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SURVEILLANCE GUIDELINES: LONG-TERM ADENOMA INCIDENCE FOLLOWING POLYP EXCISION AT INDEX COLONOSCOPY

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Introduction 1 in 10 people in the UK have a detectable colorectal adenoma. Most adenomas are asymptomatic and detected incidentally during national screening and surveillance programmes. Post-polypectomy, these patients are considered to be at an increased risk of colorectal cancer (CRC), with calculations primarily based on polyp size and multiplicity.

To investigate the outcomes of endoscopic surveillance and compare the British Society of Gastroenterology (BSG) 2012 guidelines with the recently revised 2019 guidelines. The primary outcome was to determine the incidence of advanced adenomas on repeat investigations following the complete excision of all polyps at the index procedure.

Methods Post-polypectomy patients under surveillance at a single large tertiary referral centre serving a secondary care population of approximately 1 million were identified. Patients with a familial hereditary condition, polyposis syndrome, inflammatory bowel disease (IBD), previous CRC diagnosis and history of bowel resection were excluded. Patients were categorised as 'high,' 'intermediate' or 'low' risk using the 2012 BSG guidelines and re-categorised as 'large non-pedunculated colorectal polyp (LNPCP),' 'high risk,' or 'discharge' using the 2019 BSG guidelines. Patients were assigned an advanced Polyp Index (API) score following each endoscopy (size $\geq$ 10 mm = 1, number $\geq$ 5 = 1, high-grade dysplasia = 2) for analyses.

Results Between October 2011 and Dec 2014, 1190 patients (M=816(69%), mean age=62) had a primary colonoscopy and polypectomy. During surveillance, n=2(0.19%) CRCs were detected (mean interval =3.2 years). Patients were stratified into high (n=484), intermediate (n=303) and low (n=403) risk groups and follow-up data was collected until December 2019, mean=7.6[SD= $\pm$ 0.9] years.

API $\geq$ 1 during surveillance was detected in n=46(9.5%), n=11(3.6%), n=7(1.7%) patients in high, intermediate and low risk patients respectively, as per 2012 guidelines; high risk vs intermediate risk (p=0.0017), intermediate risk vs low risk (p=0.146). On re-stratification to 2019 guidelines, API $\geq$ 1 was determined in LNCP (n=177), high risk (n=296) and discharge (n=717), as n=15 (8.5%), n=34 (11%) and n=18 (2.5%) respectively.

Conclusions Using 2019 revised guidelines, 717 (60.1%) patients would have been discharged following the index procedure and no CRC would have missed. 18 (2.5%) patients with an API $\geq$ 1 would have been missed, however this was not significant (Fisher's Exact Test; p=0.42). The revised BSG guideline for polyp surveillance reduces the burden of colonoscopy to patients and the healthcare system, without compromising the identification of significant pathology or CRC.

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SIMULATION TRAINING FOR ENDOSCOPY ASSISTANTS

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Introduction The Joint Advisory Group (JAG) ISREE initiative in 2019 called for an improvement of safety in endoscopy, one of the recommendations was simulation training for staff. Endoscopy simulation courses have shown positive results for improving staff confidence in handling emergencies (Menabawey, T et al, 2018). A hospital conducted a simulation day in conjunction with the local simulation centre and the impact on was staff analysed.

Methods Training was provided to a range of staff from 3 endoscopy units. Simulations were delivered using a combination of clinical mannequins and simulated patients. Simulations consisted of: vasovagal, respiratory arrest, and cardiac arrest. Staff confidence in managing emergencies was assessed before and after the training using a 1–5 Likert scale for the following questions:

How confident do you feel...

1. that your clinical knowledge is appropriate to your level?
2. to practice within the limitations of your level?
3. that you possess sufficient strategies to raise concerns when necessary
4. that you are receptive to feedback from others?
5. that the course can teach you something new?
6. that you possess the skills and knowledge to assess and treat acutely unwell patients?
7. that you possess the skills required to communicate information to the MDT?

Questions with free text responses were also asked. Responses were divided into registered and unregistered.

Results 35 staff attended: 19 RNs, 2 ODPs, 2 Nurse Endoscopists, 1 Trainee Nursing Associate, and 11 HCAs. 100% of registered staff and 91% of unregistered staff said they would recommend the course to a colleague. All registered staff showed an improvement in confidence, with the most improvement being communication during emergencies (Q3 +0.37) and clinical knowledge (Q1 +0.65). Question 6, relating to treating the acutely unwell patient, showed a -0.37 drop in scores for unregistered. Conversations in the debriefs indicated that most were not aware of potential endoscopic emergencies. Taking in to account their positive free text answers, it could be concluded that the decrease was due to staff realising their need for further training.

Change in staff responses:

Conclusions Simulation training was well received by staff and improved knowledge of emergency protocols and confidence in dealing with emergencies.

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SUBJECTS WHO UNDERWENT BOWEL SCOPE SCREENING ARE SIGNIFICANTLY MORE LIKELY TO RETURN FOBT/FIT SCREENING KITS

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Introduction Bowel Scope screening (BoSS) was launched in 2013 for individuals aged 55 after a landmark study showed that sigmoidoscopy based colorectal cancer (CRC) screening reduced cancer incidence by 23%.¹ Longer term follow up in this study showed that the protection given by sigmoidoscopy based screening from colorectal cancer lasted at least 17 years.²

What is not known is how subjects who underwent BoSS at age 55, would interact with the home faecal occult blood/immunochemical test (FOBT/FIT) based screening offered at age 60, compared to non-BoSS screened subjects engaging who engage with FOBT/FIT.

Methods 429 Northamptonshire subjects who underwent BoSS in 2014 had their interaction with the FOBT/FIT screening in 2019 recorded and analysed, benchmarked against non-BoSS screened subjects' data (from Exeter database dashboard; 2017 & 2018).

Results 429 subjects' data analysed, 205 females (47.8%), 412 subjects attended a BoSS examination. 30/412 had ≥ 1 adenoma (7.3%). 304/412 returned a FOBT/FIT kit (73.8%), 5/304 were positive (1.6%), one patient diagnosed with CRC. One FOBT/FIT non-responder diagnosed with CRC.

Abstract P78 Table 1

	BoSS cohort 2019	FOBT data 2017	FOBT data 2018
Uptake	304/412, 73.8%	45869/75082, 61.1%	51600/82185, 62.8%
	†‡	†	‡
Positivity	5/304, 1.6%	953/45869, 2.1%	974/51600, 1.9%

†‡ For Boss cohort vs FOBT 2017, and for Boss cohort vs FOBT 2018; $p < 0.0001$

Conclusion The cohort of subjects who underwent BoSS in 2014 were significantly more likely to return FOBT/FIT kits when compared to a non-BoSS screened population (benchmarked with data from 2017 & 2018), Even considering the switch to FIT from FOBT during 2019, the marked improvement in returns suggests that the majority of subjects who underwent BoSS found it a positive experience making them much more likely to engage with FOBT/FIT at the age of 60 and older.

Despite the higher uptake, the positivity rate is lower for the BoSS cohort than the non-BoSS screened population. The sample size is too small to reach statistical significance, but if this trend for lower positivity is established when looking a bigger sample (eg; all the regions of England), this may represent the benefits shown in the original studies.^{1, 2}

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THE EFFECT OF ENDOCUFF/ENDOCUFF VISION ON LOWER GI ENDOSCOPY: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Introduction Colonoscopy is the gold standard investigation for lower gastrointestinal symptoms with adenoma detection rate (ADR) considered the most important benchmark for evaluating the quality and completeness of mucosal visualisation. A number of devices to improve ADR have been investigated.

This systematic review and meta-analysis assessed the effects of using Endocuff/Endocuff Vision assisted colonoscopy (EAC) on ADR and other clinical and resource-use related outcomes compared with standard colonoscopy (SC).

Methods Searches were conducted of Medline, Embase, Web of Science, Scopus and the Cochrane Central Register to 08/02/2019. Studies published in English, as full papers or conference abstracts, comparing Endocuff (EC)/Endocuff Vision (EV) with SC were eligible. Studies of polyposis syndromes and inflammatory bowel disease surveillance were excluded.

Data were abstracted by two independent reviewers, including ADR and other key polyp/adenoma variables (mean adenomas per procedure/polyp detection rate/mean polyps per procedure) and procedure variables (procedure time/withdrawal time/caecal intubation time/caecal intubation rate/complication rate). The quality of eligible studies was assessed using the Cochrane risk of bias tool. Meta-analysis, using random effects models, was used to compute pooled estimates of outcomes (mean difference, 95% confidence interval) across studies.

Results We identified 8 randomised controlled trials and 2 crossover studies involving 6238 patients; 8 studies evaluated EC and 2 EV. All studies included mixed populations by indication and endoscopist experience. EAC improved ADR by 7.06% (3.81–10.31%; 10 studies), MAP by 0.19 (0.02–0.37; 9 studies), PDR by 9.5% (5.6–13.34%; 7 studies) and MPP by 0.38 (0.12–0.30; 5 studies) compared to SC. There were no significant differences in advanced adenoma and sessile serrated lesion detection rates: 0.85% (-2.74–4.43; 3 studies) and 0.28% (-1.67–2.22; 3 studies) respectively. There were no significant differences in procedure variables. Complications were uncommon. Cuff exchange rates ranged from 1.3–7.0% in 6 studies. All 10 studies were rated low risk of bias. Subgroup analysis for EC studies only showed an increased ADR of 8.02% (3.91–12.13%) and PDR by 12.00% (6.88–17.11%).

Conclusion Endocuff/Endocuff Vision are associated with increased ADR, MAP, PDR and MPP compared with standard endoscopy with no detrimental effects on procedure measures. Cost-effectiveness analyses are lacking but would be valuable to inform practice recommendations