BACKGROUND: Ideal pouch and anastomosis (IPAA) is the preferred surgical option in patients with medically refractory ulcerative colitis (UC) to preserve gastrointestinal continuity. This study aimed to describe 30-day readmission rates, as well as predictive factors for it from a national dataset.

METHODS: Patients who underwent IPAA surgery for UC between 2012 and 2015 were identified from the American College of Surgeons National Surgical Quality Improvement Program (ACS-NSQIP) database using current procedural terminology codes. Demographics, perioperative, and operative variables were collected. Patients were grouped according to the presence of 30-day readmission. *(†,††,†††,‡,§)*

RESULTS: Query identified 1882 patients, mean age was 40.8±13.9 years, mean length of stay was 7.2±5 days and postoperative 30-day morbidity rate was 28% (n=530). Most common complications in the study group were anastomotic leak (7.5%), organ space or surgical site infection (OSSSI) (3.5%), surgical site infection (SSI) (2.0%) and superficial SSI (2.0%). Twenty-two percent (n=416) were readmitted within 30 days of surgery. Reasons for readmission were: surgical site infection (n=88), dehydration (n=77), small bowel obstruction/ileus (n=34) and abdominal pain (n=34). Mean time for readmission was 7.7 days. Ninety patients had second readmission and 4 had a third readmission within 30-days of surgery. Multivariable analysis showed an ASA score of 4 (OR: 14.4 [2.89-75.0], P<0.004) and age-40 (OR: 1.3 [1.08-1.7], P=0.006) were associated with 30-day readmission. Proportional albumin level of <3.5 was associated with a second readmission *(OR:3 [1.1-8.2], P=0.02)*.

CONCLUSION(S): IPAA surgery for UC has high morbidity. One fifth of patients were readmitted within 30 days from IPAA surgery for UC and one third of them had a second readmission. This study brings the possibility and consideration for national health care initiative in surgical management of patients with UC, undergoing IPAA surgery.

P-004

The Use of Alvimopan as Prophylaxis against Post-Operative Ileus After Bowel Resection in Patients With Inflammatory Bowel Disease

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BACKGROUND: Postoperative ileus (POI) is a temporary disorder of coordinated intestinal peristalsis following major abdominal surgery, leading to significant symptoms such as nausea, vomiting, abdominal pain, prolonged hospitalization, nosocomial complications, and physical deconditioning. The use of opioids for postoperative pain control further exacerbates the problem. Opioids bind to the mu receptors in the intestinal tract, leading to gut hypomotility. Alvimopan, an oral, peripherally acting mu-opioid receptor antagonist, was FDA approved in 2008 for use before and after bowel resection to help prevent and treat POI. There are no dedicated studies of alvimopan in patients with inflammatory bowel disease (IBD). Therefore, we conducted a study to investigate alvimopan’s role in IBD patients who underwent either laparoscopic or open bowel resection.

METHODS: A retrospective chart review was conducted at a 725-bed acute care teaching hospital in New York City between January 2012 and February 2017. Data collected included age, sex, type of IBD, length of stay, post-operative gastrointestinal symptoms (nausea, vomiting, constipation, abdominal distention, first flatus, first bowel movement), POI, hospital readmission. Of 247 patients, 121 received alvimopan (49.0%) and 126 (51.0%) did not. Mean time for readmission was 7.7 days. Ninety patients had second readmission and 4 had a third readmission within 30-days of surgery. Multivariable analysis showed an ASA score of 4 (OR: 14.4 [2.89-75.0], P<0.004) and age-40 (OR: 1.3 [1.08-1.7], P=0.006) were associated with 30-day readmission. Proportional albumin level of <3.5 was associated with a second readmission *(OR:3 [1.1-8.2], P=0.02)*.

CONCLUSION(S): A significant improvement in POI was observed among patients using HealthPROMISE. IBD patients engaging with HealthPROMISE reported more equitable participation in their care decision-making process, and showed improved health outcomes compared to patients not using HealthPROMISE. Digital health interventions and IBD remote monitoring can address gaps in QOC, increase patient engagement, and improve health outcomes.

P-003

Improved Quality of Care for IBD Patients Using HealthPROMISE App: A Randomized, Control Trial

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BACKGROUND: Inflammatory bowel disease (IBD) is a chronic condition affecting over one million people in the United States (1). The recurrent and potentially debilitating nature of IBD elevates patients’ risk for adverse health outcomes (2). IBD patients and providers report high rates of stress, interpersonal communications, and constrained resources as barriers to quality care (2). IBD patients are an ideal population to assess the therapeutic potential of a digital intervention used in conjunction with clinical methods for long-term IBD management. HealthPROMISE is an innovative software platform, developed by Sinai AppLab, comprising a patient mobile application linked to a cloud-based decision support dashboard designed to improve health outcomes and enhance quality of care (“QOC”) by increasing patient engagement, self-management skills, and communication transparency (3,4).

METHODS: Recruited patients provided informed consent during in-person office visits and were randomized into intervention (HealthPROMISE) or control. Patients completed an initial questionnaire assessing health literacy, disease severity, general health status, and demographic information. The primary endpoint is QOC data based on American Gastroenterological Association’s QOC indicator check-list, which was verified against and conformed to EPIC records. Secondary endpoints include decrease in IBD-related emergency visits and hospitalizations, change in quality of life (“QOL”) score from baseline, and proportion of patients reporting controlled disease status per group. In the app, HealthPROMISE patients update their information and receive a disease summary of QOC metrics and IBD-specific QOL trends. To ensure confidentiality and accessibility, patients can share app data to HealthPROMISE dashboard with healthcare providers.

RESULTS: Of 230 patients enrolled in the study, 162 were randomized to intervention group and 158 to control group (Females 49.1%, White 92.2%; Black, 5.3%; Hispanics 9.1%; English as primary language 96.5%; Everyday Computer Usage 93.4%) (Figure 1). IBD-QOL continued to improve among HealthPROMISE patients over a follow-up of 6 months (25.2±11.3 vs. 30.3±11.3 baseline, P<0.001) (Figure 2). Patients reported that uncontrolled anxiety (89.4%) and uncontrolled fatigue (80.9%) were major drivers of poor QOL and disproportionately contributed to disease burden (Figure 3). After a mean follow-up of 145.3±15 days, QOC improved among all patients (78% vs. 59% control), with a more significant increase since baseline observed among HealthPROMISE users (+28 ppt vs. +9 ppt, P<0.01). After a second follow-up of 575±135 days, QOC continued improved (+4% vs. 65% control, P<0.001) with a significant change from baseline observed among HealthPROMISE users (+34 ppt vs. +15 ppt, P<0.001) (Figure 4). After 575 days, Screening Colonoscopy was the most met QOC indicator (92% met) while Smoking Comorbidities decreased with the least documentation met (9%).

CONCLUSION(S): A significant improvement in QOC was observed among patients using HealthPROMISE. IBD patients engaging with HealthPROMISE reported more equitable participation in their care decision-making process, and showed improved health outcomes compared to patients not using HealthPROMISE. Digital health interventions and IBD remote monitoring can address gaps in QOC, increase patient engagement, and improve health outcomes.