Education and Training

OWE-036 IMPLEMENTATION OF CYTOSPONGE™ DEVICE TRAINING FOR NURSES IN PRIMARY CARE

¹Irene DeBiram Beecham*, ¹Bincy Alias, ¹Tara Nuckcheddy, ¹Ben Bowers, ²Lisa Murray, ³Ashley Wilson, ³Beth Muldrew, ³Zohrah Khan, ⁴Maria O'Donovan, ¹Shona MacRae, ³Peter Sasieni, ¹Rebecca Fitzgerald. ¹MRC Cancer Unit, University of Cambridge, Cambridge, UK ²Endoscopy Dept, Queen Alexandra Hospital, Portsmouth, UK ³Barts Clinical Trials Unit, Centre for Cancer Prevention, Queen Mary University of London, London, UK ⁴Histopathology Department, Cambridge University Hospitals NHS Foundation Trust, Addenbrookes Hospital, Cambridge, UK

10.1136/gutjnl-2018-BSGAbstracts.525

Introduction The Cytosponge™ device offers a less invasive way to test for Barrett's oesophagus and early oesophageal cancer in patients with acid reflux symptoms. Due to the low cost compared with endoscopy, the device could have a direct impact on NHS spend. The procedure is safe, less time consuming, and should be straightforward for nurses to administer in a primary care setting. The BEST3 trial is a UK-wide randomised trial of Cytosponge™ compared with usual care, which provides an ideal opportunity to determine the feasibility and roll out of the device for administration by Practice Nurses and Clinical Research Network Nurses.

Methods A training module has been designed to ensure that nurses have background knowledge of Barrett's and the clinical follow-up plan if a patient is given a positive diagnosis. Risks and benefits of having the procedure are explained and Standard Operating Procedures (SOPs) discussed to deal with any adverse events.

Training is delivered in two stages: i) Centralised training where nurses attend in groups of between 2–10 individuals using a combination of videos, PowerPoint presentations and live clinical procedures.

ii) Nurses observe at least one procedure and are then supervised until they feel confident.

All nurses are then assessed by a trainer in their technique of safe delivery and withdrawal of the device. Once signed off they are able to carry out clinics independently with ongoing monitoring by the Trials Unit.

Results 15 CRN Nurses and 8 GP Practice Nurses from 30 surgeries have been trained during the BEST3 trial. Following the training programme, the CRN nurses were generally deemed competent after 3 clinic sessions, whereas the Practice Nurses required 2 clinic sessions as they were more used to delivering clinical interventions. The nurses found that having the intense training close to the time of starting the clinics, and the extended supervision, enabled them to feel confident quickly. During the training phase, more patients required a second attempt to swallow the device before it was successful. Specifically, 9% of the patients received 2 Cytosponges™ before the device was successfully swallowed and 4% (12 out of 331) were unable to swallow after two attempts. In comparison, 99% of patients received a successfully delivered device when administered by a Trainer.

Conclusion The Cytosponge™ device is suitable for delivery by nurses in the primary care setting. The feedback received on the training module was positive and therefore Cytosponge™ training would be suitable to wider implementation in the NHS setting, with the added benefit of a potential cost reduction when compared with endoscopy.

OTH-004 BLUE LIGHT IMAGING FOR OPTICAL DIAGNOSIS OF COLORECTAL POLYPS: THE IMPACT OF A TRAINING INTERVENTION

¹Sharmila Subramaniam*, ¹Asma Alkandari, ¹Kesavan Kandiah, ¹Rebecca Smith, ¹Matthew Stammers, ¹Sreedhari Thayalasekaran, ²Patrick Aepli, ³Bu Hayee, ⁴Erik Schoon, ⁵Milan Stefanovic, ¹Pradeep Bhandari. ¹Queen Alexandra Hospital, Portsmouth, UK ²Luzerner Kantonspittal, Lucerne, Switzerland ³King's College Hospital, London, UK ⁴Catharina Hospital, Eindhoven, The Netherlands ⁵Diagnostic Center Bled, Ljubljana, Slovenia

10.1136/gutjnl-2018-BSGAbstracts.526

Introduction The advent of image enhanced endoscopic modalities have paved the way for better optical diagnosis of colorectal polyps. Blue Light Imaging (BLI) is a new technology that utilises powerful light emitting diode technology to enhance mucosal surface and vessel patterns. A specific BLI classification has recently been developed to enable better characterisation of colorectal polyps (BLI Adenoma Serrated International Classification -

BASIC) The aim of our study was to investigate the diagnostic ability of BLI before and after training using this classification in experienced and non-experienced endoscopists.

Methods BLI images from 45 polyps were shown to 10 endoscopists (5 with experience of advanced endoscopic imaging and 5 trainees with limited experience). They independently classified each of the images as adenoma or hyperplastic initially without any focused training on interpretation of BLI images. A training module on BASIC was developed and each endoscopist undertook a face to face training session where direct feedback was given. All endoscopists then repeated the image classification exercise. The sensitivity, specificity, accuracy, negative (NPV) and positive predictive value (PPV) for adenoma detection was calculated.

Results In both groups of endoscopists, there was a significant improvement in sensitivity and NPV of adenoma detection ($p < 0.05$) following training and utilisation of a dedicated BLI classification system (see table below). This improvement was greater in the experienced endoscopist cohort where overall higher accuracy rates were achieved with no decrease in specificity.

Abstract OTH-004 Table 1

	Experienced endoscopists		Trainee endoscopists	
	Pre-training	Post-training	Pre-training	Post-training
Sensitivity (95% confidence interval/CI)	79.1 (70.5–86.1)%	97.4 (92.6–99.5)%	79.1 (70.6–86.2)%	93.9 (87.9–97.5)%
Specificity (95% CI)	94.6 (88.5–97.9)%	96.4 (90.9–99.0)%	96.4 (90.9–99.0)%	87.3 (79.6–92.9)%
PPV (95% CI)	93.8 (87.4–97.1)%	96.5 (91.4–98.6)%	95.8 (89.6–98.4)%	88.5 (82.5–92.7)%
NPV (95% CI)	81.2 (75.2–86.1)%	97.3 (92.0–99.1)%	81.5 (75.5–86.3)%	93.2 (87.0–96.6)%
Accuracy (95% CI)	86.7 (81.5–90.8)%	96.9 (93.7–98.7)%	87.6 (82.5–91.6)%	90.7 (86.1–94.1)%

Conclusions The use of a bespoke BLI classification system with adequate training can significantly improve the sensitivity and NPV of adenoma detection in both experienced and non-

experienced endoscopists thereby enabling the full potential of this novel imaging technology to be realised.

OTH-005 PROSPECTIVE MULTI-SITE AUDIT OF ACUTE UPPER GASTROINTESTINAL BLEEDING DELIVERED ACROSS MULTIPLE REGIONS BY TRAINEE-LED NETWORKS

¹Richard James Michael Ingram*, ¹Andrew Alan Baxter, ²Keith Siau, ²Monika Maria Widlak, ³Katherine White, ³Kirsty Nixon. ¹on behalf of GARNet (Gastroenterology Audit and Research Network, East Midlands) ²on behalf of WMRI (West Midlands Research in Gastroenterology Group) ³on behalf of GasTRIN NoW (Gastroenterology Training Research and Improvement Network North West)

10.1136/gutjnl-2018-BSGAbstracts.527

Introduction Trainee-led networks were developed to support improvements in patient care by delivering audit, quality improvement and research projects across multiple sites. The Midlands was the first UK region to establish gastroenterology trainee research networks: WMRI in 2015 and the GARNet in 2016. North West trainees established GasTRIN NoW in 2017. Here, we report the first project in the UK to be delivered simultaneously by trainee physicians through multiple networks.

Methods We audited the care of patients with acute upper GI bleeding (AUGIB) against national quality standards (NICE QS38 and JAG GRS) and collected data on patient and process outcomes. Patients aged ≥ 16 years admitted with suspected AUGIB who underwent an inpatient OGD were prospectively identified in a consecutive 30 day window from November 2017. Anonymised data and outcomes to 30 d were collected using common proformas and protocols.

Results 471 patients were identified across 30 sites (EM: 157, 8 sites, WM: 193, 12 sites, NW: 121, 10 sites). We report the population characteristics and selected audit and outcome measures for 455/471 (97%) with complete data available. The mean age was 65 years (SD 18.1, range 17–100) and 54% were male. 45% presented on weekdays 7am–7pm, 32% on weekdays outside these hours and 23% at weekends. The median time from presentation to OGD was 22.5 hour (IQR 12.7–43.9 hour), with 54% performed within 24 hour (range at sites 22%–88%; $>50\%$: 18 sites, $>75\%$: 5 sites). Glasgow Blatchford scores were recorded pre-OGD in 47% (range at sites 8%–100%), with median score 7 (IQR 1–12; ≥ 8 : 46%, ≥ 12 : 26%). Endoscopic findings were: 63% non-variceal, 11% variceal, 8% other, 18% no lesion identified. 116 patients required endotherapy (25%; 80 non-variceal, 34 oesophageal and 4 gastric varices). A rebleed plan was documented in 36% (range at sites 0%–81%). Rebleeding within 8 d occurred in 36 patients (7.9%). 29 died (6.3%) within 30 d of OGD. Median length of stay was 5 d (IQR 3–9 d).

Conclusions Collaboration between gastroenterology trainee-led research networks can successfully deliver projects across multiple sites and regions. This audit shows wide variations in practice. Local action plans are still needed to meet JAG quality measures. However, we propose to harness the enthusiasm of trainees to drive improvements in the quality of care received by patients with GI bleeding – regionally, through the BSG national QI agenda, and in partnership with patients

via Core. We encourage our peers to establish their own trainee-led research networks.

PTH-129 EVALUATION OF SIMULATION-BASED INDUCTION PROGRAMME TO ENHANCE ACQUISITION OF HANDLING SKILLS FOR UPPER GI ENDOSCOPY

¹Kate Edwards*, ²Keith Siau, ¹Peter Neville, ³Jeff Turner, ⁴Amanda Beale, ⁴Susi Green, ²A Murugananthan, ¹Neil Hawkes. ¹Cwm Taf University Health Board, Merthyr Tydfil, UK ²Royal Wolverhampton NHS Trust, Wolverhampton, UK ³Cardiff and Vale UHB, Cardiff, UK ⁴Bristol Royal Infirmary, Bristol, UK ⁵Royal Sussex County Hospital, Sussex, UK

10.1136/gutjnl-2018-BSGAbstracts.528

Introduction Endoscopic training pathways in the UK need to support efficient development of complex motor skills. Previous studies have demonstrated benefit from use of simulators in the early phase of training. However a target of a 25% improvement performance should be demonstrated to remain cost effective. The SPRINT induction programme aims to provide a structured sequence of training elements to optimise and accelerate the early phase of training in upper GI endoscopy. We hosted a Tri-deanery simulation training event using the Surgical Science EndoSIM.

Methods Baseline data on previous training experience was obtained from 20 trainees attending the SPRINT induction. Pre-course self-assessed competency scores in 12 upper GI handling skills domains were provided and mapped to the Joint Advisory Group on GI Endoscopy (JAG) DOPS assessment forms. Domain scores were given a rating from 0–10 on a Likert scale (0=not at all competent, 10=very competent). Trainees completed a structured curriculum of simulator training and a series of small group teaching seminars on technical aspects of endoscopy and lesion recognition. At the end of the course trainees provided further self-assessed competency scores and rating scores for small group teaching sessions. Differences in the competency scores were determined by the Mann Whitney U test with an alpha value of 0.01. The proportion of trainees with less (0–25 procedures) and more experience (26–50 procedures) reporting greater than 25% domain score change was tested using the Chi-squared statistic.

Results Paired scores (n=20) showed a significant increase across all 12 upper GI handling skills domains following the training intervention ($p<0.01$, alpha=0.01, two-tailed). The proportion of trainees reporting $>25\%$ difference in domain scores was greater for trainees with less experience compared to more experienced trainees [$p<0.05$ for all domains]. All trainees rated good/excellent small group sessions in scope handling, lesion recognition, and endoscopic non-technical skills.

Conclusion This study demonstrates significant benefit from the EndoSIM simulator across all upper GI technical skills domains. Simulation training is best targeted in the early stages of endoscopy training (0–25 cases), but there remains some benefit to more experienced trainees. Small group training provides additional value during the SPRINT induction. These findings further support inclusion of simulation as part of the JAG certification pathway for upper GI endoscopy.