

# Assessing the Impact of a National Small-Group CME Activity on Management of Patients With IBS

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## Educational Intervention and assessment purpose

Given the rapid advances related to irritable bowel syndrome (IBS) and chronic constipation (CIC) management, a significant educational need has been created among practicing clinicians. In 2018, a national educational initiative focusing on the management of IBS was led by the Gastrointestinal Health Foundation (GIHF) IBS Centers of Educational Expertise and complemented by educational resources on the GIHF's educational portal. The initiative consisted of 50 small group CME discussions and one on-line module. The target audience consisted of community-based gastroenterologists and healthcare professionals who provide care for patients with IBS.

Learning objectives: Upon completion of this activity, participants should:

- Describe the burden of IBS and CIC on patients and the healthcare system
- Recognize symptoms of IBS/CIC and describe strategies for diagnosing these conditions
- Identify patients with alarm symptoms who require further diagnostic investigation
- Describe the evidence regarding the efficacy and safety of conventional and newer therapies for IBS and CIC
- Differentiate among newer therapies for IBS

While immediate post-test results showed the education was successful in imparting knowledge change, this methodology is inadequate to determine whether the education had lasting effect on changing clinician practice and performance to better manage their patients with IBS. This study was designed to understand areas of change due to this education as well as topics that are in need of future continuing education.

## Outcomes methodology

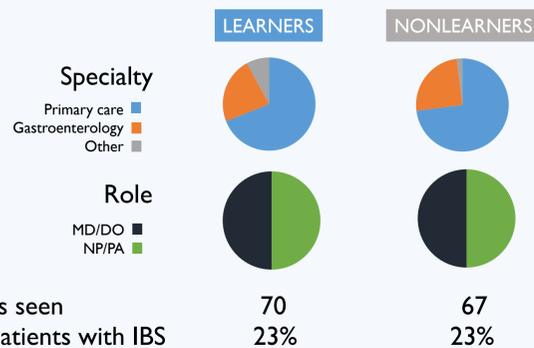
Independent from the educational design, a case-based survey was developed from the learning objectives and goals of the activity. Case vignettes have been empirically shown to be an effective and efficient method for assessing physician practice behavior in relation to alternative measures (chart abstraction and standardized patients). Questions were designed to assess performance-based change related to the education, as well as corresponding attitudes and barriers to care.

Surveys were distributed to learners at least 30 days following the education (August through October 2018). The survey was also sent to a nonlearner control group in the same timeframe: a sample of learners (n = 52) was matched to a similar group of clinicians (n = 52) who did not engage in the activity by degree, specialty, patient load, and percentage of patients with IBS.

Survey responses from each group were compared via Chi-square and t-tests to determine specific differences by question. Effect size and regression analyses were conducted to compare the two groups and to determine overall effect of the education.

## Demographics

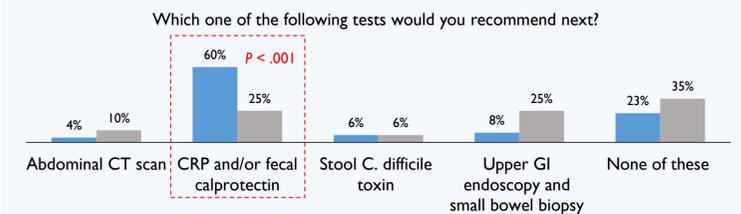
The education had a total of 401 learners; 236 of those were eligible for the outcomes study based on demographic criteria (physician/NP/PA role, currently managing patients with IBS). A sample of 52 learners were collected and matched to a control group of 52 nonlearners. No significant differences were found between learner and nonlearner demographics.



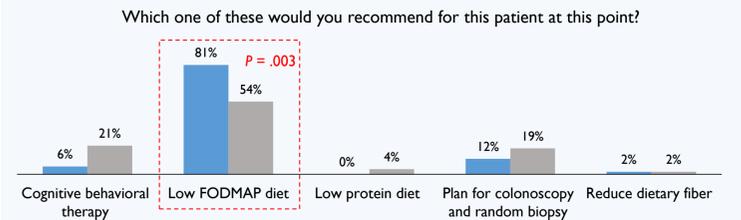
## Diagnosis and management of IBS-D

Overall, learners outperform nonlearners in diagnosis and treatment of IBS-D. Learners are more likely to choose appropriate testing to confirm IBS-D diagnosis and select appropriate initial pharmaceutical and nonpharmaceutical treatment for IBS-D as well as appropriate management for recurrent IBS-D. However, there are areas where additional education is needed, specifically in second- and third-line pharmaceutical management.

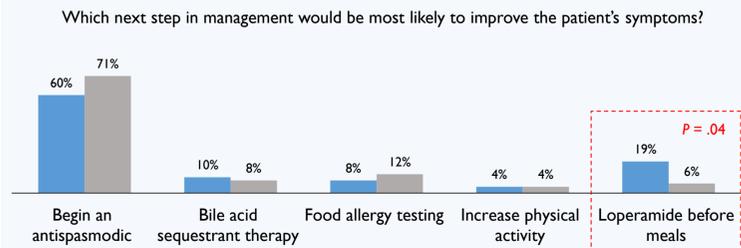
**CASE:** A 40-year-old woman presents with post-prandial abdominal bloating, 5-6 loose bowel movements daily with urgency, and lower abdominal cramping prior to defecation. These symptoms have been present intermittently for 10 years but have worsened in the past year. Her symptoms have occurred daily for the past 3 months. She consumes occasional alcohol and smokes daily. She separated from her long-term partner 6 months ago. She has no history of chronic illness or prior surgery, her weight is steady, and vital signs are normal. She had a normal colonoscopy with biopsies 12 months ago. CBC and thyroid profile are within normal range.



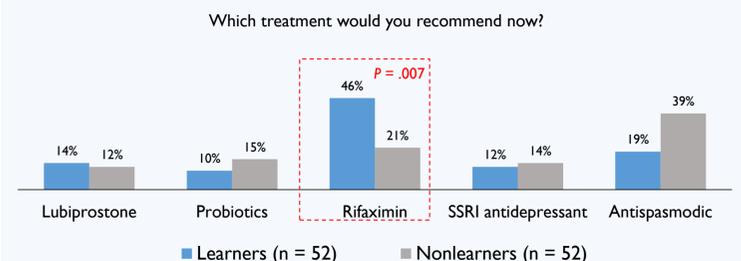
**CASE (cont.):** Her CRP is < 0.5 mg/dL and fecal calprotectin is < 40 µg/g. Celiac panel is negative. She commences a gluten- and lactose-free diet and begins exercising daily without resolution in symptoms. Eliminating gas-producing foods only partly helps with her bloating symptoms.



**CASE (cont.):** The patient's abdominal bloating and discomfort improve with dietary changes, but she has persistent lower GI symptoms including urgency and cramping with bowel movements.



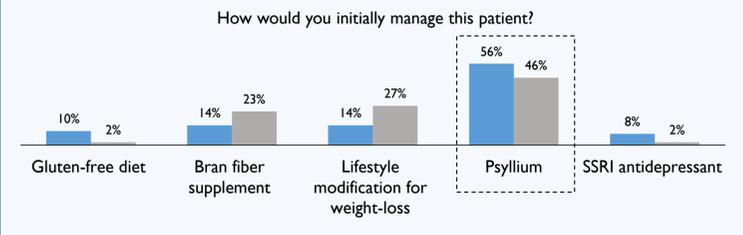
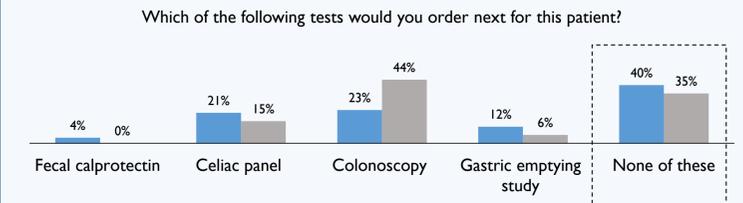
**CASE (cont.):** You initiate loperamide before meals. Her bowel frequency and stool consistency improve initially, but she continues to have lower abdominal pain, bloating, and urgency, now with 4-5 loose stools most days.



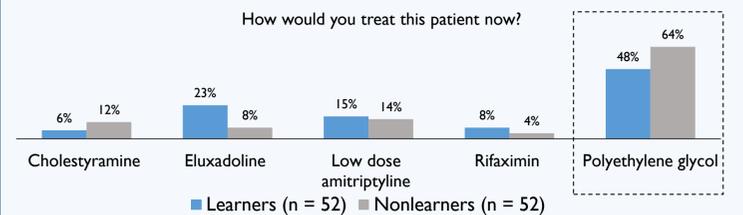
## Diagnosis and management of IBS-C

Overall, there was less educational effect seen in IBS-C, especially when compared to IBS-D. Continued education needs to emphasize when testing is needed for IBS-C, as well as initial and second-line therapeutic approaches. Further importance may need to be placed on distinguishing between treatments best suited for IBS-C or IBS-D.

**CASE:** A 38-year-old woman presents with a 12-month history of increasing constipation and abdominal pain. She previously had bowel movements every 1-2 days, but they have decreased to every 4-5 days with a sensation of incomplete evacuation and change in consistency. Her stools are now hard and pebble-like and require excessive straining. She has associated abdominal bloating and general abdominal pain which improves after a bowel movement. She works frequent overnight shifts, has a poor sleep pattern, irregular meal habits, and no regular exercise. BMI is 30 kg/m<sup>2</sup> and she has normal rectal tone and no fecal impaction. CBC, CRP, and fecal calprotectin are normal.



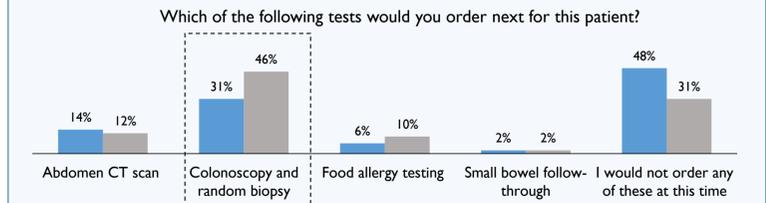
**CASE (cont.):** The patient is started on psyllium. She returns for follow-up complaining of increased bloating and abdominal pain. She is intolerant to fiber and stimulant laxatives. She has made positive changes to her diet along with increased fluid intake and physical activity.



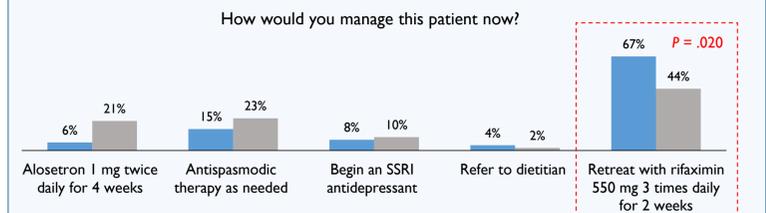
## IBS with alarm symptoms

Learners are more likely than nonlearners to appropriately treat a patient presenting with IBS with alarm symptoms, but less than half of both groups would use colonoscopy as a diagnostic tool to rule out IBD.

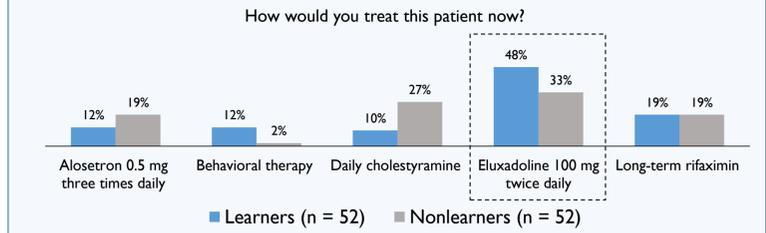
**CASE:** A 55-year-old woman with longstanding IBS with abdominal bloating and loose stools presents with a 3-month history of worsening loose watery stools 5-6 times daily with lower abdominal cramping and urgency. She previously had symptom control on loperamide as needed and low FODMAP diet. She received a course of oral antibiotics 4 months ago but has no other chronic illnesses or prior surgeries. Weight is steady, vital signs are stable, and her last colonoscopy was 5 years ago. Stool C. difficile toxin is negative. CBC, CRP and fecal calprotectin are within normal range.



**CASE (cont.):** Colonoscopy shows normal endoscopic appearance of the colon and terminal ileum. Random biopsies show no evidence for microscopic colitis. A celiac panel is negative. She begins rifaximin 550 mg 3 times daily for 2 weeks. She has initial improvement in stool consistency, urgency, and abdominal cramping; however, she has recurrent symptoms at two months.



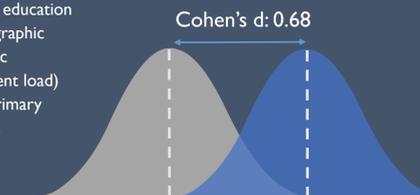
**CASE (cont.):** She has a good symptomatic response with two additional courses of rifaximin but has recurrent lower gastrointestinal symptoms at 3 months.



## Educational effect

Based on calculation of evidence-based responses, the effect size of this education, compared to a nonlearner control, is 0.68. This calculation also shows a non-overlap of 42%. For every 100 physicians that are exposed to this education, 42 will perform better than if they were not exposed. Additionally, there is a 78% chance that a person picked at random from the learner group will use evidence-based diagnosis and treatment more than a person randomly picked from the control group.

Further linear regression analysis was conducted to determine whether the effect was due to education participation or another confounding demographic variable. We found that when all demographic variables (clinician age, degree, specialty, patient load) are equal, participation in education is the primary driver of performance change in this sample.



## Discussion

- Target: The 401 healthcare providers who engaged in this activity see, on average, 16 patients with IBS each week. Therefore, due to this education, over 6,400 patients with IBS each week may benefit from improved evidence-based care.
- Target: Literature shows that a case-based follow-up survey can determine how a clinician practices. Comparing case responses of educational participants to those of demographically matched non-participants, we can control external variances and conclude that differences in approach are due to the education. Thus, these small group meetings were successful in their goals to increase evidence-based practice for IBS/CIC management.
- Target: Survey responses, both from those who attended and did not attend the education, can reveal areas in further need of continuing education. Future CME initiatives should include choosing appropriate management for a patient with IBS-C, determining when to use colonoscopy, and managing a patient with IBS-D not responding to rifaximin.

## References

1. Peabody JW, et al. Measuring the quality of physician practice by using clinical vignette: A prospective validation study. *Ann Intern Med* 2004; 141: 771-80.
2. Peabody JW, et al. Comparison of vignettes, standardized patients, and chart abstraction: A prospective validation study of three methods for measuring quality. *JAMA* 2000 Apr 5; 283 (13):1715-22.

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