1025: INSIGHT INTO PERFORMANCE ON VIRTUAL REALITY SIMULATION OF DYNAMIC HIP SCREW FIXATION

Kapil Sugand, Chetan Khatri 1, Kash Akhtar, Chinmay Gupte. MSK Lab, Imperial College, London, UK.

Introduction: Orthopaedic training comprises of unstandardised subjective feedback and an objective and standardised means of measuring performance metrics to achieve competency is long overdue.

Methods: 52 medical students were randomised to two groups: Group 1 (training) performed 5 attempts whilst Group 2 (control) performed only once on a virtual reality (VR) dynamic hip screw (DHS) simulator. Both cohorts also repeated the task after a week washout period. Real-time objective measurements were recorded. Participants subjectively rated how they performed using a seven-point Likert scale. The mean score (with standard deviation), Mann-Whitney U-test to determine significance (p<0.05) and Pearson correlation coefficient ($r^2$) were calculated between metrics.

Results: Group 1 significantly (p<0.001) outperformed Group 2 in total procedural time by 68%, reduced tip-apex distance (TAD) by 41% and procedures essential for awarding CCT (Certiicate for Continued Training) performed 5 attempts whilst Group 2 (control) performed only once on a virtual reality (VR) dynamic hip screw (DHS) simulator. Both cohorts also repeated the task after a week washout period. Real-time objective measurements were recorded. Participants subjectively rated how they performed using a seven-point Likert scale. The mean score (with standard deviation), Mann-Whitney U-test to determine significance (p<0.05) and Pearson correlation coefficient ($r^2$) were calculated between metrics.

Conclusions: 68% decrease in procedural time by 68%, reduced tip-apex distance (TAD) by 41% and procedures essential for awarding CCT (Certificate for Continued Training) performed 5 attempts whilst Group 2 (control) performed only once on a virtual reality (VR) dynamic hip screw (DHS) simulator. Both cohorts also repeated the task after a week washout period. Real-time objective measurements were recorded. Participants subjectively rated how they performed using a seven-point Likert scale. The mean score (with standard deviation), Mann-Whitney U-test to determine significance (p<0.05) and Pearson correlation coefficient ($r^2$) were calculated between metrics.

1053: TRAIN HARD, GO PRO – USE OF PERSONALISED VIDEO TRAINING IN ORTHOPAEDIC SURGERY

Edmund Leong 1, Piyush Mahapatra 2, James Duncan 1,2, Amir Sadri 1.

1 Charing Cross Hospital, London, UK; 2 St. George’s Hospital, London, UK.

Introduction: With the advancement of technology, reduced working hours and time pressures, the idea of utilising technology to create novel ways of learning and training is exciting and necessary.

Methods: We used a lightweight, high definition head mounted video camera to record trainees performing operations. The operations were reviewed by a senior clinician for training and assessment of the trainee. Explicit consent was obtained from all patients involved and data was securely stored.

Results: Video recordings impart the following advantages: 1. Re-evaluation of one’s performance. 2. A revision aid to a particular multi-step operation. 3. Targeted technical feedback and training - specific parts of the operation may be revisited by the trainer to demonstrate and emphasise specific learning points. 4. Web-based training - videos may be uploaded for training and education via narrated video libraries and web-based learning. 5. A video log of operations - to monitor progress and allow continued evaluation.

Conclusions: With the increasing prevalence of web based training and work based assessments, video training is a novel concept of training and assessment, and may be used as an adjunct to work based assessments. Footage may also allow trainees to reflect back on performance and demonstrate progression.

1064: UROLOGY INDICATIVE NUMBERS – IS IT AN ACHIEVABLE OBJECTIVE?

Katherine Hall 1, Vincent Tang, Zubeer Ali. Lancashire Teaching Hospitals NHS Trust, Preston, Lancashire, UK.

Introduction: To assess whether the Joint Committee on Surgical Training (JCST) Urology indicative numbers are feasible within a 5-year training programme?

Methods: We identified, the total number of JCST recommended urological procedures essential for awarding CCT (Certificate for Completion of Training) at Lancashire Teaching Hospital NHS Foundation Trust and the number of procedures performed, or had involvement by urological Specialty Registrar (SJR) trainees, non-trainee middle grades and consultants alone.

Results: 4,454 JCST recommended urological procedures were available at Lancashire Teaching Hospital NHS Foundation Trust between 2012-13. Consultants performed 1415 (31.8%) of these without registrar involve-

ment. The two trainee registrars performed or were involved in 1,007 (22.6%) of procedures, equating to 503.5 (11.3%) procedures per trainee. The four non-trainee middle grade doctors performed or were involved in 1,896 (42.5%) of procedures, equating to 474 (10.6%) procedures per non-

trainee. Nurses performed 136 (0.08%) procedures.

Conclusions: The JCST recommended urology operative experience indicative numbers should be achievable during a 5 year training pro-

gramme as there is sufficient operative activity taking place. However, trainee exposure to certain index procedures is not as available as others, and to fulfil the JCST requirements, trainees would require a more flexible timetable and targeted training to ensure opportunities are not missed.