(IBS) should be tested for coeliac disease (CD). This study reviewed the symptoms, demographics and investigation of pateints diagnosed with IBS at a large semi-rural general practice.

Methods Patients diagnosed with the IBS were identified from a computer database of 11,250 patients at St Johns Surgery. 250 casenotes were randomly selected for analysis. Patient demographics, symptoms recorded and investigations performed were recorded. a history of depression was recorded. Census and postcode data was used as a surogate marker of poverty.

Results 499 patients had a diagnosis of IBS (110 male and 389 females). The records of 48 male and 202 female patients were reviewed.

186 patients were diagnosed with IBS within 6 months of their initial consultation. 180 began treatment for IBS within 6 months of diagnosis.

65 patients were tested for CD (13 males and 52 females). 34 (52%) of those tested for CD went on to have further investigations such as a barium enema or colonoscopy.185 patients were not tested for CD. 137 had no further investigations.

Symptoms of those tested for CD were a change in bowel habit (90.8%), abdominal pain (90.8%), chronic diarrhoea (73.8%) and bloating (67.7%). Symptoms of those not tested for CD were the most common symptoms where abdominal pain (91.9%), change in bowel habit (73.5%) and bloating (69.2%) and chronic diarrhoea (52.4%).

There was no significant difference in poverty or history of depression between those tested and not tested for CD.

Conclusion This study suggests that patients diagnosed with the IBS in primary care are not routinely tested for CD. Explanations include a pragmatic approach to investigation of common gastrointestinal symptoms and a likely difference between patients diagnosed with the IBS in primary care and those referred onto secondary care and academic centres.

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Disclosure of Interest None Declared.

THE EXCITATORY EFFECTS OF REPETITIVE CEREBELLAR BRAIN STIMULATION ON HUMAN SWALLOWING MOTOR PATHWAYS ARE CRITICALLY DEPENDENT ON STIMULUS DURATION

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Introduction Previously we have demonstrated frequency-specific effects of cerebellar repetitive transcranial magnetic stimulation (rTMS) in enhancing human cortical swallowing pathways,[1] as a prelude to developing therapeutic parameters for post-stroke dysphagia. Here, we investigate the durational parameters of 10Hz cerebellar rTMS on pharyngeal motor excitability.

Methods Healthy subjects (n = 12, 7 male, 5 female, mean age 31 ± 4 years), were intubated with an intraluminal catheter to record pharyngeal electromyography before bilateral MRI-guided single-pulse TMS mapping of pharyngeal motor evoked potentials (PMEPs) to co-localise optimal cortical and cerebellar sites for pharyngeal activity. Baseline cortical PMEPs were then
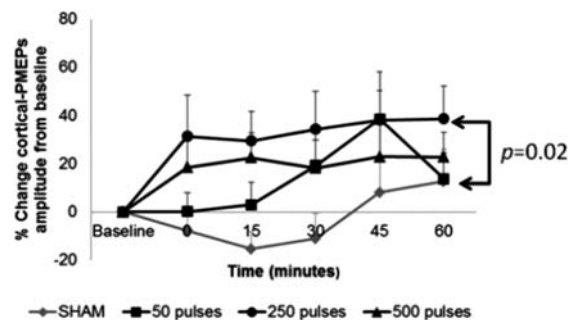
Abstract PWE-163 Figure 1

recorded followed by one of the four cerebellar interventions; sham (coil tilted to 90°), short duration (50-pulses), intermediate duration (250-pulses) or longer-train (500-pulses) at 10 Hz frequency, received on separate randomised visits. Post-intervention PMEPs were recorded for up to an hour as a measure of cortical excitability. Normalised (percentage change from baseline) PMEP data were then compared to sham using repeated measures ANOVA (factors of time, hemispheric site, intervention).

Results Intermediate train-length (250-pulses: $F_{1,11}=7.3$, $p = 0.02$) was most effective at increasing pharyngeal cortical excitability bilaterally compared to longer (500-pulses: $F_{1,11}=4.5$, p = 0.058) and shorter (50 pulses; $F_{1,11}=1.7$, p = 0.21) 10-Hz cerebellar interventions (Figure 1).

Conclusion Our data confirm that sustained facilitation of the pharyngeal motor cortex to cerebellar rTMS is not only dependent on the stimulation frequency, but also the duration of stimulation. We therefore propose that 250-pulses of 10 Hz cerebellar rTMS to be the optimal parameters for future therapeutic studies in post-stroke dysphagia.

REFERENCE
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Disclosure of Interest
None Declared.

A META-ANALYSIS OF RANDOMISED CONTROLLED TRIALS ON THE EFFECT OF PROBIOTICS ON FUNCTIONAL CONSTIPATION IN ADULTS

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Introduction Constipation is a prevalent gastrointestinal disorder whose treatment remains challenging. Patient dissatisfaction with prescribed medications is common, and there is a need for alternative methods of management. Probiotics are live microorganisms that, when administered in adequate amounts, confer a health benefit to the host, and have been increasingly used in the management of functional constipation. The aim of this study was to determine the effect of probiotics in functional constipation through a systematic review and meta-analysis of randomised controlled trials (RCTs) in adults.

Methods Methods followed PRISMA recommendations. Studies were identified by searching four electronic databases, back-searching reference lists, contacting authors and hand searching

abstracts of eight annual conferences. RCTs reporting administration of probiotics in adults with functional constipation were included. Two reviewers independently performed the screening of articles, data extraction, and risk of bias assessment. Data were synthesised using weighted or standard mean differences for all relevant outcomes using a random effects model. Publication bias was assessed via funnel plots and the Egger's test.

Results 657 records were identified, of which 14 were eligible (1,347 patients). Probiotics significantly reduced whole gut transit time by 11.9 h (95% CI: -18.4 to -5.4; p = 0.0003). They also significantly reduced right and left colonic transit times by 5.7 h (95% CI: -9.9 to -1.6; p = 0.007) and 5.1 h (95% CI: -9.6 to -0.6; p = 0.03), respectively. Probiotics significantly increased stool frequency by 1.1 bowel movements per week (95% CI: 0.7 to 1.5; p < 0.0001) with a number to treat (NNT) of 2, but there was significant heterogeneity (I^2=79%; p < 0.0001). Probiotics resulted in softer stool consistency (standardised mean difference, SMD = +0.5, 95% CI: 0.3 to 0.8; p = 0.0001) with a NNT of 3. Bloating (SMD = -0.6, 95% CI: -1.2 to -0.01; p= 0.04) and flatulence (SMD = -0.4, 95% CI: -0.7 to -0.1; p = 0.01) were also significantly reduced. No serious adverse events were reported following probiotic administration, and compliance was over 95%. There was no statistically significant funnel plot asymmetry found (p = 0.271), suggesting no evidence of publication bias.

Conclusion Probiotics significantly improve gut transit time, stool frequency and consistency, and constipation-related symptoms, and are associated with low risk of adverse events and high rates of compliance. Probiotics should thus be considered as an alternative treatment for functional constipation.

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PWE-165 **A REAL WORLD STUDY TO DESCRIBE THE PATIENT PATHWAYS AND NHS RESOURCE USE ASSOCIATED WITH THE MANAGEMENT OF IRRITABLE BOWEL SYNDROME (IBS) IN UK CLINICAL PRACTICE**

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Introduction Irritable bowel syndrome (IBS) is often a diagnosis of exclusion, with poor diagnosis coding in primary care. This makes identification of eligible research participants challenging.

We present the methodology development of a multi-centre, observational, retrospective research study ongoing in primary care, designed to overcome the challenges of IBS patient identification.

Methods Study feasibility was conducted by pH Associates (research consultancy; study coordinators) for Almirall UK Ltd (Sponsor) using medical opinion, clinical coding searches and NIHR Clinical Research Network expertise. FARSITE, a software tool for identification of research participants in primary care developed by the Greater Manchester Comprehensive Local Research Network and North West e-Health, was used to screen anonymised primary care records for potential eligible patients. Search criteria: patients aged 18–60; combination READ code symptoms indicative of IBS and prescription of IBS drugs 01/01/2009–31/12/2011. GP practices with eligible patients were

invited to participate, with GPs reviewing clinical records of the FARSITE-generated list of patients to apply full eligibility criteria for final patient selection.

Inclusion criteria: medical diagnosis of IBS or meeting ROME III criteria; provision of consent. Exclusion Criteria: diagnosis excluding IBS; IBS symptoms secondary to other condition; IBS medications for non-GI symptoms. The study is ongoing in 8 GP practices in Salford and Greater Manchester (Ethical approval 13/LO/0692).

Results FARSITE feasibility search using READ code for IBS identified 50 (0.02%) patients. Combining READ codes with symptom and prescriptions criteria selected 4714 (1.9%) From these, 3 GP practices each screened 10 random patient records for eligibility and 12/30 (40%) were found eligible. Eligibility READ codes were revised following feasibility.

Following study approvals, FARSITE identified 1089 potential eligible patients at the 8 participating practices, of which 297 (27.3%) were eligible and approached for consent for participation. Main reasons for non-eligibility were symptom characteristics not meeting ROME III criteria or not confirmed as IBS by medical opinion.

Conclusion Identification of patients with IBS using READ code is sub-optimal in primary care. A combination search of READ codes with symptom and prescription data via FARSITE has enabled potential participants to be identified with a reasonable screening failure rate. FARSITE is a valuable research tool aiding study feasibility by reducing the need for manual patient identification.

Disclosure of Interest I. Caldwell: None Declared, J. Collins: None Declared, M. Rance Employee of: Almirall UK Limited, R. Dew Conflict with: Commissioned by Almirall UK to provide research design, conduct analysis and scientific editorial services.

PWE-166 **IS RESPONSE TO LINACLOTIDE AFTER 4 WEEKS OF TREATMENT PREDICTIVE OF 12-WEEK IMPROVEMENT?**

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Introduction Linaclotide is a minimally absorbed guanylate cyclase C agonist approved in the US and EU for irritable bowel syndrome with constipation (IBS-C). A question for prescribing physicians is whether to continue linaclotide in patients who do not improve during the early weeks of therapy. This post-hoc analysis assessed if response to linaclotide at Week 4 predicts Week 12 improvement, and if linaclotide should be continued in IBS-C patients not responding by Week 4.

Methods Pooled data from 2 Phase 3 IBS-C trials of linaclotide were analysed. For Degree of Relief of IBS Symptoms, Degree of Relief of Abdominal Pain, and Spontaneous Bowel Movement [SBM] frequency, a patient's Week-4 clinical response was used to predict improvement at Week 12. For the purposes of determining a patient's Week-4 response, the 7-point balanced Degree of Relief scale was collapsed into 3 categories: Improved (completely, considerably, or somewhat relieved), Unchanged, and Worse (somewhat worse, considerably worse, or as bad as I can imagine) compared with baseline. For SBM frequency, a dichotomous end point was used: SBMs increased by ≥2/week or not increased by ≥2/week from baseline.

Results The proportion of patients who had response at Week 4 was significantly greater for linaclotide- vs placebo-treated