

preparation. The adenoma detection rate (ADR) was 62% with an mean of 2.1 polyps per colonoscopy in DM compared to ADR of 52% and mean 1.4 per colonoscopy in NDM. There was 1 cancer detected in each group. Neither group had any complications and no readmissions or 30 day mortality.

Conclusion Our findings were 3 fold. 1) Outcomes of Diabetic (DM) & Non Diabetic (NDM) patients were similar for CIR, Cancers detected & Adverse Events. 2) Bowel preparation is below QA & GRS standards in DM patients which consequently led to significant number of repeat procedures and to failure to complete the colonoscopy in all of group of patients. 3) ADR and numbers found per colonoscopy seem to be greater in DM even with the poorer bowel prep. This may reflect the male preponderance but needs further investigation. We are looking at changing the bowel preparation from Moviprep to Kleen prep in the diabetic population within our programme.

Disclosure of Interest None Declared.

PTH-057 A TWIN-CENTRE RANDOMIZED TRIAL OF INCREASING CLEAR FLUID INTAKE TO STANDARD MOVIPREP REGIMEN IN ADULT OUT-PATIENT COLONOSCOPY IMPROVES LEFT SIDED BOWEL CLEANSING & POLYP DETECTION RATES

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Introduction Inadequate bowel preparation for colonoscopy is associated with increased complication rates and a reduction in diagnostic yield. Low volume 2L polyethylene glycol and ascorbic acid (Moviprep, Norgine Pharmaceuticals) has been demonstrated to be non-inferior to other bowel cleansing agents but has greater patient tolerability (1). It is not known whether the addition of clear fluids to the standard regiment improves bowel cleansing with Moviprep.

Methods All adult patients attending for routine out-patient colonoscopy at two secondary care sites were randomised to receive either standard 2L Moviprep (regimen 1) or standard 2L Moviprep with an extra 1.5L of clear fluid (regimen 2). Segmental, and overall, bowel cleansing was assessed by the colonoscopist, blinded to the randomisation, using the validated Harefield Scale (HS). The HS is an inverted Ottawa scale scored from 4 (colon empty and clean) to 1 (large amounts of irremovable residual faeces) in six colonic segments.

Results 496 patients (252 females, mean age 59 years (range 22–90)) were included in an intention to treat analysis. The unadjusted completion rate was 95%. 246 patients were randomised to regimen 1 and 250 patients to regimen 2. Groups were similar in terms of demographics, indications for colonoscopy, presence of comorbidities and completion rates. *Table 1* details the segmental, and overall, scoring between groups. Polyp detection rates were significantly higher in the group who took extra fluid (odds ratio 0.57, 95% confidence interval 0.34–0.89, $p = 0.01$).

Abstract PTH-057 Table 1

	Regimen 1 (mean HS score \pm SEM)	Regimen 2 (mean HS score \pm SEM)	P value
Rectum	3 \pm 0.05	3.5 \pm 0.05	< 0.0001
Sigmoid	2.8 \pm 0.05	3.3 \pm 0.03	< 0.0001
Descending colon	2.7 \pm 0.06	2.6 \pm 0.06	0.3
Transverse colon	2.7 \pm 0.04	2.6 \pm 0.07	0.6
Ascending colon	2.6 \pm 0.05	2.6 \pm 0.07	0.8
Caecum	2.5 \pm 0.05	2.6 \pm 0.1	0.7
Total score	16.5 \pm 0.1	17.3 \pm 0.01	0.07

Conclusion Increasing the volume of clear fluid intake with Moviprep improves cleansing in the distal colon and improves polyp detection rate. These data have important implications for clinical practise as upto 2/3rds of colorectal cancers arise in the left colon (2). Further research is now warranted to reproduce these findings in a larger cohort of patients.

Disclosure of Interest None Declared.

REFERENCES

- Marmo *et al.* Effective bowel cleansing before colonoscopy: a randomised study of split-dosage versus non-split dosage regimens of high-volume versus low-volume polyethylene glycol solutions. *GIE* 2010; 72(2):313–320.
- McCallion *et al.* Flexible sigmoidoscopy and the changing distribution of colorectal cancer: implications for screening, *Gut* 2001; 48(4):522–5.

PTH-058 TRAINEE COLONOSCOPISTS ACQUIRE COMPETENCY AT DIFFERENT RATES, AS DETERMINED BY CUSUM ANALYSIS OF COLONOSCOPY DATA FROM THE JETS DATABASE

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Introduction The number of colonoscopies required to reach competency is not well established. Nevertheless, a minimal number forms part of UK certification criteria.

The Cusum technique is a statistical analysis of sequential data to determine if a process is 'in control'. The Joint Advisory Group on GI Endoscopy have developed an e-portfolio for users to record their endoscopic experience. The primary aim of this study was to determine the range of experience required by individuals to attain a caecal intubation rate (CIR) $\geq 90\%$, as defined by Cusum. A secondary aim was to assess which training factors are associated with attaining competence.

Methods Inclusion criteria were all e-portfolio users who had performed ≤ 50 ('baseline') colonoscopies prior to submission of data to the e-portfolio; termed 'trainees'. All colonoscopy records for the trainees were retrieved from the e-portfolio database and learning curve-Cusum analysis was performed. This analysis of colonoscopy completion reports the number of procedures required for CIR performance to reach $\geq 90\%$. A colonoscopy was defined complete if the caecum or ileum was reached and was performed without assistance.

Trainees who had attained a CIR $\geq 90\%$ were compared to those with a CIR $< 90\%$ for differences in previous endoscopic experience, case volume and other trainee factors by univariate (Mann-Whitney, Chi-squared) and multivariate (binomial logistic regression) analysis.

Results The e-portfolio contained 169,515 colonoscopy records entered by 1,572 different users. 265 users ('trainees') were confirmed to have performed ≤ 50 baseline colonoscopies and were included in subsequent analyses. By Cusum method, 39 trainees attained a CIR $\geq 90\%$; 226 achieved a CIR $< 90\%$.

For those trainees with over 250 procedures, only 47% attained a CIR $\geq 90\%$.

Factors associated with attaining CIR $\geq 90\%$ were high number of procedures ($P < 0.01$), high number of colonoscopies per month ($P < 0.01$), and prior experience of more than 100 sigmoidoscopies ($P = 0.017$) by univariate and multivariate analysis. Nurse endoscopists attained competency at a higher rate than gastroenterology or surgical trainees by univariate ($P = 0.01$) but not multivariate analysis.

Conclusion This is the largest study to date by both procedure and trainee numbers assessing colonoscopy competency by Cusum method.

Trainees achieve competency at different rates. A high proportion of trainees will not attain a CIR $> 90\%$ even after 250 procedures.