ORAL PRESENTATIONS 2A
TRAINING AND EDUCATION

O52 **THE EFFECT OF A SELF-ADMINISTERED PERFORMANCE BASED INTRA-PROCEDURAL CHECKLIST ON AN EMERGENCY SIMULATED LAPAROSCOPIC TASK PERFORMANCE**

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Introduction: Surgical checklists are in use as means to reduce errors. Checklists are infrequently applied during procedures and have been limited to lists of procedural steps as aid memoires. We aimed to study the effect of a performance based checklist on the surgical task performance in an emergency scenario.

Method: We formulated a standardised performance based checklist among master surgeons via an online questionnaire. Thirty consented laparoscopic novices were exposed unexpectedly to a bleeding vessel in a laparoscopic virtual reality simulator as an emergency surgical scenario. The task consisted of using laparoscopic clips to achieve haemostasis. Subjects were randomly allocated into 2 equal groups; those using the checklist (study group) and those without (control group). The checklist was applied by the trainees in the study group once every 20 seconds. The surgical performance was computed on eight predetermined technical factors.

Result: The study group performed statistically better ($p < 0.05$) in 6 out of 8 technical factors when compared to the control group: number of badly placed clips (0 vs 4), dropped clips (1 vs 24), left instrument path length (m) (20.99 vs 34.99), left instrument angular path score (4490.31 vs 7073.92), right instrument path length (m) (25.62 vs 42.1), and right instrument angular path score (4477.42 vs 9090.43). Although statistically not significant, total blood loss (lit) decreased in the study group from 19.99 to 12.6, and total time (min) from 55.714 to 34.181.

Conclusion: The performance based intra-procedural checklist significantly enhanced surgical task performance in an emergency simulated laparoscopic scenario.

Take-home message:
The developed performance based checklist significantly improved laparoscopic task performance during emergency scenario.

O53 **MENTAL EXHAUSTION: A SYSTEMATIC REVIEW ON THE PSYCHO-SOCIAL IMPACT OF A CAREER IN SURGERY**

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Introduction: Training as a physician has been demonstrated to be a source of personal and familial distress; we sought to assess and analyse the holistic impact of a surgical career by examining non-physical effects upon surgeons and their families.

Method: The MEDLINE database was systematically searched from inception to August 2015 in accordance with PRISMA guidance. Two reviewers independently reviewed articles using pre-defined inclusion and exclusion criteria.

Result: 77 articles met inclusion criteria. Fifty-nine studies (77%) assessed burnout with a reported prevalence of 12.6-58% (mean 34.3%, SD 10.5%). Workload was found to be the most significant contributor to burnout. Rates of psychiatric morbidity ranged between 16-37% (mean 25.2%, SD 6.0%) and rates of suicidal ideation, especially amongst more senior surgeons and those involved in malpractice, was higher than the general population. Depression screen positive scores were reported in 30.1-37.5% (mean 33.2%, SD 3.1%). All were strongly associated with workload and burnout; indicative of a likely synergistic effect. Other risk factors included juniority and lower age, poor professional relationships, work-home conflicts and poor work-life balance. Protective factors included marriage or spousal support, career satisfaction, autonomy and academic practice.

Conclusion : Surgeons have a high prevalence of burnout, psychiatric morbidity and depression, with suicidal ideation rates higher than the general population. Professional factors contribute significantly to these phenomena. Although personal and familial factors are protective, they are eroded by the overwhelming impact of professional factors; nevertheless, career satisfaction rates remain high.

Take-home message:
Surgical training exerts multiple stresses on surgeons and their family. Work-related elements are most often the cause, whilst personal/family influences usually protect.

O54 **WARD ROUND COMMUNICATION: A QUALITY IMPROVEMENT PROJECT**

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Introduction: Ward rounds are fundamental for inpatient management and patient-doctor communication. There is a wealth of evidence linking ineffective clinician-patient communication with increased malpractice risk, non-adherence, patient and clinician dissatisfaction and poor patient health outcomes. Surgical ward rounds are often brief and may not convey this information effectively; therefore this quality improvement project was constructed.

Method: Prospective observational data collection of 150 patient-team interactions on ward rounds was conducted between February and April 2015 by 2 concurrent observers. It was noted whether the patient was told on the ward round the reason for their admission, plan for care that day and plan before discharge. Patient knowledge in these areas was then tested again afterwards and scored on a scale of 0-2. The second cycle assessed 50 patient-team interactions using the same methodology.

Result: If communicated by team, then patient had good chance of retaining and understanding the information (R>0.15), however only 75% of patients were told the plan for their care that day. A departmental Delphi Consensus led to the implementation of a Ward Round Checklist. This substantially improved communication of the daily plan to the patient (92%) and patient understanding about their care. There will be a third cycle with new staff intake in October.

Conclusion: Communication on the ward round is crucial for safe and effective patient management. This project has shown some improvements in doctor-patient communication and patient understanding so far and the next cycle aims to significantly improve patient understanding of their care.

Take-home message:
A check-list solution can improve the quality of communication on ward rounds.

O55 PERCEPTIONS ABOUT THE PRESENT AND FUTURE OF SURGICAL SIMULATION: A NATIONAL STUDY OF MIXED QUALITATIVE, QUANTITATIVE METHODOLOGY

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Introduction: Whilst there is a plethora of evidence that simulation is a useful adjunct to surgical training, a national framework for implementation is needed. Erratic access (both taught and self practice), training budget cuts and lack of consultant leads are causes for concern. This survey explores the views of surgical educators on the current limitations of simulation.

Method: A validated questionnaire, was sent to Training Programme Directors/Deputies (TPD) in our LETB and nationally to Heads of School of Surgery/Deputies (HoS).

Result: Response rates were 78% and 79% respectively. Simulation was considered a good training tool (HoS: 15/15, TPD: 21/21) and the concept that it is only useful for novices (HoS 13/15, TPDs 21/21) and basic skills acquisition (HoS 13/15, TPDs 18/21) was rejected. It was also considered valuable for teaching non-technical skills (HoS 13/15, TPDs 20/21) and re-enacting stressful situations (HoS 14/15; TPDs 15/21) but not universally accepted for assessment during recruitment (6/15 HoS; 14/21 TPDs). Nevertheless, only half believed that it should be compulsory (HoS 8/15; TPDs 11/21) but most agreed that providers required formal accreditation (HoS 12/15, TPDs 16/21) and that consultant mentors should lead simulation in all trusts (HoS 12/15; TPDs 19/21).

Conclusion : Simulation is of proven value for technical and non-technical skills. Haphazard access, the lack of accreditation of both courses and centres and the absence of formally appointed faculty were of concern to our responders. These issues must be addressed before simulation can be incorporated into the curricula for surgical specialties.

Take-home message:
Whilst simulation has been established as a useful adjunct to traditional surgical training a national framework for its implementation is needed. This should address the current limitations of surgical simulation training.

O56 OPERATION NOTES: ARE WE CONFORMING TO RCS RECOMMENDATIONS?

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Introduction: The Royal College of Surgeons (RCS) of England provides Guidelines on Good Clinical Practice. A general surgery operative note audit was carried out at a district general hospital to ascertain whether recommended information is documented, identify areas of poor documentation and suggest methods of improvement. The audit cycle was completed following implementation of recommendations.

Method: A prospective review of 47 operative notes was performed and audited against 15 criteria devised by the RCS guidelines over a 3-month period. Results were presented at a clinical governance meeting and an aide memoir was placed in all theatres. A prospective re-audit of 89 notes was carried out over another three months and data analysed.

Result: There were significant improvements in 4/15 criteria (p<0.05); Operative diagnosis (improved from 30%to 77%), problems/complications (improved from 17%to 47%), extra procedures (improved from 9%to 66%) and identification of implants/prosthesis (improved from 4%to 62%). Legibility continued to be problematic, 10/15 criteria affected (2%to 34% of cases). Operative findings and post-operative instructions were illegible in 12% and 5% of the re-audited group respectively.

Conclusion : Robust methods of documentation are required. Illegibility continues to remain a problem with handwritten notes. A modified electronic operative note has been submitted to the information systems department and is now active. All surgical trainees have been given access to use the system. A key factor will be to educate the surgeons on the new method of recording operative notes, which is already used by some consultants within the Trust, but not all.

Take-home message:
Structured electronic operative notes will allow robust documentation and enhance patient care - an area that has the potential to be be exposed to errors due to illegibility.

O57   EFFECT OF PLAYING VIDEO GAMES ON LAPAROSCOPIC SKILLS PERFORMANCE: A SYSTEMATIC REVIEW

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Introduction: The advances in both video games and minimally invasive surgery have allowed many to consider the potential positive relationship between the two. This review aims to evaluate the correlation between video game skills and performance in laparoscopic surgery.

Method: A systematic search was conducted on PubMed / Medline and EMBASE databases for the MeSH terms and keywords including: video games and laparoscopy, computer games and laparoscopy, Xbox and laparoscopy, Nintendo Wii and laparoscopy and Playstation and laparoscopy. All other study designs but randomised controlled trials (RCT) were excluded. Task performance was the primary outcome.

Result: 57 abstracts were identified. 36 were duplicates or non-relevant. Overall, 21 full texts were assessed. 16 did not meet the MERSQI criteria and were therefore excluded. Five RCTs matched criteria for inclusion. Playing video games reduced error in 2 studies (p 0.002 and p 0.045). However, for the same studies several metrics assessed were not significantly different between control and intervention groups. 1 study showed decrease in time for the group playing video games (p 0.037) for one out of two laparoscopic tasks performed. However, in the same study when the groups were reversed (initial control group became intervention and vice versa) a difference was not demonstrated (p=0.465 for peg transfer 1, p=0.185 for cobra robe). 2 further studies found no statistical difference between the interventional and control group performance.

Conclusion : There is very limited evidence to support that the use of video games enhances surgical simulation performance.

Take-home message:
From this systematic review, it is apparent that there is a limited amount of evidence to support that the use of video games enhances surgical simulation performance. The evidence that video games enhance laparoscopic surgery performance is non-existent.

O58   MOOC - AN ON-LINE EDUCATIONAL PLATFORM FOR TOMORROW'S SURGEONS

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Introduction: Massive Open Online Courses (MOOCs) represent a novel online resource providing unlimited access and opportunity for engagement in learning. They are currently infrequently used for undergraduate medical education in the United Kingdom (UK). The UKMSA (United Kingdom Medical Student's Association) recently launched a MOOC delivering interactive lectures on surgical and medical topics aimed at UK-based undergraduate medical students. We aimed to assess the acceptance and efficacy of such a scheme amongst this cohort.

Method: A pilot series of interactive lectures were live-streamed on a weekly basis. Online feedback was collected from participating UK-based medical students and responses collated. The following areas were specifically evaluated: structure including aims, organisation, and conclusions; content including appropriateness and relevance; standard of presentation including presenter knowledge, enthusiasm, clarity, delivery, and overall impression.

Result: A total of 68 feedback forms were collected for the pilot series comprising 13 surgical and medical lectures hosted between February and November 2014. The feedback response rate was 27%: overall 100% of students agreed that content was appropriately pitched; 98.5% agreed the material was well organised; 97.1% agreed that the lectures were clear and informative; and 98.5% agreed that the teaching was of high quality.

Conclusion: MOOCs are both highly-rated and highly-accepted amongst UK-based medical students. MOOCs represent a seemingly acceptable method of large-scale learning through enabling open access and ease of participation. As an innovative and potentially cost-effective learning method, MOOCs may prove to be an effective adjunct in support of traditional teaching methods.

Take-home message:
MOOCs (Massive Open Online Courses) are a novel and effective way of delivering interactive teaching on a large scale. Acceptance and efficacy amongst an undergraduate medical cohort is high.