8.7% still without one. An overwhelming majority reported negative experiences of MMC (86.2%) and detriment to quality of life (81.7%). 56.3% considered continuing their careers abroad, with 10% eventually doing so.

**Conclusions:** The attrition rates from surgery, the medical profession in general and the United Kingdom demonstrate the lasting effects on professional's careers resulting from the mismanaged implementation of MMC.

**1162: THE ASSOCIATION OF SURGEONS IN TRAINING (ASiT) FOUNDATION SKILLS IN SURGERY COURSE: 6 YEARS OF ASPIRING SURGEONS**


**Introduction:** The Association of Surgeons in Training (ASiT) has run Foundation Skills in Surgery (FSS) courses for six years. Aimed at senior medical students and Foundation (FY) doctors, FSS focuses on basic surgical skills, offering an overview of surgery. This study evaluates the course and career progression of delegates.

**Methods:** A non-mandatory online questionnaire was distributed via email to previous FSS delegates. Questions focused on demographics, career intentions and course feedback.

**Results:** Of 214 delegates, 72 responded (35.0%); 58.0% were male. At the time of survey, 27.7% were FYs, 27.5% Core Surgical Trainees, and 15.0% fifth-year students. 40.6% attended at FY1 and 17.4% as fourth-years students. At the course, 89.9% intended on surgical careers; 85.5% 15.9% career intentions and course feedback.

**Results:** To investigate the efficacy of medical practice (MP) and physical practice (PP) in restoring surgical performance following sleep deprivation.

**Methods:** 31 novice surgeons underwent curriculum based simulation training in laparoscopic cholecystectomy. The 3 stages of performances were (1) rested, (2) following 24 hour of sleep deprivation and (3) 5-7 days later in a rested state. Epworth sleepiness scale (ESS), mental imagery questionnaire (MIQ), global rating scale (GRS) and simulator metrics served as outcome parameters.

**Results:** At baseline no difference in psychomotor aptitude existed. In the rested state, no significant differences were observed between the groups with regards to ESS scores or performance quality, however the MP group had higher MIQ scores than the control (median 44 versus 43; p = 0.043).

**Followign sleep deprivation the performance quality of control and PP groups significantly deteriorated [23 & 21.5 (p = 0.001) and 22.5 & 20 (p = 0.035) respectively] whilst MP group [23 & 23 p = 0.52] maintained a performance equivalent to the rested state. Comparison of all outcome measures between the rested and rested states 5-7 days later demonstrated the absence of a learning effect.

**Conclusions:** MP can counter the effects of sleep deprivation on the quality of surgical performance. Further study amongst trainees is warranted to appraise the full benefits of MP.

**1203: TRAINING IN LAPAROSCOPIC TOTAL EXTRA-PERITONEAL HERNIA REPAIR: SAFE UNDER EXPERIENCED SUPERVISION WITH SIGNIFICANT PERFORMANCE IMPROVEMENT**

Richard Booth*, Fergus Noble, Christian Wakefield. Royal Hampshire County Hospital, Winchester, Hampshire, UK.

**Introduction:** Laparoscopic total extra-peritoneal (TEP) hernia repair is perceived as technically demanding with a long learning curve. We aimed to establish whether TEP hernia repair is safe for trainees to perform under supervision and if trainee operating times improve over a placement.

**Methods:** A retrospective analysis of consecutive TEP hernia repairs performed under the care of a single consultant between April 2002 and November 2013. Statistical analysis was conducted using Mann-Whitney U test, Wilcoxon W test and Pearson correlation coefficient.

**Results:** 1106 TEP hernia repairs were performed on 804 male and 37 female patients (530 as bilateral), median age 57 (range 16-91). 49.6% of hernia repairs were performed by trainees. Trainee operating time improved over a six month placement, reaching statistical significance for unilateral cases (month 1-3: 48 min vs month 3-6: 43 min, P = 0.028). The overall peri-operative morbidity rate was 3.7% (41 cases), with no significant difference in consultant vs trainee morbidity rates (4.3% and 3.1% respectively, P = 0.416), or morbidity types. Overall recurrence rate was 1.3%.

**Conclusions:** Trainees can safely perform TEP hernia repair under supervision, with no difference in post-operative morbidity. Trainees demonstrate significant improvement in operating time for unilateral repair during an attachment.

**1208: EARLY WARNING! PODCASTS REALLY CAN SAVE LIVES!**

Damian Bragg*, Jessika Voll*, Gregor McNeill. Nottingham University Hospitals, Nottingham, UK.

**Introduction:** To standardise junior doctors’ induction on the early warning score (EWS), and increase the rate of patient escalation to critical care teams.

**Methods:** An induction podcast [https://vimeo.com/80420216] on the EWS was created by a consultant anaesthetist. Targeted at junior doctor level, it contained an introduction to the EWS and how to escalate patients to critical care teams. The podcast was uploaded to the trust website and the link e-mailed to all junior doctors commencing their rotations in December 2013.

**Results:** Medical escalation is one of five EWS targets which form part of EWS CQUIN (Commissioning for Quality and Innovation). The yearly target
has been set to 35%. The data from the EWS audit for December 2013 in our hospital demonstrated a compliance rate of 51%. This is a significant increase from the previous four months of 15, 17, 25 and 18%.

**Conclusions:** Timely medical escalation has a major clinical impact and financial implications to the trust. The EWS podcast on our trust website was the main intervention in the beginning of December and has made a massive impact on our patient care.

1220: EVALUATING AND ADDRESSING MODERN UNDERGRADUATE SURGICAL EDUCATIONAL NEEDS

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**Introduction:** An imperative part of surgical training has been the passing on of technical skills to junior colleagues. Surgery was learnt by repeatedly performing operations on patients, under supervision. Junior doctors often feel ill-prepared for surgical foundation training.

**Methods:** A national medical student survey was electronically conducted to investigate how effective surgical teaching is on the modern undergraduate course. 187 clinical year medical students participated in the survey.

**Results:** 51% of students rarely had formal surgical skill teaching with 77% never receiving formal skill assessment by supervisors. 82% have never been examined on knot tying or suturing. 47% of students had never had the opportunity to practice surgical skills, and 45% felt they would not be confident to close an open wound. 96.8% were not satisfied with surgical simulation training at medical school. A 2-day course was devised to address deficiencies in surgical skill teaching, resulting in a minimum average improvement of 42% of open surgical skills and 36% of laparoscopic skills.

**Conclusions:** Our study has identified a substantial shortfall in the teaching of surgical skills. We have shown this deficit can be addressed by implementing a surgical skills course, demonstrating a significant improvement in student skills.

1237: ADVANCED TEAMWORKING IN EMERGENCY SURGICAL SITUATIONS: IMPROVING PATIENT SAFETY THROUGH THE DESIGN OF A MULTI-PROFESSIONAL, MULTI-DISCIPLINARY COURSE FOCUSING ON NON-TECHNICAL SKILLS

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**Introduction:** Non-technical skills are vital to surgeons, yet they are rarely formally taught. Teams of healthcare professionals make human errors despite technical expertise and knowledge, compromising patient safety. Our aim was to design a one-day, multi-professional, multidisciplinary course to practice non-technical and team-working skills in emergency situations through simulation.

**Methods:** The course comprised a morning of interactive lectures and team-working exercises, and an afternoon of simulated scenarios. For the latter, the group divided into teams made up of an anaesthetist, ODP, surgical trainee/ emergency medic and nurse. During the scenarios, teams focused on communication strategies, situational awareness and prompts such as checklists. A thorough debrief with experienced clinicians followed.

**Results:** Over 100 healthcare professionals have completed the course. All reported finding the course useful and would recommend it to their colleagues. 95% felt the scenarios had good or excellent relevance to clinical practice, and longer-term data (up to 1 year post course completion) revealed 98% continued to use the skills taught.

**Conclusions:** There is a real enthusiasm for developing non-technical skills within modern surgical training. A course which includes simulation in a multi-professional and multidisciplinary environment will improve not only team-working, but the culture in general and, ultimately, patient safety.

1249: PRESERVING ARTERIOVENOUS FISTULA OUTCOMES DURING SURGICAL TRAINING

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**Introduction:** Arteriovenous fistulae (AVFs) are the preferred option for vascular access as they are associated with lower mortality in haemodialysis patients compared to arteriovenous grafts (AVGs) or central venous catheters (CVCs).

**Methods:** We assessed whether vascular access outcomes for surgical trainees are comparable to consultants or associate specialists. A prospective database was created and information collected regarding patient demographics, past medical history, pre-operative investigations, grade of operating surgeon, type of AVF formed, primary AVF patency rate and the 4 year cumulative AVF survival.

**Results:** 143 vascular access patients were identified for inclusion during the 6-month study period. Primary AVF patency was established in 123 (86%). There was no significant difference in survival of AVFs according to grade of surgeon (consultants and associate specialists versus trainee surgeons; log rank x^2 0.984 p = 0.61) or type of AVF (radiocephalic versus brachiocephalic AVF; log rank x^2 0.472 p = 0.79). Patency rates of successful AVFs at one and two years were 60.9% and 47.9% respectively.

**Conclusions:** We have demonstrated no significant differences in outcomes of primary AVFs formed by trained versus trainee surgeons. Creation of a primary AVF represents an excellent training platform for intermediate stage surgeons across general and vascular surgical specialties.

1276: STARSURGUK: IMPROVING MEDICAL STUDENTS’ PERCEPTIONS OF SURGICAL ACADEMIA THROUGH PARTICIPATION IN A COLLABORATIVE, MULTI-CENTRE, NATIONAL COHORT STUDY

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**Introduction:** Medical students can struggle to engage in high-quality research and audit outside of formal programmes, such as intercalated degrees. STARSurgUK is the world’s first student-led collaborative network in surgery, completing its first national study in 2013. This parallel study assessed the educational impact of participation.

**Methods:** Practical experience within STARSurgUK was supplemented with a 1-day training meeting, e-learning modules and YouTube presentations. Paired, self-reported electronic surveys were issued pre- and post-participation. Likert scales were used to assess collaborators’ understanding and perceptions of research, audit, academic careers and the collaborative research model. Paired differences were assessed using Wilcoxon signed rank tests (alpha=0.05).

**Results:** 55 paired pre-post responses (23%) were received (M:F 58:42; median age=23). Participation led to increased confidence in key academic activities including: data collection in a clinical setting (p<0.001), presentation of scientific results (p=0.013) and communication with local governance bodies (p=0.001). Collaborators described an increased appreciation of research, audit and study design (p=0.001). The majority of collaborators (98%) disclosed ‘no previous interaction’ with trainee-led networks, however 95% were more likely to engage following participation.

**Conclusions:** STARSurgUK empowered students to engage with surgical academia and promoted integration into trainee-led research networks. Collaborators reported increased confidence in generic academic skills.

1291: ENHANCING CORE SURGICAL TRAINING: A SUSTAINABLE MODEL FOR SIMULATED OPERATIONS ON WHOLE FRESH FROZEN CADAVERS

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**Introduction:** Better Training Better Care (BTBC) pilots are a Health Education England initiative to maximise learning opportunities during training. We report on the cost, development and educational benefit of a BTBC pilot of simulated operations on whole fresh frozen cadavers (FFC) for Core Surgical Trainees (CSTs).

**Methods:** Evaluation from a first workshop informed design of a second. The safety checklist, a simulated sterile field and parallel training of Operating Department Practitioner Trainees allowed operative environment simulation. Consultant Supervisors attended during Supporting Professional Activities time. Educational evaluation was by a designed questionnaire and modified Dundee Ready Educational Environment Measure (DREEM).