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A Systematic Review of Patient-Oriented Educational Interventions to Improve Quality of Pre-Colonoscopy Bowel Preparation

Arjun R. Sondhi, Jacob E. Kurlander, Akbar K. Waljee, Stacy B. Menees, Philip S. Schoenfeld, Sameer D. Saini

Background: Inadequate bowel preparation before colonoscopy is common, resulting in clinical and economic harms. The US Multi-Society Taskforce advocates use of both written and oral instructions for patients before colonoscopy. However, little is known about the most effective method of patient education. This systematic review aims to assess the effectiveness of patient-oriented educational interventions in improving the quality of bowel preparation. **Methods:** Studies were identified from MEDLINE, EMBASE, Cochrane, CINAHL, and Web of Science. Two investigators evaluated each abstract for the following inclusion criteria: evaluation of a patient-oriented educational intervention, prospective design, and measurement of bowel preparation quality with a validated scale. Included studies underwent duplicate data extraction by 2 investigators using a standardized approach. Extracted data included the method of intervention, timing of intervention, staffing of intervention, purgative used, bowel preparation scale used, and bowel preparation quality. Methodological quality of studies was assessed using a modified Downs and Black instrument. Due to significant heterogeneity in assessment of outcomes, meta-analysis was not performed. **Results:** 1080 unique published studies were identified, and 7 of these studies met inclusion criteria. Five studies were randomized controlled trials, and 2 were quasi-experimental. The number of patients analyzed ranged from 99 to 969. 3 studies were performed in the US, 2 in Taiwan, 1 in China, and 1 in Korea. 3 interventions used paper-based tools (1 cartoon, 2 illustrated brochures), 2 interventions used videos, 1 intervention used face-to-face education, and 1 used telephone calls. In 6 of the 7 studies, the educational intervention was effective in improving bowel preparation quality, with an absolute increase in bowel preparation adequacy ranging from 2% to 32%. No study accounted for all significant confounders of bowel preparation quality (i.e. constipation, diabetes, opiates, socioeconomic status, literacy rate, age, gender, BMI). Validity scores ranged from 12-23, with a median value of 18, indicating fair methodological quality. **Conclusions:** Patient-oriented educational interventions significantly improve bowel preparation quality, but existing studies are of variable quality and may have limited generalizability. Gastroenterologists should work internally and with referring practices to ensure that patients receive evidence-based preparation education. Future studies should focus on comparative effectiveness and cost-effectiveness of educational interventions

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Investigating the Smoking Gun: Should Tobacco Use Be Incorporated Into Colorectal Screening Guidelines?

Jessica Davis, Brandon Rieders, Aung Myint, Abdullah A. Al-Shahrani, Samah Nassereddine, Lakshmi Lattimer, Vikesh Khanijow, Sonia Taneja, Marie L. Borum

Introduction: Colorectal cancer (CRC) causes significant morbidity and mortality worldwide. Smoking is a known risk factor for both CRC and colonic polyps. Currently, however, a history of tobacco use does not affect the recommended initiation age or frequency of CRC screening. We examined the relationship between smoking and adenoma detection rate at an urban university medical center. Methods: A retrospective medical record review of all colonoscopies performed at an urban university in a twelve-month period was conducted. There were no exclusion criteria. Patient age, gender, ethnicity and tobacco use history were documented. Personal and family histories of colon cancer and colon polyps were noted. Endoscopic findings were recorded. A database, maintaining patient confidentiality, was created using Microsoft Excel. Statistical analysis was performed using a Fisher Exact test with significance set at p<0.05. The study was approved by the university institutional review board. Results: 3,189 colonoscopy records were reviewed. The mean patient age was 58.2 years. The demographic characteristics of the patients were collected (tables 1 and 2). The overall adenoma detection rate (ADR) was 41.7%. 1,125 colonoscopies were performed on patients that had a smoking history (419 current smokers). 1,933 of patients had never used tobacco. Tobacco use was not documented for 131 patients (4%). The ADR was 48.0% for patients with any history of tobacco use and 39.1% in patients that never used tobacco (p<0.0001). The ADR for current smokers was similar to that of ever-smokers at 48.2% and 48.1% respectively. We examined the ADRs and smoking status of patients by gender (table 1) and ethnicity (table 2). In each group, there was a trend toward a higher ADR in current or ever-smokers with the exception of Hispanic current smokers (although they represented only 15 patients). The difference in ADRs among female never-smokers (34.9%) and female ever-smokers (45.6%) was statistically significant (p<0.0001). The difference in ADRs among African-American never-smokers (35.1) and African-American ever-smokers (46.8) was also statistically significant (p<0.0001). Discussion: In our study, any history of smoking was associated with statistically significant rise in ADR. This trend was maintained when we compared ADRs of smokers and non-smokers by gender and ethnicity and was statistically significant among women and African-Americans. Tobacco use is an established risk factor for CRC and our study suggests that the magnitude of its impact may be higher than typically appreciated. Potential weaknesses of our study are its retrospective perspective and reliance upon documentation. Although not incorporated into current CRC screening guidelines, a history of smoking should be taken into account when providing individualized screening recommendations.

Table 1: Adenoma detection rates of smokers vs. non-smokers reviewed by gender.

	Men	Men	Women	Women	Total	Total
	Individuals (No. (%))	ADR (%)	Individuals (No.(%))	ADR (%)	Individuals (No. (%))	ADR (%)
Overall	1382 (43)	47.5	1807 (57)	37.1	3189 (100)	41.7
Never-smoker	728 (37)	46.1	1203 (62)	34.9	1933 (61)	39.1
Ever-smoker	588 (52)	50.3	537 (48)	45.6	1125 (35)	48.1
Current smoker	216 (52)	50.5	206 (49)	45.8	419 (13)	48.2

Table 2: Adenoma detection rates of smokers vs. non-smokers assessed by ethnicity.

	Caucasian	Caucasian	African-American	African-American	Hispanic	Hispanic
	Individuals (No.(%))	ADR (%)	Individuals (No.(%))	ADR (%)	Individuals (No(%))	ADR (%)
Overall	1034 (32)	48.8	1543 (48)	40.1	218 (7)	36.2
Never-smoker	698 (36)	46.7	841 (44)	35.1	166 (9)	35.5
Ever-smoker	318 (28)	53.1	674 (60)	46.8	45 (4)	40.0
Current Smoker	62 (15)	54.8	307 (73)	48.9	15 (4)	33.3

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Consensus Statements on the Management of Acute Severe Ulcerative Colitis

Jo-Hua Chen, Crispin J. Corte, Viraj C. Kariyawasam, Neil Moran, Praveen Gounder, Glen D. Collins, Susan J. Connor, Thomas Lee, Alissa Walsh, Cherry E. Koh, Jeff Chang, Sudarshan Paramsothy, Stephen J. Tattersall, Daniel A. Lemberg, Andrew McLachlan, Gregory T. Moore, Jane M. Andrews, Rupert W. Leong

Background: Acute severe ulcerative colitis (ASUC) is a potentially life-threatening condition affecting 15% of UC patients. The mortality rate has improved from 24% prior to corticosteroids to 2.9%. Treatment guidelines assist in timely diagnosis and initiation of treatment. However, there are no current guidelines that exclusively aid the management of ASUC. Our aim was to develop consensus guidelines on the diagnosis and management of ASUC. **Methods:** The Delphi method was used in the development of the consensus statements. A steering committee prepared and generated the statements of interest. A group of IBD health professionals were invited to participate in the process of producing the guideline. Two rounds of anonymous voting were carried out on Survey Monkey prior to the final voting at a face-to-face meeting after presentation of evidence of their respectively allocated statements and discussion among delegates. 80% or more agreement without or with only minor reservation determined acceptance of statements. Evidence level and recommendation grade, according to the National Health and Medical Research Council (NHMRC) guideline, were endorsed following further discussion. **Results:** A total of 33 statements were grouped into 16 themes covering definition, treatment targets, investigations, first-line treatment, indications and options for second-line therapy, maintenance therapy, DVT prophylaxis, nutrition, pharmacy, pregnancy, and opportunistic infections. From 22 multi-disciplinary clinicians, there was 100% agreement for 24 out of 33 statements; 80-99% for 6 statements; and 3 statements were rejected. The rejected statements involved prolonged DVT prophylaxis after hospital discharge; infliximab dosing based on trough level; and restricted use of thiopurines in EBV-naive young patients. Important translatable outcomes include the paucity of evidence of occupational health and safety risks from casual anti-TNF exposure and that all ASUC therapies be readily available for prompt emergency dispensing. Dose intensification of infliximab either by shorter dosing interval or higher dosage to induce remission can be considered, but further studies are needed to definitively establish the benefit of this practice. Management of ASUC in pregnant women should be no different to non-pregnant patients, including the use of infliximab in the third trimester, as the previous concern of increased infant infection has been shown to be absent in the latest large prospective cohort study of pregnant women. **Conclusions:** These are the first comprehensive consensus guidelines specific to ASUC, containing the latest evidence of emerging areas of therapy, as well as detailed discussion of areas previously addressed in other major guidelines. The endorsed statements are expected to improve and harmonise management and provide auditable quality assessments.

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Introducing Non-Financial Conflicts of Interest (COI) and Refining Financial Conflicts of Interest in Consensus Guideline Development

Yidan Lu, Nour Sharara, Derek J. Jones, Tonya Kaltenbach, Myriam Martel, Alan N. Barkun

Background: Financial COI (FCOI) reporting in Medicine lacks standardization in certain regards. Also, the concept of non-financial COI (NFCOI) - COI relating to beliefs, personal or institutional relationships and interest in career advancement - remains obscure with little published guidance. Aims: To explore perception of NFCOI and FCOI in participants of an international consensus guideline, and assess impact on voting and reporting thresholds. Methods: COI were assessed as part of the SCENIC conference on surveillance guidelines for colorectal neoplasia in inflammatory bowel disease. **FCOI**: Before the meeting, participants filled a national Gastroenterological Society FCOI disclosure form. A second detailed FCOI form, with in-depth listing of relevant industry sources, roles, amount, and timing was completed at the meeting. Members were also surveyed on FCOI reporting thresholds for categories, dollar amounts, and elapsed time span. **NFCOI**: Participants completed a validated