**Supplement Figure 1. Cohort Flow Diagram**

**Supplement Table 1. Michigan Surgical Quality Collaborative Coding1**

|  |
| --- |
| 2-gram prophylaxis cohort (*n*=214) |

|  |
| --- |
| 3-gram prophylaxis cohort (*n*=367) |

|  |
| --- |
| 3- vs. 2-gram prophylaxis population (*n*=581) |

|  |
| --- |
| Prophylaxis population (*n*=28,899) |

|  |
| --- |
| MSQC elective colorectal surgeries (July 2012 - June 2021) (*n*=35,138) |

|  |
| --- |
| Excluded (*n*=6,239)   * Non-recommended prophylaxis regimen (n= 4,647) * Missing antibiotic dosing, timing, or patient weight data if prophylaxis required weight-based dosing (n=1,545) * Received clindamycin and aztreonam prophylaxis (n=47) |

|  |
| --- |
| Excluded (*n*=28,318)   * Regimens other than cefazolin and metronidazole (n=16,683) * Cefazolin and metronidazole regimens <120 kg (n=11,542) * Did not receive either cefazolin 3- or 2-grams with metronidazole 0.5-grams for surgical prophylaxis (n=24) * Remaining cases with clean and dirty/infected wound classifications, and small bowel resections (n=69) |

|  |  |
| --- | --- |
| **Variable** | **CPT Coding** |
| **Colectomy** |  |
| Partial colectomy with anastomosis | 44140 |
| Partial colectomy with skin level cecostomy or colostomy | 44141 |
| Partial colectomy with end colostomy and closure of distal segment (Hartmann type procedure) | 44143 |
| Partial colectomy with resection and colostomy or ileostomy and creation of mucofistula | 44144 |
| Partial colectomy with coloproctostomy (low pelvic anastomosis) | 44145 |
| Partial colectomy with coloproctostomy (low pelvic anastomosis) and colostomy | 44146 |
| Partial colectomy using abdominal and transanal approach with anastomosis | 44147 |
| Total abdominal colectomy without proctectomy with ileostomy or ileoproctostomy | 44150 |
| Total abdominal colectomy without proctectomy with continent ileostomy | 44151 |
| Total abdominal colectomy with proctectomy and ileostomy | 44155 |
| Total abdominal colectomy with proctectomy and continent ileostomy | 44156 |
| Total abdominal colectomy with proctectomy, ileoanal anastomosis, loop ileostomy, and rectal mucosectomy (when performed | 44157 |
| Total abdominal colectomy with proctectomy, ileoanal anastomosis, creation of ileal reservoir (S or J), loop ileostomy, and rectal mucosectomy (when performed) | 44158 |
| Partial colectomy with removal of terminal ileum with ileocolostomy | 44160 |
| Surgical laparoscopy; partial colectomy with anastomosis | 44204 |
| Surgical laparoscopy; partial colectomy with removal of terminal ileum and ileocolostomy | 44205 |
| Surgical laparoscopy; partial colectomy with end colostomy and closure of distal segment (Hartmann type procedure) | 44206 |
| Surgical laparoscopy; partial colectomy with anastomosis and coloproctostomy (low pelvic anastomosis) | 44207 |
| Surgical laparoscopy; partial colectomy with anastomosis, coloproctostomy (low pelvic anastomosis), and colostomy | 44208 |
| Surgical laparoscopy; total abdominal colectomy without proctectomy with ileostomy or ileoproctostomy | 44210 |
| Surgical laparoscopy; total abdominal colectomy with proctectomy, ileoanal anastomosis, creation of ileal reservoir (S or J), loop ileostomy, and rectal mucosectomy (when performed) | 44211 |
| Surgical laparoscopy; total abdominal colectomy with proctectomy and ileostomy | 44212 |
|  |  |
| **Other Colon Procedures** |  |
| Laparoscopy, surgical; ileostomy or jejunostomy, non-tube | 44187 |
| Laparoscopy, surgical, colostomy or skin level cecostomy | 44188 |
| Surgical laparoscopy; closure of enterostomy, large or small intestine, with resection and anastomosis | 44227 |
| Unlisted laparoscopy procedure in large or small intestine (except rectum) | 44238 |
| Placement, enterostomy or cecostomy, tube open (eg, for feeding or decompression) (separate procedure) | 44300 |
| Ileostomy or jejunostomy, non-tube | 44310 |
| Revision of ileostomy; simple (release of superficial scar) (separate procedure) | 44312 |
| Revision of ileostomy; complicated (reconstruction in-depth) (separate procedure) | 44314 |
| Colostomy or skin level cecostomy | 44320 |
| Colostomy or skin level cecostomy with multiple biopsies | 44322 |
| Revision of colostomy; simple (release of superficial scar) (separate procedure) | 44340 |
| Revision of colostomy; complicated (reconstruction in-depth) (separate procedure) | 44345 |
| Revision of colostomy; with repair of paracolostomy hernia (separate procedure) | 44346 |
| Suture of small intestine (enterorrhaphy) for perforated ulcer, diverticulum, wound, injury or rupture; single perforation | 44602 |
| Suture of small intestine (enterorrhaphy) for perforated ulcer, diverticulum, wound, injury or rupture; multiple perforations | 44603 |
| Suture of large intestine, for perforated ulcer, diverticulum, wound, injury, or rupture without colostomy | 44604 |
| Suture of large intestine, for perforated ulcer, diverticulum, wound, injury, or rupture with colostomy | 44605 |
| Closure of enterostomy, large or small intestine | 44620 |
| Closure of enterostomy, large or small intestine with resection and anastomosis other than colorectal | 44625 |
| Closure of enterostomy, large or small intestine with resection and colorectal anastomosis | 44626 |
| Closure of intestinal cutaneous fistula | 44640 |
| Closure of enteroenteric or enterocolic fistula | 44650 |
| Closure of entervesical fistula without intestinal or bladder resection | 44660 |
| Closure of entervesical fistula with intestinal and/or bladder resection | 44661 |
| Excision of Meckel's diverticulum (diverticulectomy) or omphalomesenteric duct | 44800 |
| Excision of ileoanal reservoir with an ileostomy | 45136 |
| Unlisted procedure in colon | 45399 |
|  |  |
| **Proctectomy** |  |
| Proctectomy, complete, combined abdominoperineal, with colostomy | 45110 |
| Proctectomy, partial resection of rectum, transabdominal approach | 45111 |
| Proctectomy, combined abdominoperineal, pull-through procedure | 45112 |
| Proctectomy, partial, with rectal mucosectomy, ileoanal anastomosis, creation of ileal reservoir (S or J), with or without loop ileostomy | 45113 |
| Proctectomy, partial with anastomosis, abdominal and transsacral approach | 45114 |
| Proctectomy, partial with anastomosis, transsacral approach only | 45116 |
| Proctectomy, combined abdominoperineal pull-through procedure, with creation of colonic reservoir, with diverting enterostomy when performed | 45119 |
| Proctectomy, complete, abdominal and perineal approach with pull-through procedure and anastomosis | 45120 |
| Proctectomy, complete, abdominal and perineal approach with subtotal or total colectomy, with multiple biopsies | 45121 |
| Proctectomy, partial, without anastomosis, perineal approach | 45123 |
| Pelvic exenteration | 45126 |
| Excision of rectal procidentia, with anastomosis, perineal approach | 45130 |
| Excision of rectal procidentia, with anastomosis, abdominal and perineal approach | 45135 |
| Excision of a rectal tumor by proctectomy, transsacral, or transcoccygeal approach | 45160 |
| Excision of rectal tumor through transanal approach, not including muscularis propria (partial thickness) | 45171 |
| Excision of rectal tumor through transanal approach, full thickness of the muscularis propria | 45172 |
| Surgical laparoscopy, proctectomy, complete, combined abdominoperineal with colostomy | 45395 |
| Surgical laparoscopy, proctectomy, combined abdominoperineal pull-through procedure with creation of colonic reservoir, diverting enterostomy, when performed | 45397 |
| Surgical laparoscopy, proctopexy for prolapse | 45400 |
| Surgical laparoscopy, proctopexy with sigmoid resection for prolapse | 45402 |
| Proctopexy via abdominal approach for prolapse | 45540 |
| Proctoplasty for stenosis | 45550 |
| Transanal rectal tumor excision | 0184T |

Abbreviations: CPT, current procedural terminology.

**Supplement Table 2. Michigan Surgical Quality Collaborative Demographic and Clinical Characteristic Definitions1**

|  |  |
| --- | --- |
| **Variable and Label** | **Definition** |
| Ageb | Patient age in years. |
| **Sex** | Differentiation between males and females. |
| Female |  |
| Male |  |
| **Race** | “The racial categories … generally reflect a social definition of race recognized … and not an attempt to define race biologically, anthropologically, or genetically. In addition, it is recognized that the categories of the race item include racial and national origin or sociocultural groups… People who identify their origin as Hispanic, Latino, or Spanish may be of any race” (US Census Bureau). Race may be assigned per hospital internal policy or self-identified by the patient. |
| Other | Back or African American, American Indian or Alaska Native, Native Hawaiian or Other Pacific Islander, Asian, Unknown |
| White |  |
| Body mass index, kg/m2 | Calculated variable from patient's most recent weight and height documented in the medical record before surgery. |
| Diabetes | Reported the treatment of the patient’s chronic, long-term management (>2 wk) of diabetes |
| Smoker | Tobacco use within 1 year (cigarette) |
| Corticosteroid use | The regular administration of oral or parenteral corticosteroids for a chronic medical condition (eg COPD, asthma, rheumatologic disease, rheumatologic disease, or inflammatory bowel disease) and/or has required the regular administration of immunosuppressive medications as chemotherapy, to prevent the rejection of a transplanted organ, to treat an autoimmune disease, and/or to treat a non-autoimmune inflammatory disease in the 30 d before operation. |
| Hypertension | Documentation/diagnosis of hypertension in the patient chart and requires/or is taking an antihypertensive medication within 30 days prior to operation. |
| Chronic obstructive pulmonary disease | COPD (such as asthma, emphysema, and/or chronic bronchitis) requires a diagnosis and additionally 1 or more of the following: functional disability from COPD (eg dyspnea or inability to perform activities of daily living), hospitalization in the past for treatment of COPD, requires chronic bronchodilator therapy with oral or inhaled agents, a forced expiratory volume of <75% of predicted on pulmonary function testing. |
| Dialysis | Acute or chronic renal failure requiring treatment with peritoneal dialysis, hemodialysis, hemofiltration, hemodiafiltration, or ultrafiltration within 2 weeks prior to surgery. |
| Peripheral vascular disease | PVD must be documented within the chart and also requires 1 of the following (current or past): revascularization of the upper and/or lower extremities for PVD (include angioplasty or revascularization procedures such as aorta-femoral, femoral-femoral, femoral-popliteal; exclude resection of an abdominal aortic aneurysm, carotid endarterectomy), amputation for PVD (include toe, metatarsal, below the knee, above the knee amputations; exclude amputation for trauma), rest pain (exclude intermittent claudication), gangrene (include ischemic ulceration and/or tissue loss related to PVD; exclude Fournier’s gangrene). |
| **Wound classification** | An assessment of the highest degree of contamination of a surgical wound at the time of the operation, which helps indicate the likelihood of a patient developing an infection at the surgical site. |
| Clean/Contaminated | Cases that fall into the following criteria: \* Respiratory, GI, genital, hepatobiliary or urinary tracts entered under controlled conditions \* Hollow organ or tract (e.g., bladder, bowel, stomach, vagina, etc.) if entered is under controlled conditions \* No evidence of infection or acute inflammation \* Primary wound closure (all layers of incision are closed) \* Drained with closed drainage if necessary \* Only minor break in aseptic/sterile technique if it occurs (e.g., non-visible (minor/non-significant) spillage of non-infectious fluid from GI/GU tract) |
| Contaminated | Cases that fall into the following criteria: \* Hollow organ (e.g., bladder, bowel, stomach, vagina, etc.) entered under non-controlled conditions during the operation (e.g., open, fresh, accidental wounds) \* Fecal contamination during the operation \* Acute, non-purulent inflammation \* Necrotic tissue or dry gangrene without evidence of purulence \* All layers of incision are not closed \* Penrose drain is left in the incision or has other open drainage \* Major break in sterile technique during the operation (e.g., gross/visible spillage from the GI tract, non-sterile equipment, non-sterile foreign bodies in wound, debris found in operative field, open cardiac massage, insect in the OR) |
| **American Society of Anesthesiologists (ASA) classification** | Recorded the ASA physical status classification of the patient’s present physical condition on a scale from 1 to 5 as it appears on the anesthesia record. ASA scores 1 and 2, and 3 and 4 combined for some analyses. |
| ASA 1 | Normal healthy patient |
| ASA 2 | Patient with mild systemic disease |
| ASA 3 | Patient with severe systemic disease |
| ASA 4 and 5 | ASA 4: Patient with severe systemic disease that is a constant threat to life ASA 5: Moribund patient who is not expected to survive without the operation |
| **Procedural group** | Determined by Current Procedural Terminology (CPT) code. |
| Colectomy |  |
| Other colon  procedures |  |
| Proctectomy |  |
| **Surgical approach** | Indicated the approach taken by the surgeon to perform the principal operative procedure. |
| Open | Includes:  Open Open, lap-assisted Laparoscopic, converted to Open Laparoscopic, hand-assisted converted to Open Laparoscopic, Single Port (SIL), converted to Open Robotic, converted to Open Robotic, Single Port (SIL)), converted to Open |
| Laparoscopic | Includes: Laparoscopic Laparoscopic, hand-assisted Larparoscopic, Single Port (SIL) Robotic, converted to Laparoscopic Robotic, laparoscopic assisted |
| Other | (e.g., anal, transanal, transoral) |
| Robotic | Includes: Robotic Robotic, hand-assisted Robotic, Single Port (SIL) |
| Mechanical bowel preparation with oral antibiotics | Indicated any mechanical bowel preparation and one or more oral antibiotics ordered preoperatively. |
| Surgery duration | Calculated as procedure end time minus procedure start time in minutes. |

**Supplement Table 3. Michigan Surgical Quality Collaborative Outcome Definitions1**

|  |  |
| --- | --- |
| **Variable and Labela** | Definition |
| *Clostridioides difficile* infection | *Clostridioides difficile* must be verified by laboratory detection of the toxin in the stool within 30 days of principal operative procedure. |
| Surgical site infections | Surgical site infection diagnosed within 30 days following the principal operative procedure. |
| Overall study population | Any surgical site infection (e.g., deep, organ space, or superficial). |
| Deep surgical site infection | Infection involves deep soft tissues of the incision (e.g., fascial and muscle layers) AND has at least one of the following: \* Purulent drainage from the deep incision \* A deep incision that spontaneously dehisces, or is deliberately opened or aspirated and organism identified from culture of deep incision or culture is not performed and patient has at least one of the following signs or symptoms: fever (>38°C), localized pain or tenderness \* An abscess or other evidence of infection involving the deep incision that is detected on gross anatomical or histopathologic exam, or imaging test |
| Organ space surgical site  infection | Infection involves any part of the body, deeper than the fascial/muscle layers, that is opened or manipulated during the operative procedure AND has at least one of the following: \* Purulent drainage from a drain that is placed into the organ/space (e.g., closed suction drainage system, open drain, T-tube drain, CT guided drainage) \* Organisms identified from a culture of fluid or tissue in the organ/space \* An abscess or other evidence of infection involving the organ/space that is detected on gross anatomical or histopathologic exam, or imaging test suggestive of infection AND at least one criterion for a specific organ/space infection site (e.g., deep pelvic tissue infection, gastrointestinal tract infection, intraabdominal infection) |
| Superficial surgical site  infection | Infection involves only skin and subcutaneous tissue of the incision AND has at least one of the following: \* Purulent drainage from superficial incision \* Organism identified from culture of superficial incision or subcutaneous tissue \* Superficial incision that is deliberately opened and culture is not performed, and patient has at least one of the following signs or symptoms: localized pain or tenderness, localized swelling, erythema, heat \* Diagnosis of superficial incisional SSI |

**Supplement Table 4. Subgroup Analysis of Patients who Received Mechanical and Oral Antibiotic Bowel Preparation; Demographics and Clinical Characteristics of Patients who Received Cefazolin and Metronidazole**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variable and Labela** | **Cefazolin 3-gram prophylaxis (*n*=253)** | **Cefazolin 2-gram prophylaxis (*n*=129)** | ***P*-value** |
| Ageb | 55.5 (12.5) | 57.3 (11.8) | .215 |
| **Sex** |  |  | .112 |
| Female | 72 (28.5) | 27 (2.9) |  |
| Male | 181 (71.5) | 102 (79.1) |  |
| **Race** |  |  | .254 |
| Other | 60 (23.7) | 24 (18.6) |  |
| White | 193 (76.3) | 105 (81.4) |  |
| Body mass index, kg/m2, b | 42.5 (6.2) | 42 (6.5) | .29 |
| Diabetes | 86 (34) | 46 (35.7) | .746 |
| Smoker | 36 (14.2) | 16 (12.4) | .623 |
| Corticosteroid use | 14 (5.5) | 7 (5.4) | .965 |
| Hypertension | 174 (68.8) | 87 (67.4) | .791 |
| Dialysis | 3 (1.2) | 1 (.8) | >.999 |
| **Wound classification** |  |  | .710 |
| Clean/Contaminated | 223 (88.1) | 112 (86.8) |  |
| Contaminated | 30 (11.9) | 17 (13.2) |  |
| **ASA classification** |  |  | .291 |
| ASA 1 | 1 (.4) | 0 |  |
| ASA 2 | 53 (2.9) | 37 (28.7) |  |
| ASA 3 | 188 (74.3) | 85 (66.9) |  |
| ASA 4 and 5 | 11 (4.3) | 7 (5.4) |  |
| **Procedural group** |  |  | .818 |
| Colectomy | 217 (85.8) | 113 (87.6) |  |
| Other colon procedures | 25 (9.9) | 12 (9.3) |  |
| Proctectomy | 11 (4.3) | 4 (3.1) |  |
| **Surgical approach** |  |  | .423 |
| Open | 109 (43.1) | 62 (48.1) |  |
| Laparoscopic | 80 (31.6) | 39 (30.2) |  |
| Other | 1 (.4) | 2 (1.6) |  |
| Robotic | 63 (24.9) | 26 (20.2) |  |
| Surgery duration, minutesc, d | 169 (135, 222) | 163 (129, 215) | .604 |
| Received recommended timing | 226 (89.3) | 121 (93.8) | .152 |
| At least one antibiotic post-incision | 11 (4.3) | 4 (3.1) | .553 |
| All prophylaxis post-incision | 2 (.8) | 0 | .552 |

Abbreviations: ASA, American Society of Anesthesiologists; SD standard deviation.

aData are patients, no. (%) unless otherwise specified.

bData are summarized as means (SD).

cAnalysis performed on 370 (246 3-gram prophylaxis, 124 2-gram prophylaxis) procedures with available data for surgery duration.

dData are summarized as median (interquartile range).

**Supplement Table 5. Outcomes by Cohort for Those with Receipt of Mechanical and Oral Antibiotic Bowel Preparation**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variablea** | **Cefazolin 3-gram prophylaxis (*n*=253)** | **Cefazolin 2-gram prophylaxis (*n*=129)** | ***P*-value** |
| **Surgical site infections** |  |  |  |
| Overall study population | 18 (7.1) | 8 (6.2) | .738 |
| Deep surgical site infection | 4 (1.6) | 0 | .305 |
| Organ space surgical site infection | 6 (2.4) | 4 (3.1) | .739 |
| Superficial surgical site infection | 8 (3.4) | 4 (3.1) | >.999 |
| *Clostridioides difficile* infection | 1 (.4) | 1 (.8) | >.999 |

aData are no. (%).

**Supplement Table 6. Variables Associated with 30-Day Surgical Site Infection for Those with Receipt of Mechanical and Oral Antibiotic Bowel Preparation**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variablea** | **Unadjusted odds ratio**  **(95% CI)** | ***P-*value** | **Adjusted odds ratio**  **(95% CI)** | ***P-*value** |
| Cefazolin 3-gram dosing | 1.16 (.49, 2.74) | .738 | .94 (.38, 2.31) | .891 |
| Recommended timing | 2.64 (.37, 2.1) | .349 | Not tested | -- |
| Age, divided by 10 | .68 (.49, .95) | .022 | Not tested | -- |
| Body mass index | 1 (.94, 1.07) | .923 | Not tested | -- |
| Diabetes | .83 (.35, 1.97) | .674 | Not tested | -- |
| Smoker | 3.85 (1.62, 9.19) | .002 | 4.25 (1.23, 1.42) | .002 |
| Corticosteroid use | 2.45 (.67, 8.93) | .175 | Not tested | -- |
| Hypertension | .73 (.32, 1.65) | .443 | Not tested | -- |
| Dialysis | - | - |  |  |
| **Wound classificationb** |  |  |  |  |
| Contaminated | 1.78 (.64, 4.97) | .271 | Not tested | -- |
| **ASA classificationc** |  |  |  |  |
| ASA 3 and 4 | .57 (.24, 1.32) | .186 | Not tested | -- |
| **Procedural groupd** |  |  |  |  |
| Other colon  procedures | 1.88 (.61, 5.83) | .275 | Not tested | -- |
| Proctectomy | 2.39 (.5, 11.3) | .274 | Not tested | -- |
| **Surgical approache** |  |  |  |  |
| Laparoscopic | .43 (.15, 1.19) | .104 | Not tested | -- |
| Other | - | - | Not tested | -- |
| Robotic | .58 (.2, 1.63) | .299 | Not tested | -- |
| Surgery duration, minutes divided by 15f | 1.08 (1.01, 1.16) | .033 | 1.08 (1.01, 1.16) | .037 |
| At least one antibiotic post-incision | - | - | Not tested | -- |
| All prophylaxis post-incision | - | - | Not tested | -- |

Abbreviations: CI, confidence interval; MOABP, mechanical and oral bowel preparation; ASA, American Society of Anesthesiologists

aAdusted analysis performed on 370 procedures with available data with 24 surgical site infections.

bThe baseline value for wound classification is clean/contaminated procedures.

cThe baseline value for ASA classification is an ASA score of 1 and 2.

dThe baseline value for procedural group is colectomy procedures.

eThe baseline value for surgical approach is open procedures in the unadjusted analysis.

fSurgical time divided by 15 minutes.

**Supplement Table 7. Outcomes by Cohort for Those with Receipt of Mechanical and Oral Antibiotic Bowel Preparation and Received Recommended Prophylaxis Timing**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variablea** | **Cefazolin 3-gram prophylaxis (*n*=226)** | **Cefazolin 2-gram prophylaxis (*n*=121)** | **Unadjusted p-value** |
| **Surgical site infections** |  |  |  |
| Overall study population | 17 (7.5) | 8 (6.6) | .755 |
| Deep surgical site infection | 3 (1.3) | 0 | .554 |
| Organ space surgical site infection | 6 (2.7) | 4 (3.3) | .744 |
| Superficial surgical site infection | 8 (3.4) | 4 (3.3) | >.999 |
| *Clostridioides difficile* infection | 1 (.4) | 1 (.8) | >.999 |

aData are no. (%).

**Supplement Table 8. Outcomes by Procedure Group by Cohort**

|  |  |  |  |
| --- | --- | --- | --- |
| **Variablea, b** | **Cefazolin 3-gram prophylaxis (*n*=367)** | **Cefazolin 2-gram prophylaxis (*n*=214)** | ***P* value** |
| **Colectomy** | 277 (75.5) | 169 (79) |  |
| **Surgical site infections** |  |  |  |
| Any surgical site infection | 15 (5.4) | 11 (6.5) | .632 |
| Deep surgical site infection | 4 (1.4) | 0 | .087 |
| Organ space surgical site infection | 4 (1.4) | 6 (3.6) | .189 |
| Superficial surgical site infection | 7 (2.5) | 5 (3) | .771 |
| Surgical site infection with receipt of MOABPc | 13 (6) | 7 (6.2) | .941 |
| Surgical site infection with MOABP and received  recommended timingd | 12 (6.1) | 7 (6.6) | .869 |
| *Clostridioides difficile* infection | 1 (.4) | 1 (.6) | >.999 |
|  |  |  |  |
| **Other colon procedure** | 72 (19.6) | 35 (16.4) |  |
| **Surgical site infections** |  |  |  |
| Any surgical site infection | 6 (7.7) | 5 (7.6) | .498 |
| Deep surgical site infection | 1 (1.4) | 0 | >.999 |
| Organ space surgical site infection | 2 (2.8) | 2 (5.7) | .596 |
| Superficial surgical site infection | 3 (4.2) | 3 (8.6) | .39 |
| Surgical site infection with receipt of MOABPe | 3 (12) | 1 (8.3) | >.999 |
| Surgical site infection with MOABP and received  recommended timingf | 3 (15) | 1 (9.1) | >.999 |
| *Clostridioides difficile* infection | 1 (1.4) | 1 (2.9) | .549 |
|  |  |  |  |
| **Proctectomy** | 18 (4.9) | 10 (4.7) |  |
| **Surgical site infections** |  |  |  |
| Any surgical site infection | 2 (10.5) | 0 | .524 |
| Deep surgical site infection | 0 | 0 | - |
| Organ space surgical site infection | 1 (5.6) | 0 | >.999 |
| Superficial surgical site infection | 1 (5.6) | 0 | >.999 |
| Surgical site infection with receipt of MOABP  with oral antibioticsg | 2 (18.2) | 0 | >.999 |
| Surgical site infection with MOABP and received  recommended timingh | 2 (20) | 0 | .334 |
| *Clostridioides difficile* infection | 0 | 1 (10) | .357 |

Abbreviations: MOABP, mechanical and oral antibiotic bowel preparation.

aData are No. (%).

bAnalyses performed on cohort subset.

cAnalysis performed on 330 colectomy procedures (217 3-gram prophylaxis, 113 2-gram prophylaxis) with receipt of MOABP.

dAnalysis performed on 302 colectomy procedures (196 3-gram prophylaxis, 106 2-gram prophylaxis) with receipt of MOABP and recommended timing.

eAnalysis performed on 37 other colon procedures (25 3-gram prophylaxis, 12 2-gram prophylaxis) with receipt of MOABP.

fAnalysis performed on 31 other colon procedures (20 3-gram prophylaxis, 11 2-gram prophylaxis) with receipt of MOABP and recommended timing.

gAnalysis performed on 15 proctectomy procedures (11 3-gram prophylaxis, 4 2-gram prophylaxis) with receipt of MOABP.

hAnalysis performed on 14 proctectomy procedures (10 3-gram prophylaxis, 4 2-gram prophylaxis) with receipt of MOABP and recommended timing.

**Supplement References.**

1. Michigan Surgical Quality Collaborative. <https://msqc.org/>. Accessed June 9, 2024.