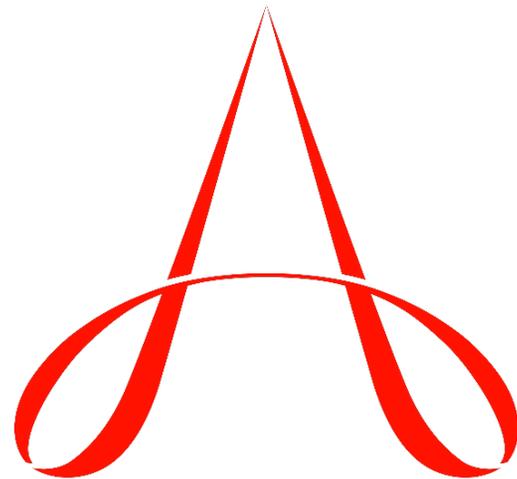




# Supplemental Guide: Colon and Rectal Surgery



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## **Milestones Supplemental Guide**

This document provides additional guidance and examples for the Preventive Medicine – Occupational Medicine Milestones. This is not designed to indicate any specific requirements for each level, but to provide insight into the thinking of the Milestone Work Group.

Included in this document is the intent of each Milestone and examples of what a Clinical Competency Committee (CCC) might expect to be observed/assessed at each level. Also included are suggested assessment models and tools for each subcompetency, references, and other useful information.

Review this guide with the CCC and faculty members. As the program develops a shared mental model of the Milestones, consider creating an individualized guide (Supplemental Guide Template available) with institution/program-specific examples, assessment tools used by the program, and curricular components.

Additional tools and references, including the Milestones Guidebook, Clinical Competency Committee Guidebook, and Milestones Guidebook for Residents and Fellows, are available on the [Resources](#) page of the Milestones section of the ACGME website.

<b>Patient Care 1: Rectal Cancer</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat rectal cancer	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates in a multidisciplinary approach to peri-operative diagnosis and management</i></p> <p><i>Assists in component steps for transanal excision, total mesorectal excision, restorative proctectomy, and abdominoperineal resection</i></p> <p><i>Assists in management of complications</i></p>	<ul style="list-style-type: none"> <li>● Participates in multidisciplinary team for a 52-year-old patient presenting with a mid-rectal neoplasm at colonoscopy</li>   <li>● Assists the attending performing total mesorectal excision (TME) and diverting loop ileostomy (DLI)</li>   <li>● Assists in the evaluation and management of a patient with fever, pelvic pressure, and leukocytosis four days after surgery; the attending instructs the resident to order an interventional radiology drainage after a computerized tomography (CT) scan reveals a pelvic collection consistent with a leak</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, interprets and integrates relevant staging and a multidisciplinary approach to peri-operative diagnosis and management</i></p> <p><i>With direct supervision, selects and completes the component steps for transanal excision, total mesorectal excision, restorative proctectomy, and abdominoperineal resection</i></p> <p><i>With direct supervision, anticipates, diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>● With attending help for preparation, presents case at multidisciplinary conference for a 52-year-old patient with a mid-rectal T3N1 carcinoma, and recommends neoadjuvant treatment</li>   <li>● Performs portions of the TME and DLI with attending assistance</li>   <li>● Evaluates and manages a patient with fever, pelvic pressure, and leukocytosis four days after surgery; after conferring with attending, the resident orders an interventional radiology drainage after CT reveals a pelvic collection consistent with a leak</li> </ul>
<p><b>Level 3</b> <i>Independently interprets and integrates relevant staging and a multidisciplinary approach to peri-operative diagnosis and management</i></p> <p><i>With minimal guidance, selects and completes the component steps for transanal excision, total</i></p>	<ul style="list-style-type: none"> <li>● Treats a patient with new diagnosis of rectal cancer, coordinates appropriate imaging for staging, and after conferring with attending, recommends neoadjuvant therapy</li>   <li>● Performs majority of the TME and DLI</li> </ul>

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<p><i>mesorectal excision, restorative proctectomy, and abdominoperineal resection</i></p> <p><i>With minimal guidance, anticipates, diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>● Evaluates and manages a patient with fever, pelvic pressure, and leukocytosis four days after surgery; informs the attending of a plan to order an interventional radiology drainage after CT reveals a pelvic collection consistent with a leak</li> </ul>
<p><b>Level 4</b> <i>Leads the multidisciplinary team in peri-operative diagnosis and management</i></p> <p><i>Independently selects and completes component steps for transanal excision, total mesorectal excision, restorative proctectomy, and abdominoperineal resection</i></p> <p><i>Independently anticipates, diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>● Appropriately leads the presentation of a rectal cancer patient in multidisciplinary setting accurately presenting stage, treatment options, and surgical recommendation, and coordinates discussion among oncology, surgery, and radiation oncology</li> <li>● Independently completes TME and DLI</li> <li>● Evaluates and manages a patient with fever, pelvic pressure, and leukocytosis four days after surgery; orders an interventional radiology drainage after CT reveals a pelvic collection consistent with a leak</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant for transanal excision, total mesorectal excision, restorative proctectomy, and abdominoperineal resection</i></p>	<ul style="list-style-type: none"> <li>● Successfully leads a general surgery resident through steps of performing TME and DLI</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Medical record (chart) review</li> <li>● Multisource feedback</li> <li>● Objective structured clinical examination (OSCE)</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> <li>● American Joint Committee on Cancer. Cancer Staging. <a href="https://cancerstaging.org">https://cancerstaging.org</a> Accessed 2020.</li> </ul>

- National Comprehensive Cancer Network. NCCN Guidelines.  
[https://www.nccn.org/professionals/physician\\_gls/default.aspx](https://www.nccn.org/professionals/physician_gls/default.aspx). Accessed 2020.

<b>Patient Care 2: Colonic Neoplasia (Polyps, Colon Cancer, Polyposis)</b> <b>Overall Intent:</b> To diagnose, comprehensively manage, and treat colon cancer	
Milestones	Examples
<p><b>Level 1</b> <i>Participates in a multidisciplinary approach to peri-operative diagnosis and management</i></p> <p><i>Assists in component steps for partial colectomy, total abdominal colectomy, total proctocolectomy, including minimally invasive and open techniques</i></p> <p><i>Assists in management of complications</i></p>	<ul style="list-style-type: none"> <li>● Participates in multidisciplinary team for a patient with a sigmoid mass</li>   <li>● Assists attending performing sigmoid resection</li>   <li>● Assists in the evaluation and management of a patient with decreasing hemoglobin and bright red blood per rectum; attending instructs the resident to order labs, type and screen, and cessation of anticoagulants</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, interprets and integrates relevant staging and a multidisciplinary approach to peri-operative diagnosis and management</i></p> <p><i>With direct supervision, selects and completes the component steps for partial colectomy, total abdominal colectomy, total proctocolectomy, restorative proctectomy, including minimally invasive and open techniques</i></p> <p><i>With direct supervision, anticipates, diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>● With attending help for preparation, presents case at multidisciplinary conference for a sigmoid mass</li>   <li>● Performs portions of the sigmoid colon resection</li>   <li>● Evaluates and manages a patient with decreasing hemoglobin and bright red blood per rectum; after conferring with attending, the resident orders labs, type and screen, and cessation of anticoagulants</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, interprets and integrates relevant staging and a multidisciplinary approach to peri-operative diagnosis and management</i></p>	<ul style="list-style-type: none"> <li>● Treats a patient with new diagnosis of sigmoid mass after conferring with attending (or with indirect supervision)</li> </ul>

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<p><i>With minimal guidance, selects and completes the component steps for partial colectomy, total abdominal colectomy, total proctocolectomy, restorative proctectomy, including minimally invasive and open techniques</i></p> <p><i>With minimal guidance, anticipates, diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>● Performs majority of the sigmoid colon resection</li> <li>● Evaluates and manages a patient with decreasing hemoglobin and bright red blood per rectum; resident orders labs, type and screen, and cessation of anticoagulants; informs the attending of plan to transfer the patient to the endoscopy suite</li> </ul>
<p><b>Level 4</b> <i>Leads the multidisciplinary team in peri-operative diagnosis and management</i></p> <p><i>Independently selects and completes component steps for partial colectomy, total abdominal colectomy, total proctocolectomy, restorative proctectomy, including minimally invasive and open technique</i></p> <p><i>Independently anticipates, diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>● Appropriately leads the presentation of a sigmoid mass in multidisciplinary setting accurately presenting stage, treatment options, and surgical recommendation, and coordinates discussion among oncology and surgery</li> <li>● Independently completes sigmoid colon resection</li> <li>● Evaluates and manages a patient with decreasing hemoglobin and bright red blood per rectum; orders labs, type and screen, and cessation of anticoagulants; initiates transfer to endoscopy suite</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant for partial colectomy, total abdominal colectomy, total proctocolectomy, and restorative proctectomy, including minimally invasive and open techniques</i></p>	<ul style="list-style-type: none"> <li>● Leads a general surgery resident through a sigmoid colon resection</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Medical record (chart) review</li> <li>● Multisource feedback</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> </ul>

- ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <https://fascrs.org/my-ascrs/education/carsep> 2020.

**Patient Care 3: Anal Cancer**

**Overall Intent:** To diagnose, comprehensively manage, and treat anal cancer

Milestones	Examples
<p><b>Level 1</b> <i>Participates in a multidisciplinary approach to peri-operative diagnosis, management, and surveillance</i></p> <p><i>Assists in component steps for management of anal cancer</i></p> <p><i>Assists in management of complications</i></p>	<ul style="list-style-type: none"> <li>● Participates in multidisciplinary team for a patient with an anal canal cancer</li> <li>● Assists in biopsy of an anal canal mass</li> <li>● Assists in the evaluation and management of a patient with stricture after chemoradiation</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, interprets and integrates relevant staging and a multidisciplinary approach to peri-operative diagnosis, management, and surveillance</i></p> <p><i>With direct supervision, selects and completes the component steps for treatment of anal cancer</i></p> <p><i>With direct supervision, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● With attending help for preparation, presents case at multidisciplinary conference for a patient with an anal canal cancer</li> <li>● With attending assistance, performs a biopsy of the anal canal mass</li> <li>● With attending assistance, evaluates and manages a patient with stricture after chemoradiation</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, interprets and integrates relevant staging and a multidisciplinary approach to peri-operative diagnosis, management, and surveillance</i></p> <p><i>With minimal guidance, selects and completes the component steps for management of anal cancer</i></p> <p><i>With minimal guidance, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Presents case at multidisciplinary conference for a patient with an anal canal cancer after conferring with attending (or with indirect supervision)</li> <li>● Performs a biopsy of the anal canal mass</li> <li>● Evaluates and manages a patient with stricture after chemoradiation; confers with attending and performs manual dilation</li> </ul>
<p><b>Level 4</b> <i>Leads the multidisciplinary team in peri-operative diagnosis, management, and surveillance</i></p>	<ul style="list-style-type: none"> <li>● Appropriately leads in the presentation of an anal canal cancer patient in multidisciplinary setting accurately presenting stage, treatment options, and surgical recommendations; coordinates discussion among oncology, radiation oncology, and surgery physicians</li> </ul>

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<p><i>Independently selects and completes component steps for management of anal cancer</i></p>	<ul style="list-style-type: none"> <li>● Performs a biopsy of the anal canal mass and fine needle biopsy any other groin masses</li> </ul>
<p><i>Independently anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Evaluates and manages a patient with stricture after chemoradiation, and performs manual dilation after informing attending</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant for surgical management of anal cancer</i></p>	<ul style="list-style-type: none"> <li>● Guides general surgery resident through surveillance anoscopy and groin evaluation after treatment for anal canal cancer</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Medical record (chart) review</li> <li>● Multisource feedback</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> <li>● American Joint Committee on Cancer. Cancer Staging. <a href="https://cancerstaging.org">https://cancerstaging.org</a> Accessed 2020.</li> <li>● National Comprehensive Cancer Network. NCCN Guidelines. <a href="https://www.nccn.org/professionals/physician_gls/default.aspx">https://www.nccn.org/professionals/physician_gls/default.aspx</a>. Accessed 2020.</li> </ul>

**Patient Care 4: Anal Fistula**

**Overall Intent:** To diagnose, comprehensively manage, and treat anal fistula

Milestones	Examples
<p><b>Level 1</b> <i>Participates in examination and assessment of anal fistula</i></p> <p><i>Assists in component steps for surgical management of anal fistula</i></p> <p><i>Assists in the management of complications and recurrence</i></p>	<ul style="list-style-type: none"> <li>● Verbalizes understanding of typical fistula anatomy</li> <li>● Assists the attending in the placement of a seton or fistulotomy</li> <li>● Assists attending in draining recurrent abscess after fistulotomy</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, performs examination and assessment of anal fistula</i></p> <p><i>With direct supervision, selects and completes the component steps for surgical management of anal fistula</i></p> <p><i>With direct supervision, anticipates, diagnoses, and manages complications and recurrence</i></p>	<ul style="list-style-type: none"> <li>● Locates the internal opening and tract of simple fistulae</li> <li>● Performs a simple fistulotomy and verbalizes understanding of surgical options for complex fistulae</li> <li>● With attending assistance, evaluates and manages a patient with recurrent fistula and performs seton placement</li> <li>● Recognizes the signs and symptoms of recurrent fistulae</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates assessment of anal fistula</i></p> <p><i>With minimal guidance, selects and completes component steps of surgical management of anal fistula</i></p> <p><i>With minimal guidance, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Locates the internal opening and tract of complex fistulae, with attending's assistance</li> <li>● Completes the steps of a complex fistula procedure with attending's assistance</li> <li>● Evaluates and manages a patient with recurrent fistula; confers with attending and places a seton</li> </ul>
<p><b>Level 4</b> <i>Independently formulates assessment of anal fistula</i></p>	<ul style="list-style-type: none"> <li>● When a patient presents with draining sinus after incision and drainage of a perirectal abscess two months prior, appropriately completes examination of the fistula determining potential sphincter involvement, orders appropriate imaging, assesses concurrent disease processes, and determines potential for active infection</li> </ul>

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<p><i>Independently selects and completes component steps of surgical management of anal fistula</i></p> <p><i>Independently anticipates, diagnoses, and manages complication</i></p>	<ul style="list-style-type: none"> <li>● In the operating room appropriately determines significant sphincter involvement and correctly selects appropriate definitive repair</li> <li>● When after completion of previous repair a patient re-presents with recurrent fistula and induration, appropriately determines need for control of infection, potential causes of recurrence including concurrent cancer or Crohn's disease, and subsequent surgical management</li> </ul>
<p><b>Level 5 Demonstrates proficiency as a teaching assistant for surgical management of anal fistula</b></p>	<ul style="list-style-type: none"> <li>● Appropriately teaches and directs the general surgery resident in the comprehensive management of fistula disease</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Medical record (chart) review</li> <li>● Multisource feedback</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Patient Care 5: Benign Anorectal (Hemorrhoids, Fissures, Abscess, Pilonidal Disease, and Dermatologic Conditions)</b> <b>Overall Intent:</b> To diagnose, comprehensively manage, and treat benign anorectal conditions	
Milestones	Examples
<p><b>Level 1</b> <i>Participates in formulating a differential diagnosis and medical or surgical management plan</i></p> <p><i>Assists with component steps for interventions</i></p> <p><i>Assists with the management of complications</i></p>	<ul style="list-style-type: none"> <li>● Observes an attending formulate a differential diagnosis and treatment plan for a patient presenting with grade III hemorrhoids; that includes implementing fiber supplements, hydration, and other conservative measures; discusses options should these conservative measures fail</li> <li>● Assists attending surgeon with hemorrhoidal banding</li> <li>● Assists attending surgeon with exam under anesthesia for significant rectal bleeding on post-banding day five</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, formulates a differential diagnosis and medical or surgical management plan</i></p> <p><i>With direct supervision performs and completes component steps for interventions</i></p> <p><i>With direct supervision anticipates, makes diagnosis, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● With direct supervision, formulates differential diagnosis for a patient with grade III hemorrhoids, implements fiber supplements, hydration, and other conservative measures, and discusses options should these conservative measures fail</li> <li>● Performs hemorrhoidal banding with direct supervision</li> <li>● Performs exam under anesthesia for significant rectal bleeding on post-banding day five under direct supervision</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates a differential diagnosis and medical or surgical management plan</i></p> <p><i>With minimal guidance performs and completes component steps for interventions</i></p> <p><i>With minimal guidance anticipates, makes diagnosis, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● After confirming with attending, formulates differential diagnosis for a patient presenting with grade III hemorrhoids and implements fiber supplements, hydration, and other conservative measures; discusses options should these conservative measures fail</li> <li>● Performs hemorrhoidal banding after confirming with attending</li> <li>● Performs exam under anesthesia for significant rectal bleeding on post-banding day five with attending assistance</li> </ul>
<p><b>Level 4</b> <i>Independently formulates a differential diagnosis and medical or surgical management plan</i></p> <p><i>Independently performs and completes component steps for interventions</i></p>	<ul style="list-style-type: none"> <li>● Formulates differential diagnosis for a patient presenting with grade III hemorrhoids, and implements fiber supplements, hydration, and other conservative measures; discusses options with patient should these conservative measures fail</li> <li>● Performs hemorrhoidal banding</li> </ul>

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<p><i>Independently anticipates, makes diagnosis, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Performs exam under anesthesia for significant rectal bleeding on post-banding day five</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant for component steps for interventions</i></p>	<ul style="list-style-type: none"> <li>● Serves as teaching assistant for junior resident for hemorrhoidal banding and examination under anesthesia for significant rectal bleeding five days later</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Mock oral exam</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Patient Care 6: Ulcerative Colitis</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat ulcerative colitis	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates with development of a multidisciplinary medical or surgical management plan, including surveillance</i></p> <p><i>Assists with selection and completion of component steps of operations, including restorative proctocolectomy</i></p> <p><i>Assists with diagnosis and management of complications</i></p>	<ul style="list-style-type: none"> <li>● Participates in a multidisciplinary conference to review a 32-year-old patient presenting with bloody diarrhea whose: colonoscopy reveals pancolitis; biopsies suggest ulcerative colitis; and does not respond to the gastroenterologist’s medical management including biologic agents</li> <li>● Observes staged restorative proctocolectomy with J-pouch reconstruction and loop ileostomy</li> <li>● Observes management of patient who developed a fever five days after restorative proctocolectomy with diversion, and whose CT exam reveals pelvic abscess; observes requests for interventional CT-guided percutaneous drainage with water-soluble contrast study ordered following patient recovery to ensure resolution of leak prior to ileostomy takedown</li> </ul>
<p><b>Level 2</b> <i>With direct supervision formulates a differential diagnosis and multidisciplinary medical or surgical management plan, including surveillance</i></p> <p><i>With direct supervision, selects and completes component steps of operations, including restorative proctocolectomy</i></p> <p><i>With direct supervision, anticipates, makes diagnosis, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Provides informed consent for operative options (with direct supervision by attending) to a 32-year-old patient presenting with bloody diarrhea whose: colonoscopy reveals pancolitis, biopsies suggest ulcerative colitis, and who fails to respond to the gastroenterologist’s medical management including biologic agents</li> <li>● Assists with staged restorative proctocolectomy with J-pouch reconstruction and loop ileostomy</li> <li>● Assists in management of patient who developed a fever five days after restorative proctocolectomy with diversion, and whose CT exam reveals pelvic abscess; assists in the request for interventional CT-guided percutaneous drainage with water-soluble contrast study ordered following patient recovery to ensure resolution of leak prior to ileostomy takedown</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates a differential diagnosis and multidisciplinary medical or surgical management plan, including surveillance</i></p>	<ul style="list-style-type: none"> <li>● After confirming with attending surgeon, provides informed consent for operative options to a 32-year-old patient presenting with bloody diarrhea whose: colonoscopy reveals pancolitis, biopsies suggest ulcerative colitis, and who fails to respond to the gastroenterologist’s medical management including biologic agents</li> </ul>

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<p><i>With minimal guidance, selects and completes component steps of operations, including restorative proctocolectomy</i></p> <p><i>With minimal guidance, anticipates, makes diagnosis, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Performs staged restorative proctocolectomy with J-pouch reconstruction and loop ileostomy with attending assistance</li> <li>● Manages patient who developed a fever five days after restorative proctocolectomy with diversion; when a CT exam reveals pelvic abscess, requests interventional CT-guided percutaneous drainage after confirmation with attending surgeon; orders a water-soluble contrast study following patient recovery and following confirmation with attending surgeon to ensure resolution of leak prior to ileostomy takedown</li> </ul>
<p><b>Level 4</b> <i>Independently formulates a differential diagnosis and multidisciplinary medical or surgical management plan, including surveillance</i></p> <p><i>Independently selects and completes component steps of operations, including restorative proctocolectomy</i></p> <p><i>Independently anticipates, makes diagnosis, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Provides informed consent for operative options to a 32-year-old patient presenting with bloody diarrhea whose colonoscopy reveals pancolitis, biopsies suggest ulcerative colitis, and who fails to respond to the gastroenterologist's medical management including biologic agents</li> <li>● Performs staged restorative proctocolectomy with J-pouch reconstruction and loop ileostomy</li> <li>● Manages patient who developed a fever five days after restorative proctocolectomy with diversion; when a CT exam reveals pelvic abscess, requests interventional CT-guided percutaneous drainage; orders a water-soluble contrast study following patient recovery to ensure resolution of leak prior to ileostomy takedown</li> </ul>
<p><b>Level 5</b> <i>Guides discussion of patient care in the multidisciplinary team</i></p> <p><i>Demonstrates proficiency as a teaching assistant for operations, including restorative proctocolectomy</i></p>	<ul style="list-style-type: none"> <li>● Guides junior resident through non-operative and operative management decision making for patient with ulcerative colitis</li> <li>● Serves as teaching assistant for restorative proctocolectomy and loop ileostomy</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Mock oral exam</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> </ul>

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<b>Patient Care 7: Diverticular Disease</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat diverticular disease	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates in examination and assessment and medical or surgical management</i></p> <p><i>Assists in component steps for surgical management</i></p> <p><i>Assists in the management of complications and recurrences</i></p>	<ul style="list-style-type: none"> <li>● Participates in assessment and discussion of medical and surgical options for a 56-year-old patient presenting with left lower-quadrant abdominal pain and low-grade fever consistent with clinical diverticulitis, and whose CT scan shows a six-centimeter pericolic abscess not amenable to percutaneous drainage</li> <li>● Observes and assists with operative intervention that includes drainage of an abscess, resection of the diseased segment, and primary anastomosis, with or without diversion depending on risk factors for anastomotic leak</li> <li>● Participates in team discussion for a patient who presents with post-operative fever after discharge; when repeat CT imaging demonstrates recurrent pelvic abscess amenable to interventional radiology drainage, participates in ordering interventional radiology drainage</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, performs examination, assessment and medical or surgical management</i></p> <p><i>With direct supervision, selects and completes the component steps for surgical management</i></p> <p><i>With direct supervision, anticipates, diagnoses, and manages complications and recurrences</i></p>	<ul style="list-style-type: none"> <li>● With the attending, discusses assessment and medical and surgical options for a 56-year-old patient who presents with left lower-quadrant abdominal pain and low-grade fever consistent with clinical diverticulitis and whose CT scan shows a six-centimeter pericolic abscess not amenable to percutaneous drainage</li> <li>● Assists with operative intervention that includes drainage of an abscess, resection of the diseased segment, and primary anastomosis, with or without diversion depending on risk factors for anastomotic leak</li> <li>● Assists in the assessment of a patient who presents with post-operative fever after discharge; after repeat CT imaging demonstrates recurrent pelvic abscess amenable to interventional radiology drainage, assists in ordering interventional radiology drainage</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates assessment and medical or surgical management</i></p> <p><i>With minimal guidance, selects and completes component steps of surgical management</i></p> <p><i>With minimal guidance, anticipates, diagnoses, and manages complications and recurrences</i></p>	<ul style="list-style-type: none"> <li>● After conferring with attending, assesses and discusses medical and surgical options for a 56-year-old patient presenting with left lower-quadrant abdominal pain and low-grade fever consistent with clinical diverticulitis and whose CT scan shows a six-centimeter pericolic abscess not amenable to percutaneous drainage</li> <li>● With the attending's assistance, proceeds with an operative intervention that includes drainage of an abscess, resection of diseased segment, and primary anastomosis, with or without diversion depending on risk factors for anastomotic leak</li> <li>● Assesses a patient who presents with post-operative fever following discharge; after repeat CT imaging demonstrates recurrent pelvic abscess amenable to interventional radiology drainage, informs the attending then orders interventional radiology drainage</li> </ul>

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<p><b>Level 4</b> <i>Independently assesses and formulates a plan for medical or surgical management</i></p> <p><i>Independently selects and completes component steps of surgical management</i></p> <p><i>Independently anticipates, diagnoses, and manages complications and recurrences</i></p>	<ul style="list-style-type: none"> <li>● Assesses and discusses medical and surgical options for a 56-year-old patient who presents with left lower-quadrant abdominal pain and low-grade fever consistent with clinical diverticulitis, and whose CT scan shows a six-centimeter pericolic abscess not amenable to percutaneous drainage</li> <li>● Proceeds with operative intervention that includes drainage of an abscess, resection of the diseased segment, and primary anastomosis, with or without diversion depending on risk factors for anastomotic leak</li> <li>● Assesses a patient who presents with post-operative fever following discharge; orders interventional radiology drainage after repeat CT imaging demonstrates recurrent pelvic abscess amenable to interventional radiology drainage</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant for surgical management</i></p>	<ul style="list-style-type: none"> <li>● Serves as teaching assistant for complex surgical decision making and management</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Mock oral exam</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Patient Care 8: Benign Colon Disease (Lower Gastrointestinal (GI) Bleeding, Volvulus, Trauma, Foreign Body and Large Bowel Obstruction)</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat benign colon disease	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Assists in assessing and formulating a plan for medical or surgical management</i></p> <p><i>Assists in selecting and completing component steps for surgical or procedural management</i></p> <p><i>Assists in establishing diagnoses, and managing treatment failure or surgical and procedural complications</i></p>	<ul style="list-style-type: none"> <li>● Observes assessment and formulation of a medical or surgical plan for an 85-year-old patient with Parkinson’s disease who presents with acute onset of abdominal pain and distention, whose imaging suggests sigmoid volvulus, and for whom an attempt at endoscopic detorsion fails</li> <li>● Observes an attempt at endoscopic detorsion and sigmoid resection (with or without diversion)</li> <li>● Observes a patient who develops generalized abdominal pain with diffuse rebound tenderness two days after surgery; assists with establishing diagnosis and returns patient to operating room for resection of ischemic colonic segment</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, assesses and formulates a plan for medical or surgical management</i></p> <p><i>With direct supervision, selects and completes component steps for surgical or procedural management</i></p> <p><i>With direct supervision, anticipates, diagnoses, and manages treatment failure or surgical and procedural complications</i></p>	<ul style="list-style-type: none"> <li>● Assists in assessment and formulation of a medical or surgical plan for an 85-year-old patient with Parkinson’s disease who presents with acute onset of abdominal pain and distention, whose imaging suggests sigmoid volvulus, and for whom an attempt at endoscopic detorsion fails</li> <li>● Assists with attempt at endoscopic detorsion and sigmoid resection (with or without diversion) with attending surgeon supervision</li> <li>● With attending surgeon supervision, observes a patient who develops generalized abdominal pain with diffuse rebound tenderness two days after surgery; assists with establishing diagnosis and returns patient to operating room for resection of ischemic colonic segment</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, assesses and formulates a plan for medical or surgical management</i></p> <p><i>With minimal guidance, selects and completes component steps for surgical or procedural management</i></p>	<ul style="list-style-type: none"> <li>● After conferring with the attending, assesses and formulates a surgical plan for an 85-year-old patient with Parkinson’s disease who presents with acute onset of abdominal pain and distention, whose imaging suggests sigmoid volvulus, and for whom an attempt at endoscopic detorsion fails</li> <li>● With attending assistance, attempts endoscopic detorsion and sigmoid resection (with or without diversion)</li> </ul>

<p><i>With minimal guidance, anticipates, diagnoses, and manages treatment failure or surgical and procedural complications</i></p>	<ul style="list-style-type: none"> <li>● After conferring with the attending, observes a patient who develops generalized abdominal pain with diffuse rebound tenderness two days after surgery; establishes diagnosis and returns patient to operating room for resection of ischemic colonic segment</li> </ul>
<p><b>Level 4</b> <i>Independently assesses and formulates a plan for medical or surgical management</i></p> <p><i>Independently selects and completes component steps for surgical or procedural management</i></p> <p><i>Independently anticipates, diagnoses, and manages treatment failure or surgical and procedural complications</i></p>	<ul style="list-style-type: none"> <li>● Assesses and formulates a surgical plan for an 85-year-old patient with Parkinson’s disease who presents with acute onset of abdominal pain and distention, whose imaging suggests sigmoid volvulus, and for whom an attempt at endoscopic detorsion fails</li> <li>● Proceeds with sigmoid resection (with or without diversion)</li> <li>● Observes a patient who develops generalized abdominal pain with diffuse rebound tenderness two days after surgery; establishes diagnosis and returns patient to operating room for resection of ischemic colonic segment</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant in guiding learners in assesses and formulates a plan for medical or surgical management</i></p> <p><i>Demonstrates proficiency as a teaching assistant to guide learners in selecting and completing component steps for surgical or procedural management</i></p> <p><i>Demonstrates proficiency as a teaching assistant in guiding learners in anticipating, diagnosing, and managing treatment failure or surgical and procedural complications</i></p>	<ul style="list-style-type: none"> <li>● Guides junior resident with history, physical exam, and imaging for patient with sigmoid volvulus</li> <li>● Serves as teaching assistant for junior resident for endoscopic detorsion and for sigmoid resection (with or without diversion) for sigmoid volvulus</li> <li>● Guides junior resident through assessment of patient with postoperative rebound tenderness and serves as teaching assistant for operative resection of ischemic colon segment</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Mock oral exam</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> </ul>

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<b>Patient Care 9: Pelvic Floor Disorders</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat pelvic floor disorders	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates in formulating a differential diagnosis and development of multidisciplinary medical or surgical management plan</i></p> <p><i>Assists in performing various surgical procedures and interventions</i></p> <p><i>Assists in the process of diagnosing, and managing complications</i></p>	<ul style="list-style-type: none"> <li>● Participates in formulating differential diagnosis and multidisciplinary plan for a 45-year-old patient presenting with outlet-type constipation requiring digitation maneuvers and whose physical exam reveals rectocele, and whose defecography confirms rectocele that does not empty</li> <li>● Observes and assists with multidisciplinary repair of rectocele in conjunction with cystocele repair by urogynecologist</li> <li>● Observes incision and drainage of perineal abscess under anesthesia for a patient who presents seven days after surgery of pelvic floor disorder</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With direct supervision, performs various surgical procedures and interventions</i></p> <p><i>With direct supervision, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● With supervision by attending surgeon, formulates a differential diagnosis for a 45-year-old patient presenting with outlet-type constipation requiring digitation maneuvers and whose physical exam reveals rectocele; orders defecography to confirm rectocele does not empty</li> <li>● Performs multidisciplinary repair of rectocele with attending surgeon assistance in conjunction with cystocele repair by urogynecologist</li> <li>● Assists with incision and drainage of perineal abscess under anesthesia for a patient who presents seven days after surgery of pelvic floor disorder</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With minimal guidance, performs various surgical procedures and interventions</i></p> <p><i>With minimal guidance, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● After confirming with attending surgeon, formulates a differential diagnosis for a 45-year-old patient presenting with outlet-type constipation requiring digitation maneuvers and whose physical exam reveals rectocele; orders defecography to confirm rectocele does not empty</li> <li>● With the attending’s assistance, performs multidisciplinary repair of rectocele in conjunction with cystocele repair by urogynecologist</li> <li>● After conferring with attending, performs incision and drainage of perineal abscess under anesthesia for a patient who presents seven days after surgery of pelvic floor disorder</li> </ul>

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<p><b>Level 4</b> <i>Independently formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>Independently performs various surgical procedures and interventions</i></p> <p><i>Independently anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>• Formulates a differential diagnosis for a 45-year-old patient presenting with outlet-type constipation requiring digitation maneuvers and whose physical exam reveals rectocele, orders defecography to confirm rectocele does not empty</li> <li>• Performs multidisciplinary repair of rectocele in conjunction with cystocele repair by urogynecologist</li> <li>• Performs incision and drainage of perineal abscess under anesthesia for a patient who presents seven days after surgery of pelvic floor disorder</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant in formulating a differential diagnosis and development of multidisciplinary medical or surgical management plan</i></p> <p><i>Demonstrates proficiency as a teaching assistant in performing various surgical procedures and interventions</i></p> <p><i>Demonstrates proficiency as a teaching assistant in guiding trainee in diagnosing, and managing complications</i></p>	<ul style="list-style-type: none"> <li>• Guides junior resident formulating differential diagnosis and multidisciplinary medical and surgical plan for patient with pelvic floor dysfunction presenting as outlet-type constipation</li> <li>• Serves as teaching assistant for junior resident for rectocele repair with cystocele repair by urogynecologist</li> <li>• Serves as teaching assistant for junior resident identifying perineal abscess as a complication and drainage under anesthesia</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>• Assessment of case-based presentation</li> <li>• Direct observation</li> <li>• Mock oral exam</li> <li>• OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>• Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>• American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>• ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Patient Care 10: Rectal Prolapse</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat rectal prolapse	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates in formulating a differential diagnosis and development of multidisciplinary medical or surgical management plan</i></p> <p><i>Assists in performing various surgical procedures and interventions</i></p> <p><i>Assists in the process of diagnosing, and managing complications</i></p>	<ul style="list-style-type: none"> <li>● Observes and participates in development of differential diagnosis and multidisciplinary plan for a 90-year-old woman who presents with incarcerated full thickness rectal prolapse and multiple comorbidities</li> <li>● Observes and assists with urgent perineal proctectomy</li> <li>● Observes and assists with the management a patient who developed a fever five days after surgery; the patient is returned to the operating suite for drainage of a low pelvic para-anastomotic abscess through a two-centimeter anastomotic defect</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With direct supervision performs various surgical procedures and interventions</i></p> <p><i>With direct supervision anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● With supervision, develops a differential diagnosis and multidisciplinary plan for a 90-year-old woman who presents with incarcerated full thickness rectal prolapse and multiple comorbidities</li> <li>● Performs parts of the urgent perineal proctectomy with attending surgeon assistance</li> <li>● With supervision, manages a patient who developed a fever five days after surgery by returning to the operating suite to drain a low pelvic para-anastomotic abscess through a two-centimeter anastomotic defect</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With minimal guidance, performs various surgical procedures and interventions</i></p> <p><i>With minimal guidance, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● After conferring with the attending, develops a differential diagnosis and multidisciplinary plan for a 90-year-old woman who presents with incarcerated full thickness rectal prolapse and multiple comorbidities</li> <li>● Performs urgent perineal proctectomy with attending surgeon assistance</li> <li>● After conferring with the attending, manages a patient who developed a fever five days after surgery by returning to the operating suite to drain a low pelvic para-anastomotic abscess through a two-centimeter anastomotic defect</li> </ul>
<p><b>Level 4</b> <i>Independently formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p>	<ul style="list-style-type: none"> <li>● Develops a differential diagnosis and multidisciplinary plan for a 90-year-old woman who presents with incarcerated full thickness rectal prolapse and multiple comorbidities</li> </ul>

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<p><i>Independently performs various surgical procedures and interventions</i></p> <p><i>Independently anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Performs urgent perineal proctectomy</li> <li>● Manages a patient who developed a fever five days after surgery by returning to the operating suite to drain a low pelvic para-anastomotic abscess through a two-centimeter anastomotic defect</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant in formulating a differential diagnosis and development of multidisciplinary medical or surgical management plan</i></p> <p><i>Demonstrates proficiency as a teaching assistant in performing various surgical procedures and interventions</i></p> <p><i>Demonstrates proficiency as a teaching assistant in guiding learners in diagnosing and managing complications</i></p>	<ul style="list-style-type: none"> <li>● Guides general surgery resident through diagnosis and management plan of a 90-year-old woman with multiple comorbidities presenting with incarcerated full thickness rectal prolapse</li> <li>● Guides general surgery resident through urgent perineal proctectomy</li> <li>● Serves as a teaching assistant for drainage of low pelvic para-anastomotic abscess through two-centimeter anastomotic defect</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Assessment of case-based presentation</li> <li>● Direct observation</li> <li>● Mock oral exam</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Patient Care 11: Fecal Incontinence</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat fecal incontinence	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates in formulating a differential diagnosis and development of multidisciplinary medical or surgical management plan</i></p> <p><i>Assists in performing surgical procedures and interventions</i></p> <p><i>Assists in the process of diagnosing, and managing complications</i></p>	<ul style="list-style-type: none"> <li>● Observes attending work-up a 75-year-old patient who presents with daily incontinence to formed stool; the work-up includes complete bowel diary, medical assessment, ultrasound confirming an intact sphincter, and no associated urinary incontinence; observes the attending recommend sacral nerve stimulator after the patient declines biofeedback</li> <li>● Assists in surgery for a patient undergoing successful stage 1 and stage 2 sacral nerve stimulator placement</li> <li>● Observes the attending’s management of a patient with a sacral nerve stimulator who returns after six months with increased frequency of incontinence; observes the attending interrogate the device and diagnose a lead fracture, returning the patient to the operating room for lead revision</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With direct supervision, performs surgical procedures and interventions</i></p> <p><i>With direct supervision, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● With direct supervision, assesses a 75-year-old patient who presents with daily incontinence to formed stool; the work-up includes complete bowel diary, medical assessment, an ultrasound confirming an intact sphincter, and associated urinary incontinence; recommends sacral nerve stimulator after the patient declines biofeedback</li> <li>● Performs a successful stage 1 and stage 2 sacral nerve stimulator placement with assistance</li> <li>● With direct supervision, manages a patient with a sacral nerve stimulator who returns after six months with increased frequency of incontinence; interrogates the device and diagnoses a lead fracture; returns the patient to the operating room for lead revision</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With minimal guidance, performs surgical procedures and interventions</i></p>	<ul style="list-style-type: none"> <li>● After confirming with attending, assesses a 75-year-old patient who presents with daily incontinence to formed stool; the work-up includes complete bowel diary, medical assessment, an ultrasound confirming an intact sphincter, and no associated urinary incontinence; recommends sacral nerve stimulator after patient declines biofeedback</li> <li>● Performs successful stage 1 and stage 2 sacral nerve stimulator placement, with supervision</li> </ul>

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<p><i>With minimal guidance, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● After confirming with attending, manages a patient with a sacral nerve stimulator who returns after six months with increased frequency of incontinence; interrogates the device and diagnoses a lead fracture; returns the patient to the operating room for lead revision</li> </ul>
<p><b>Level 4</b> <i>Independently formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>Independently performs surgical procedures and interventions</i></p> <p><i>Independently anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Assesses a 75-year-old patient who presents with daily incontinence to formed stool; work-up includes complete bowel diary, medical assessment, ultrasound confirming an intact sphincter, and no associated urinary incontinence; recommends sacral nerve stimulator after patient declines biofeedback</li> <li>● Performs successful stage 1 and stage 2 sacral nerve stimulator placement</li> <li>● Manages a patient with a sacral nerve stimulator who returns after six months with increased frequency of incontinence; interrogates the device and diagnoses a lead fracture; return the patient to the operating room for lead revision</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant in guiding learners in formulating a differential diagnosis and development of multidisciplinary medical or surgical management plan</i></p> <p><i>Demonstrates proficiency as a teaching assistant in performing surgical procedures and interventions</i></p> <p><i>Demonstrates proficiency as a teaching assistant in guiding learners in diagnosing and managing complications</i></p>	<ul style="list-style-type: none"> <li>● Guides junior resident through work-up of 75-year-old female with daily incontinence to formed stool; guides junior resident to obtain complete bowel diary, medical assessment, an ultrasound confirming an intact sphincter; and no associated urinary incontinence; guides junior resident to recommend sacral nerve stimulator after patient declines biofeedback</li> <li>● Guides general surgery resident through a successful stage 1 and stage 2 sacral nerve stimulator placement</li> <li>● Is a proficient teaching assistant for assessing and identifying problems with devices</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Case-based presentation</li> <li>● Direct observation</li> <li>● Multisource feedback</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> </ul>

- ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <https://fascrs.org/my-ascrs/education/carsep> 2020.

<b>Patient Care 12: Endoscopy (Flexible Sigmoidoscopy and Colonoscopy)</b>	
<b>Overall Intent:</b> To formulate the indications, recommendations, and performance of diagnostic and therapeutic endoscopy	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates in formulating indications and performs risk stratification</i></p> <p><i>Participates in diagnostic and therapeutic lower endoscopy</i></p> <p><i>Participates in diagnosing, and managing complications</i></p>	<ul style="list-style-type: none"> <li>● Observes the attending assess a 51-year-old patient who presents with symptomatic hemorrhoids while on blood thinners; observes the attending recommend a colonoscopy and blood thinner use cessation after consulting the patient’s primary care physician</li> <li>● Assists in performing colonoscopy with successful intubation of cecum and ileocecal valve; the colonoscope is withdrawn appropriately and relevant anatomic landmarks are photographed</li> <li>● Observes the attending manage a patient who returns to the emergency room 12 hours after colonoscopy complaining of severe right lower-quadrant pain; at the attending’s behest, orders a CT scan that demonstrates contained retroperitoneal air; at the attending’s instruction, resident admits patient for antibiotics, IV fluids, and serial abdominal examinations</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, identifies indications and performs risk stratification</i></p> <p><i>With direct assistance, completes diagnostic and therapeutic lower endoscopy</i></p> <p><i>Independently anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● With direct supervision, assesses a 51-year-old patient who presents with symptomatic hemorrhoids while on blood thinners; recommends a colonoscopy and blood thinner use cessation after consulting the patient’s primary care physician</li> <li>● Performs colonoscopy but requires attending assistance for intubation of cecum and ileocecal valve; withdraws colonoscopy appropriately and photographs relevant anatomic landmarks</li> <li>● With direct supervision, manages a patient who returns to the emergency room 12 hours after a colonoscopy complaining of severe right lower-quadrant pain; orders CT scan that demonstrates contained retroperitoneal air, and admits patient for antibiotics, IV fluids, and serial abdominal examinations</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, identifies indications and performs risk stratification</i></p> <p><i>With minimal assistance, completes diagnostic and therapeutic lower endoscopy</i></p>	<ul style="list-style-type: none"> <li>● After conferring with the attending, assesses a 51-year-old patient who presents with symptomatic hemorrhoids while on blood thinners; recommends blood thinner use cessation and a colonoscopy after consulting the patient’s primary care physician</li> <li>● With guidance, performs colonoscopy with successful intubation of cecum and ileocecal valve; withdraws colonoscope appropriately and photographs relevant anatomic landmarks</li> </ul>

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<p><i>With minimal assistance, anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● After conferring with attending, manages a patient who returns to the emergency room 12 hours after a colonoscopy complaining of severe right lower-quadrant pain; orders CT scan that demonstrates contained retroperitoneal air; and admits patient for antibiotics, IV fluids, and serial abdominal examinations</li> </ul>
<p><b>Level 4</b> <i>Independently identifies indications and performs risk stratification</i></p> <p><i>Independently completes diagnostic and therapeutic lower endoscopy</i></p> <p><i>Independently anticipates, diagnoses, and manages complications</i></p>	<ul style="list-style-type: none"> <li>● Assesses a 51-year-old patient who presents with symptomatic hemorrhoids while on blood thinners. After consulting the patient’s primary care physician, recommends blood thinner use cessation and a colonoscopy</li> <li>● Performs colonoscopy with successful intubation of cecum and ileocecal valve; withdraws colonoscope appropriately and photographs relevant anatomic landmarks</li> <li>● Manages a patient who returns to the emergency room 12 hours after a colonoscopy complaining of severe right lower-quadrant pain; orders CT scan that demonstrates contained retroperitoneal air; and admits patient for antibiotics, IV fluids, and serial abdominal examinations</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant in guiding learners in completing diagnostic and therapeutic lower endoscopy</i></p>	<ul style="list-style-type: none"> <li>● Guides junior resident through a colonoscopy with successful intubation of cecum and ileocecal valve</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Case-based presentation</li> <li>● Direct observation</li> <li>● Multisource feedback</li> <li>● OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Patient Care 13: Crohn's Disease</b>	
<b>Overall Intent:</b> To diagnose, comprehensively manage, and treat Crohn's Disease	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Participates with development of a multidisciplinary medical or surgical management plan</i></p> <p><i>Assists with selection and completion of component steps of operations</i></p> <p><i>Assists with diagnoses and management of complications</i></p>	<ul style="list-style-type: none"> <li>● Observes attending: assess a 36-year-old patient with known terminal ileal Crohn's who presents with a second episode of bowel obstruction; order a CT scan that demonstrates terminal ileal stricture with evidence of acute and chronic inflammation; admit patient and obtain gastroenterology (GI) consult and recommend to steroids; and recommend patient to undergo ileocolic resection when patient does not improve</li> <li>● Observes and assists in an ileocolic resection with primary anastomosis</li> <li>● Observes attending: manage the patient who develops hypotension, abdominal pain, and fever six days after surgery; take patient back to the operating room for repair after a CT scan demonstrates a anastomotic leak; and</li> </ul>
<p><b>Level 2</b> <i>With direct supervision, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With direct supervision, selects and completes component steps of operations</i></p> <p><i>With direct supervision, anticipates, makes diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>● With direct supervision, assesses a 36-year-old patient with known terminal ileal Crohn's who presents with a second episode of bowel obstruction; orders a CT scan that demonstrates terminal ileal stricture with evidence of acute and chronic inflammation; admits patient and works with GI consult who recommends steroids; and recommends a ileocolic resection when the patient does not improve</li> <li>● Performs some parts of an ileocolic resection with primary anastomosis</li> <li>● With direct supervision, manages the patient who develops hypotension, abdominal pain, and fever six days after surgery; takes the patient back to the operating room for repair when a CT scan demonstrates an anastomotic leak</li> </ul>
<p><b>Level 3</b> <i>With minimal guidance, formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>With minimal guidance, selects and completes component steps of operations</i></p>	<ul style="list-style-type: none"> <li>● After conferring with attending, assesses a 36-year-old patient with known terminal ileal Crohn's who presents with a second episode of bowel obstruction; admits patient after a CT scan demonstrates terminal ileal stricture with evidence of acute and chronic inflammation; receives GI consult who recommends steroids; and recommends ileocolic resection when patient does not improve</li> <li>● Performs ileocolic resection with primary anastomosis with attending assistance</li> </ul>

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<p><i>With minimal guidance, anticipates, makes diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>• After conferring with attending, manages the patient who develops hypotension, abdominal pain, and fever six days after surgery; orders CT scan that demonstrates anastomotic leak; and with attending assistance, takes patient back to the operating room for repair</li> </ul>
<p><b>Level 4</b> <i>Independently formulates a differential diagnosis and multidisciplinary medical or surgical management plan</i></p> <p><i>Independently selects and completes component steps of operations</i></p> <p><i>Independently anticipates, makes diagnoses, and proficiently manages complications</i></p>	<ul style="list-style-type: none"> <li>• Assesses a 36-year-old patient with known terminal ileal Crohn’s who presents with a second episode of bowel obstruction; after a CT scan demonstrates terminal ileal stricture with evidence of acute and chronic inflammation, admits the patient and receives GI consult who recommends steroids; recommends ileocolic resection when patient does not improve</li> <li>• Performs an ileocolic resection with primary anastomosis</li> <li>• Manages patient who develops hypotension, abdominal pain, and fever six days after surgery; takes patient back to operating room for repair after a CT scan demonstrates an anastomotic leak</li> </ul>
<p><b>Level 5</b> <i>Demonstrates proficiency as a teaching assistant for operations</i></p>	<ul style="list-style-type: none"> <li>• Guides general surgery resident through an ileocolic resection with primary anastomosis performed</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>• Case-based presentation</li> <li>• Direct observation</li> <li>• Multisource feedback</li> <li>• OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>• Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>• American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>• ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Medical Knowledge 1: Anatomy, Pathophysiology, and Treatment</b> <b>Overall Intent:</b> To demonstrate progressive knowledge of pathophysiology and treatment of surgical conditions	
Milestones	Examples
<p><b>Level 1</b> <i>Demonstrates knowledge of pathophysiology and treatments of patients with common colorectal conditions</i></p> <p><i>Identifies normal colorectal anatomy</i></p>	<ul style="list-style-type: none"> <li>● Demonstrates knowledge of pathophysiology and treatment of patients with:               <ul style="list-style-type: none"> <li>○ diverticular disease</li> <li>○ fissure</li> <li>○ hemorrhoids</li> </ul> </li> <li>● Identifies the dentate line</li> </ul>
<p><b>Level 2</b> <i>Demonstrates knowledge of pathophysiology and treatments of patients with complex colorectal conditions</i></p> <p><i>Identifies variations in colorectal anatomy</i></p>	<ul style="list-style-type: none"> <li>● Demonstrates knowledge of pathophysiology and treatment of patients with:               <ul style="list-style-type: none"> <li>○ anal fistula</li> <li>○ colon cancer</li> <li>○ ulcerative colitis</li> </ul> </li> <li>● Identifies intersphincteric groove for a sphincterotomy</li> <li>● Identifies the plane between the left and right colonic mesentery and the retroperitoneum</li> </ul>
<p><b>Level 3</b> <i>Demonstrates knowledge of the impact of patient factors on pathophysiology and the treatment of patients with colorectal conditions</i></p> <p><i>Identifies normal anatomy during routine colorectal operations</i></p>	<ul style="list-style-type: none"> <li>● Demonstrates knowledge of the impact of the following patient factors on the pathophysiology and treatment of surgical conditions:               <ul style="list-style-type: none"> <li>○ constipation</li> <li>○ immunosuppression</li> <li>○ obesity</li> </ul> </li> <li>● Identifies the total mesorectal excision (TME) plane</li> <li>● Identifies vascular and lymphatic supply of the rectum</li> <li>● Identifies the ureter</li> </ul>
<p><b>Level 4</b> <i>Demonstrates comprehensive knowledge of the varying patterns of disease presentation and alternative and adjuvant treatments of patients with colorectal conditions</i></p> <p><i>Identifies variations in anatomy during complex colorectal operations</i></p>	<ul style="list-style-type: none"> <li>● Demonstrates knowledge of the pathophysiology and treatment of:               <ul style="list-style-type: none"> <li>○ T3 rectal cancer and neoadjuvant therapy</li> <li>○ trans-sphincteric anterior fistula in a woman and sphincter-preserving surgery</li> <li>○ ulcerative colitis patient on high dose immunosuppression requiring a staged operative approach</li> </ul> </li> <li>● Identifies altered ureteral course due to complex diverticulitis</li> <li>● Identifies ileo-colonic fistula from Crohn’s disease</li> </ul>
<p><b>Level 5</b> <i>Teaches varying patterns of disease presentation, and alternative and adjuvant treatments of patients with colorectal conditions</i></p>	<ul style="list-style-type: none"> <li>● Publishes retrospective series</li> <li>● Designs clinical trial</li> <li>● Contributes patients to clinical trials</li> <li>● Develops electronic educational module</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Direct observation</li> <li>● End-of-rotation evaluation</li> <li>● In-training examination (CARSITE)</li> </ul>

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	<ul style="list-style-type: none"> <li>● Mock orals</li> <li>● Multisource feedback</li> <li>● OSCE</li> </ul>
Curriculum Mapping	<ul style="list-style-type: none"> <li>●</li> </ul>
Notes or Resources	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Medical Knowledge 2: Critical Thinking for Diagnosis and Therapy</b> <b>Overall Intent:</b> To demonstrate the ability to engage in critical thinking for the comprehensive diagnosis and management of patients	
Milestones	Examples
<b>Level 1</b> Lists a differential diagnosis for common clinical presentations  <i>Lists therapeutic options for common clinical presentations</i>	<ul style="list-style-type: none"> <li>● When a 21-year-old male complains of abdominal distension, articulates possible diagnoses including constipation and irritable bowel syndrome (IBS)</li> <li>● Lists treatment options for above clinical presentations</li> </ul>
<b>Level 2</b> Provides a comprehensive differential diagnosis for a wide range of clinical presentations  <i>Explains advantages and drawbacks of standard therapeutic options</i>	<ul style="list-style-type: none"> <li>● When a 21-year-old male complains of abdominal distension, articulates a broad differential diagnosis including colonic inertia, pelvic outlet disorder, IBS, and Hirschsprung disease</li> <li>● Articulates the advantages of initial fiber and laxative trial compared to colonic resection for colonic inertia</li> </ul>
<b>Level 3</b> Provides a focused differential diagnosis based on individual patient presentation  <i>Justifies optimal therapeutic option based on individual patient presentation</i>	<ul style="list-style-type: none"> <li>● Identifies pelvic outlet obstruction and Hirschsprung disease as part of the differential diagnoses in a 21-year-old male complaining of abdominal distension, constipation since birth, and failure to pass meconium in the first 48 hours who had a contrast enema that revealed an enlarged sigmoid with a reduced caliber rectum.</li> <li>● Discusses the benefits and risks of anorectal manometry compared to full-thickness rectal biopsy to diagnose Hirschsprung disease</li> </ul>
<b>Level 4</b> Interprets anomalous presentations and rare disorders  <i>Adapts therapeutic choice to anomalous or rare patient presentations</i>	<ul style="list-style-type: none"> <li>● Diagnoses Hirschsprung disease in a 21-year-old male complaining of abdominal distension, constipation since birth, and failure to pass meconium in the first 48 hours, who had a contrast enema that revealed an enlarged sigmoid with a reduced caliber rectum</li> <li>● Discusses the surgical options of Hirschsprung disease including Duhamel pouch, Swenson, and Soave procedures</li> </ul>
<b>Level 5</b> Studies and reports challenging diagnostic presentations  <i>Creates new or modifies existing therapeutic options</i>	<ul style="list-style-type: none"> <li>● Completes a case report for an adult diagnosed with Hirschsprung disease</li> <li>● Modifies a Swenson procedure as a coloanal anastomosis for an adult Hirschsprung patient</li> </ul>
<b>Assessment Models or Tools</b>	<ul style="list-style-type: none"> <li>● Direct observation</li> <li>● E-learning module with assessment</li> <li>● Medical record (chart) audit</li> </ul>

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	<ul style="list-style-type: none"> <li>● Morbidity and mortality conference (M and M)</li> <li>● Portfolio</li> <li>● Reflection</li> <li>● Simulation</li> </ul>
Curriculum Mapping	<ul style="list-style-type: none"> <li>●</li> </ul>
Notes or Resources	<ul style="list-style-type: none"> <li>● Beck DE, Roberts PL, Saclarides TJ, et al. <i>The ASCRS Textbook of Colon and Rectal Surgery: Second Edition</i>. 2nd ed. Philadelphia, PA: Springer; 2011.</li> <li>● American Society of Colon and Rectal Surgeons (ASCRS). ColoRectal Educational Systems Template (CREST). <a href="https://fascrs.org/my-ascrs/education/crest">https://fascrs.org/my-ascrs/education/crest</a> 2020.</li> <li>● ASCRS. Colon and Rectal Surgery Education Program (CARSEP). <a href="https://fascrs.org/my-ascrs/education/carsep">https://fascrs.org/my-ascrs/education/carsep</a> 2020.</li> </ul>

<b>Systems-Based Practice 1: Patient Safety and Quality Improvement (QI)</b>	
<b>Overall Intent:</b> To engage in the analysis and management of patient safety events, including relevant communication with patients, families, and health care professionals; to conduct a QI project	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Demonstrates knowledge of common patient safety events</i></p> <p><i>Demonstrates knowledge of how to report patient safety events</i></p> <p><i>Demonstrates knowledge of basic quality improvement methodologies and metrics</i></p>	<ul style="list-style-type: none"> <li>● Demonstrates basic knowledge of patient safety events, reporting pathways, and QI strategies, but has not yet participated in such activities</li> </ul>
<p><b>Level 2</b> <i>Identifies system factors that lead to patient safety events</i></p> <p><i>Reports patient safety events through institutional reporting systems (simulated or actual)</i></p> <p><i>Describes local quality improvement initiatives (e.g., infection rate, hand hygiene, opioid use)</i></p>	<ul style="list-style-type: none"> <li>● Identifies and reports a patient safety issue (real or simulated), along with system factors contributing to that issue</li> <li>● Names improvement initiatives within the institution</li> </ul>
<p><b>Level 3</b> <i>Participates in analysis of patient safety events (simulated or actual)</i></p> <p><i>Participates in disclosure of patient safety events to patients and families (simulated or actual)</i></p> <p><i>Participates in local quality improvement initiatives</i></p>	<ul style="list-style-type: none"> <li>● Reviews a patient safety event and prepares for M and M presentations or by joins a root cause analysis group</li> <li>● Participates in discussions with patients and/or families about a patient safety event including appropriate disclosure</li> <li>● Participates in a QI project</li> </ul>
<p><b>Level 4</b> <i>Conducts analysis of patient safety events and offers error prevention strategies (simulated or actual)</i></p> <p><i>Discloses patient safety events to patients and families (simulated or actual)</i></p>	<ul style="list-style-type: none"> <li>● Collaborates with a team to lead the analysis of a patient safety event</li> <li>● Communicates with patients/families about those events in actual or simulated situations</li> </ul>

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<p><i>Demonstrates the skills required to identify, develop, implement, and analyze a quality improvement project</i></p>	<ul style="list-style-type: none"> <li>• Designs and initiates a QI project</li> </ul>
<p><b>Level 5</b> <i>Actively engages teams and processes to modify systems to prevent patient safety events</i></p> <p><i>Mentors others in the disclosure of patient safety events</i></p> <p><i>Creates, implements, and assesses quality improvement initiatives at the institutional or community level</i></p>	<ul style="list-style-type: none"> <li>• Assumes a leadership role at the departmental or institutional level for patient safety and/or QI initiatives</li> <li>• Initiate action or calls attention to the need for action regarding QI or a patient safety event</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>• Direct observation</li> <li>• E-learning module with assessment</li> <li>• Medical record (chart) audit</li> <li>• M and M</li> <li>• Portfolio</li> <li>• Reflection</li> <li>• Simulation</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>• Institute of Healthcare Improvement website and modules (<a href="http://www.ihl.org/Pages/default.aspx">http://www.ihl.org/Pages/default.aspx</a>) which includes multiple choice tests, reflective writing samples, and more</li> <li>• ACS Quality In-Training Initiative (QITI) program <a href="https://qiti.acsnsqip.org/qiti/">https://qiti.acsnsqip.org/qiti/</a></li> </ul>

<b>Systems-Based Practice 2: System Navigation for Patient-Centered Care</b>	
<b>Overall Intent:</b> To effectively navigate the health care system, including the interdisciplinary team and other care providers; to adapt care to a specific patient population to ensure high-quality patient outcomes	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Demonstrates knowledge of care coordination</i></p> <p><i>Performs safe and effective transitions of care/hand-offs in routine clinical situations</i></p>	<ul style="list-style-type: none"> <li>● Identifies the members of the interprofessional team and describes their roles</li> <li>● Lists the essential components of an effective hand-off of care</li> <li>● Identifies components of social determinants of health and how they impact the delivery of patient care</li> </ul>
<p><b>Level 2</b> <i>Coordinates multidisciplinary care of patients in routine clinical situations (e.g., dressing change)</i></p> <p><i>Performs safe and effective transitions of care/hand-offs in complex clinical situations</i></p>	<ul style="list-style-type: none"> <li>● Contacts interprofessional team members, such as social workers and consultants, but requires supervision to ensure all necessary referrals are made and resource needs are arranged</li> <li>● Manages hand-offs for intensive care unit (ICU) patients using a systems approach</li> <li>● Knows which patients are at high risk for poor health outcomes due to health literacy concerns, cost, language barrier, etc.</li> </ul>
<p><b>Level 3</b> <i>Coordinates and/or leads multidisciplinary care of patients in complex clinical situations (e.g., home parenteral nutrition, postoperative intravenous feeding, intensive care unit)</i></p> <p><i>Supervises safe and effective transitions of care/hand-offs</i></p>	<ul style="list-style-type: none"> <li>● For an advanced cancer patient, arranges for a nutritionist, occupational therapy/physical therapy, and follow-up appointments</li> <li>● Initiates the transfer of a patient from ICU to the surgical ward</li> </ul>
<p><b>Level 4</b> <i>Coordinates care of patients with barriers to health care access (e.g., trauma patient with no access to care) or other disparities in care</i></p> <p><i>Resolves conflicts in transitions of care between teams</i></p>	<ul style="list-style-type: none"> <li>● Directs care of a homeless person with rectal cancer including coordination with oncology and radiation oncology</li> <li>● Proactively calls the primary care provider for a patient with multiple comorbidities to ensure a discharged patient can get appropriate follow-up and treatment</li> <li>● Resolves conflicts between teams for operative prioritization in a patient with multiple comorbidities</li> </ul>
<p><b>Level 5</b> <i>Leads in the design and implementation of improvements to care coordination</i></p>	<ul style="list-style-type: none"> <li>● Takes a leadership role in designing and implementing changes to improve the care coordination process</li> <li>● Creates innovative hand-off tools</li> </ul>

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<p><i>Leads in the design and implementation of improvements to transitions of care</i></p>	<ul style="list-style-type: none"> <li>• Designs a social determinants of health curriculum to help others learn to identify local resources and barriers to care; effectively uses resources, such as telehealth, for proactive outreach to prevent emergency department visits or re-admission for high-risk populations</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>• Direct observation</li> <li>• Multisource feedback</li> <li>• Review of hand-off tools, use of checklists between units, from the operating room to peri-/post-operative care, or from the emergency department to an inpatient unit</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>•</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>• Agency for Healthcare Research and Quality. <a href="https://www.ahrq.gov/">https://www.ahrq.gov/</a></li> <li>• TeamSTEPS/I PASS</li> </ul>

<b>Systems-Based Practice 3: Physician Role in Health Care Systems</b>	
<b>Overall Intent:</b> To understand the surgeon’s role in the complex health care system and how to optimize the system to improve patient care and the health system’s performance	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Describes basic health payment systems, including government, private, public, and uninsured care, as well as different practice models</i></p> <p><i>Describes the key components of documentation for billing and coding</i></p>	<ul style="list-style-type: none"> <li>● Describes payment systems, such as Medicare, Medicaid, the Veterans Affairs (VA), and commercial third-party payers, and practice models (e.g., patient-centered medical home, Accountable Care Organization)</li> <li>● Describes elements necessary for appropriate coding in compliance with regulations</li> </ul>
<p><b>Level 2</b> <i>Describes how working within the health care system impacts patient care</i></p> <p><i>Documents the key components required for billing and coding</i></p>	<ul style="list-style-type: none"> <li>● Understands how improving patient satisfaction improves patient adherence and remuneration to the health system</li> <li>● Applies knowledge of health plan features, including formularies and network requirements, in patient care situations</li> <li>● Completes a note following a routine patient encounter with appropriate coding and billing elements in compliance with regulations</li> </ul>
<p><b>Level 3</b> <i>Analyzes how personal practice affects the system (e.g., length of stay, readmission rates, clinical efficiency)</i></p> <p><i>Describes basic elements needed to transition to practice (e.g., contract negotiations, malpractice insurance, government regulation, compliance)</i></p>	<ul style="list-style-type: none"> <li>● Understands, accesses, and analyzes individual performance data; relevant data may include:                             <ul style="list-style-type: none"> <li>○ Evaluates individual leak rates or lymph node harvest in cancer patients</li> <li>○ National Surgical Quality Improvement Program data</li> <li>○ Patient satisfaction data</li> <li>○ Procedure-specific cost/charge data</li> </ul> </li> <li>● Understands the need for of contract negotiations</li> </ul>
<p><b>Level 4</b> <i>Uses shared decision making in patient care, taking into consideration costs to the patient</i></p> <p><i>Identifies resources and effectively plans for transition to practice (e.g., information technology, legal, billing and coding, financial, personnel)</i></p>	<ul style="list-style-type: none"> <li>● Works collaboratively with patients to choose ileal pouch-anal anastomosis versus end ileostomy in ulcerative colitis patients, taking into account patient choice, lifestyle, and quality of life</li> <li>● Works collaboratively with patients to choose surgery versus medical management of irritable bowel disease</li> <li>● Applies knowledge of contract negotiations when searching for a job</li> </ul>

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<p><b>Level 5</b> <i>Advocates or leads change to enhance systems for high-value, efficient, and effective patient care</i></p> <p><i>Participates in advocacy activities for health policy</i></p>	<ul style="list-style-type: none"> <li>● Develops processes to decrease opioid prescribing for one or more clinical services</li> <li>● Works with community or professional organizations to advocate for colorectal cancer screening</li> <li>● Participates in initiatives for underserved populations</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Direct observation</li> <li>● Medical record (chart) audit</li> <li>● Multiple choice test</li> <li>● Multisource feedback</li> <li>● Quality Improvement project</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Agency for Healthcare Research and Quality. The Challenges of Measuring Physician Quality. <a href="https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/challenges.html">https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/challenges.html</a> 2016.</li> <li>● Agency for Healthcare Research and Quality. Major physician performance sets. <a href="https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/measurementssets.html">https://www.ahrq.gov/professionals/quality-patient-safety/talkingquality/create/physician/measurementssets.html</a> 2018.</li> <li>● The Kaiser Family Foundation. Topics include health reform, health costs, Medicare, Medicare, private insurance, uninsured: <a href="http://www.kff.org">www.kff.org</a> and <a href="http://kff.org/health-reform/">http://kff.org/health-reform/</a> 2019.</li> <li>● The National Academy for Medicine, Dzau VJ, McClellan M, Burke S, et al. Vital directions for health and health care: priorities from a National Academy of Medicine Initiative. <a href="https://nam.edu/vital-directions-for-health-health-care-priorities-from-a-national-academy-of-medicine-initiative/">https://nam.edu/vital-directions-for-health-health-care-priorities-from-a-national-academy-of-medicine-initiative/</a> March 21, 2017.</li> <li>● The National Academy for Medicine (formerly the Institute of Medicine). Vital directions for health and health care: a policy initiative of the National Academy for Medicine. <a href="https://nam.edu/initiatives/vital-directions-for-health-and-health-care/">https://nam.edu/initiatives/vital-directions-for-health-and-health-care/</a> 2018.</li> <li>● The Commonwealth Fund. Health system data center. 2017. <a href="http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1">http://datacenter.commonwealthfund.org/?_ga=2.110888517.1505146611.1495417431-1811932185.1495417431#ind=1/sc=1</a></li> <li>● The Commonwealth Fun. Health reform resource center: <a href="http://www.commonwealthfund.org/interactives-and-data/health-reform-resource-center#/f:@facasubcategoriesfacet63677=[Individual%20and%20Employer%20Responsibility]">http://www.commonwealthfund.org/interactives-and-data/health-reform-resource-center#/f:@facasubcategoriesfacet63677=[Individual%20and%20Employer%20Responsibility]</a></li> </ul>

<b>Practice-Based Learning and Improvement 1: Evidence-Based and Informed Practice</b> <b>Overall Intent:</b> To incorporate evidence and patient values into clinical practice	
Milestones	Examples
<b>Level 1</b> <i>Demonstrates how to access and use available evidence, and incorporate patient preferences and values into the care of patients with routine conditions</i>	<ul style="list-style-type: none"> <li>● Performs a literature review of non-operative management of diverticulitis for a patient who does not desire an operation</li> </ul>
<b>Level 2</b> <i>Articulates clinical questions and elicits patient preferences and values in order to guide evidence-based care</i>	<ul style="list-style-type: none"> <li>● Performs a targeted literature review of outcomes for different treatment approaches for a patient with Hinchey class 3 diverticulitis voices a preference against an ostomy</li> </ul>
<b>Level 3</b> <i>Locates and applies the best available evidence, integrated with patient preference, to the care of patients with complex conditions</i>	<ul style="list-style-type: none"> <li>● Performs a literature review of neoadjuvant management of rectal cancer for a patient with stage II-III disease</li> <li>● Applies evidence-based clinical guidelines to consider standard neoadjuvant chemoradiation, induction neoadjuvant chemoradiation, or consolidation neoadjuvant chemoradiation</li> </ul>
<b>Level 4</b> <i>Critically appraises and applies evidence, even in the face of uncertain and/or conflicting evidence, to guide care, tailored to the individual patient</i>	<ul style="list-style-type: none"> <li>● Presents a series of research articles on the controversial topic of steroid use in the management of sepsis</li> <li>● Presents a review of available evidence to the tumor board to discuss the modality of endoscopic mucosal resection and endoscopic submucosal resection in a patient with a malignant colorectal polyp</li> </ul>
<b>Level 5</b> <i>Coaches others to critically appraise and apply evidence for patients with complex conditions; and/or participates in the development of guidelines</i>	<ul style="list-style-type: none"> <li>● Presents a review of available evidence to hospital guidelines committee to advocate for the use of thromboelastogram in the management of lower gastrointestinal bleed</li> </ul>
<b>Assessment Models or Tools</b>	<ul style="list-style-type: none"> <li>● Direct observation</li> <li>● E-learning module with assessment</li> <li>● Multisource feedback</li> <li>● M and M conference</li> <li>● Portfolio</li> <li>● Reflection</li> </ul>
<b>Curriculum Mapping</b>	<ul style="list-style-type: none"> <li>●</li> </ul>
<b>Notes or Resources</b>	<ul style="list-style-type: none"> <li>● The ABIM Foundation. Choosing Wisely. <a href="http://www.choosingwisely.org/">http://www.choosingwisely.org/</a> 2019.</li> </ul>

- Johns Hopkins University Guided Care. Comprehensive primary care for complex patients. <http://www.guidedcare.org/module-listing.asp>
- American College of Physicians. High value care. <https://hvc.acponline.org/>
- Costs of Care <http://www.costsofcare.org/>
- Dartmouth-Hitchcock. Center for shared decision making. [https://med.dartmouth.hitchcock.org/csdm\\_toolkits.html](https://med.dartmouth.hitchcock.org/csdm_toolkits.html)

<b>Practice-Based Learning and Improvement 2: Reflective Practice and Commitment to Personal Growth</b> <b>Overall Intent:</b> To become a lifelong learner and integrate outcomes into practice and develop clear objectives and goals for improvement in some form of a learning plan	
Milestones	Examples
<b>Level 1</b> <i>Establishes goals for personal and professional development</i>	<ul style="list-style-type: none"> <li>• Identifies areas for improvement</li> <li>• Seeks ways to improve</li> </ul>
<b>Level 2</b> <i>Identifies opportunities for performance improvement; designs a learning plan</i>	<ul style="list-style-type: none"> <li>• Recognizes issues with minimally invasive techniques and schedules more time in the skills lab</li> <li>• Identifies CARSITE scores below expectations and creates a study plan</li> </ul>
<b>Level 3</b> <i>Integrates performance feedback and practice data to develop and implement a learning plan</i>	<ul style="list-style-type: none"> <li>• Uses skills lab with metrics to improve identified technical skills deficits and seeks additional feedback</li> <li>• Meets with a mentor regularly in preparation for the certifying exam</li> </ul>
<b>Level 4</b> <i>Revises learning plan based on performance data</i>	<ul style="list-style-type: none"> <li>• Identifies new area for improvement if previous plan is completed successfully, such as a different anastomotic technique or improving cross cultural communication</li> <li>• Improves minimally invasive skills but continues to modify current techniques or practice additional techniques based on video review and directed feedback</li> </ul>
<b>Level 5</b> <i>Coaches others in the design and implementation of learning plans</i>	<ul style="list-style-type: none"> <li>• Leads areas for improvement sessions and coaches general surgery residents to modify study techniques to improve ABSITE scores</li> <li>• Independently identifies and coaches residents who need technical skills improvement</li> </ul>
Assessment Models or Tools	<ul style="list-style-type: none"> <li>• Direct observation</li> <li>• E-learning module with assessment</li> <li>• Mentor/coach evaluation of learning plan</li> <li>• Multisource feedback</li> <li>• Portfolio</li> <li>• Reflection</li> <li>• Simulation</li> </ul>
Curriculum Mapping	<ul style="list-style-type: none"> <li>•</li> </ul>
Notes or Resources	<ul style="list-style-type: none"> <li>• Hojat M, Veloski JJ, Gonnella JS. Measurement and correlates of physicians' lifelong learning. <i>Acad Med.</i> 2009. Aug;84(8):1066-74. <i>Contains a validated questionnaire about physician lifelong learning.</i></li> </ul>

- Lockspeiser TM, Schmitter PA, Lane JL et al. Assessing Fellows' Written Learning Goals and Goal Writing Skill: Validity Evidence for the Learning Goal Scoring Rubric. *Academic Medicine* 2013. 88 (10)
- Burke AE, Benson B, Englander R, Carraccio C, Hicks PJ. Domain of competence: practice-based learning and improvement. *Acad Pediatr.* 2014;14: S38-S54.

<b>Professionalism 1: Ethical Principles</b>	
<b>Overall Intent:</b> To recognize basic ethical principles and applies in daily practice, and use appropriate resources for managing ethical dilemmas	
<b>Milestones</b>	<b>Examples</b>
<b>Level 1</b> <i>Demonstrates knowledge of the ethical principles underlying informed consent, surrogate decision making, advance directives, confidentiality, error disclosure, stewardship of limited resources, and related topics</i>	<ul style="list-style-type: none"> <li>• Discusses the basic principles underlying ethics (e.g., beneficence, nonmaleficence, justice, autonomy) and professionalism (e.g., professional values and commitments), and how they apply in various situations (e.g., informed consent process)</li> <li>• Lists elements of informed consent for procedures</li> </ul>
<b>Level 2</b> <i>Analyzes straightforward situations using ethical principles</i>	<ul style="list-style-type: none"> <li>• Identifies surrogate for impaired patients</li> <li>• Maintains patient confidentiality in public situations</li> </ul>
<b>Level 3</b> <i>Recognizes need to seek help in managing and resolving complex ethical situations</i>	<ul style="list-style-type: none"> <li>• Obtains institutional guidance on obtaining consent for blood transfusion in pediatric Jehovah’s Witness patient</li> <li>• Analyzes difficult real or hypothetical ethics case scenarios or situations, recognizes own limitations</li> </ul>
<b>Level 4</b> <i>Recognizes and uses appropriate resources for managing and resolving ethical dilemmas, as needed (e.g., ethics consultations, literature review, risk management/legal consultation)</i>	<ul style="list-style-type: none"> <li>• Manages a near miss or sentinel event (e.g., getting risk management, legal consultations)</li> <li>• Identifies ethical dilemmas of performing procedures in patients who are potential organ donors</li> <li>• Recognizes and manages situations of medical futility</li> </ul>
<b>Level 5</b> <i>Identifies and seeks to address system-level factors that induce or exacerbate ethical problems or impede their resolution</i>	<ul style="list-style-type: none"> <li>• Identifies and seeks to address system-wide factors or barriers to promoting a culture of ethical behavior through participation in a work group, committee, or task force (e.g., ethics committee or an ethics subcommittee, risk management committee, root cause analysis review, patient safety or satisfaction committee, professionalism work group, Institutional Review Board, resident grievance committee)</li> </ul>
Assessment Models or Tools	<ul style="list-style-type: none"> <li>• Direct observation</li> <li>• Global evaluation</li> <li>• Multisource feedback</li> <li>• Oral or written self-reflection (e.g., of a personal or observed lapse, ethical dilemma, or systems-level factors)</li> <li>• OSCE</li> <li>• Simulation</li> </ul>
Curriculum Mapping	<ul style="list-style-type: none"> <li>•</li> </ul>
Notes or Resources	<ul style="list-style-type: none"> <li>• American Medical Association Code of Ethics. <a href="https://www.ama-assn.org/delivering-care/ama-code-medical-ethics-2019">https://www.ama-assn.org/delivering-care/ama-code-medical-ethics-2019</a>.</li> <li>• American College of Surgeons. Code of Professional Conduct <a href="https://www.facs.org/about-acs/statements/stonprin#code-2003">https://www.facs.org/about-acs/statements/stonprin#code-2003</a>.</li> </ul>

- Ethical Issues in Clinical Surgery (ACS)
- SCORE Modules

<b>Professionalism 2: Professional Behavior and Accountability</b>	
<b>Overall Intent:</b> To take responsibility for one’s actions and the impact on patients and other members of the health care team and recognize limits of one’s own knowledge and skill	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Completes patient care tasks and responsibilities, identifies potential barriers, and describes strategies for ensuring timely task completion</i></p> <p><i>Describes when and how to appropriately report lapses in professional behavior</i></p> <p><i>Recognizes limits in the knowledge/skills of self and seeks help</i></p>	<ul style="list-style-type: none"> <li>● Completes routine discharge process</li> <li>● Sees transfer patient and completes admit orders in a timely manner</li>   <li>● Knows how to report unprofessional behavior at their institution</li>   <li>● Asks for help in incision and drainage of a rectal abscess if uncomfortable with procedure</li> </ul>
<p><b>Level 2</b> <i>Performs patient care tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations</i></p> <p><i>Takes responsibility for his or her own professional behavior</i></p> <p><i>Recognizes limits in the knowledge/skills of team and seeks help</i></p>	<ul style="list-style-type: none"> <li>● Consents patient and schedules right colectomy</li>   <li>● Apologizes to team member(s) for unprofessional behavior without prompting</li>   <li>● Recognizes inadequate glycemic control despite multiple adjustments of medication regimen and requests diabetes management consult</li> </ul>
<p><b>Level 3</b> <i>Performs patient care tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations</i></p> <p><i>Demonstrates professional behavior in complex or stressful situations</i></p> <p><i>Exhibits appropriate confidence and self-awareness of limits in knowledge/skills</i></p>	<ul style="list-style-type: none"> <li>● Counsels angry patient with complaints about care team while having multiple other clinical responsibilities</li>   <li>● Asks for assistance during operative procedure after reaching one’s own limits of understanding or failing to progress</li>   <li>● Asks for help leading family meeting where withdrawal of life-sustaining treatment will be discussed</li> </ul>
<p><b>Level 4</b> <i>Recognizes situations that may impact others’ ability to complete patient-care tasks and responsibilities in a timely manner</i></p>	<ul style="list-style-type: none"> <li>● Adjusts junior resident schedule to allow work-hour compliance</li> <li>● Encourages junior residents to use well-being days</li> </ul>

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<p><i>Intervenes to prevent and correct lapses in professional behavior in self and others</i></p> <p><i>Aids junior learners in recognition of limits in knowledge/skills</i></p>	<ul style="list-style-type: none"> <li>● Identifies fatigue in a team member and suggests they take a nap</li> <li>● Reports student harassment to appropriate institutional official</li> <li>● Puts on gown and gloves to help junior resident struggling to complete endoscopy</li> </ul>
<p><b>Level 5</b> <i>Develops systems to enhance other's ability to efficiently complete patient-care tasks and responsibilities</i></p> <p><i>Coaches others when their behavior fails to meet professional expectations</i></p>	<ul style="list-style-type: none"> <li>● Sets up a meeting with the nurse manager to streamline patient discharges</li> <li>● Coaches others on how to avoid conflict with team members</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Compliance with deadlines and timelines</li> <li>● Direct observation</li> <li>● Multisource feedback</li> <li>● Self-evaluations</li> <li>● Simulation</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● American College of Surgeons. Code of Professional Conduct <a href="https://www.facs.org/about-acs/statements/stonprin#code 2003">https://www.facs.org/about-acs/statements/stonprin#code 2003</a>.</li> <li>● Code of conduct from institutional manual</li> </ul>

<b>Professionalism 3: Administrative Tasks</b>	
<b>Overall Intent:</b> To develop the skills and behaviors required to complete the administrative duties of being a surgeon, such as clinical work and education hours, case logs, evaluations, discharge summaries, operative reports, daily progress notes, and conference/meeting attendance	
<b>Milestones</b>	<b>Examples</b>
<b>Level 1</b> <i>Takes responsibility for failure to complete administrative tasks and responsibilities, identifies potential contributing factors, and describes strategies for ensuring timely task completion in the future</i>	<ul style="list-style-type: none"> <li>• Acknowledges a failure to allocate time specifically for case logs and discharge summaries</li> <li>• Creates a plan to log all cases at the end of each day</li> </ul>
<b>Level 2</b> <i>Performs administrative tasks and responsibilities in a timely manner with appropriate attention to detail in routine situations</i>	<ul style="list-style-type: none"> <li>• Logs clinical and educational work hours and case logs regularly</li> <li>• Completes operative reports, progress notes, and discharge summaries promptly</li> </ul>
<b>Level 3</b> <i>Performs administrative tasks and responsibilities in a timely manner with appropriate attention to detail in complex or stressful situations</i>	<ul style="list-style-type: none"> <li>• When on a busy service, continues to log clinical and educational work hours and cases without interruption</li> <li>• Completes evaluations promptly even when having multiple other clinical and administrative responsibilities</li> </ul>
<b>Level 4</b> <i>Recognizes situations that may impact others' ability to complete administrative tasks and responsibilities in a timely manner</i>	<ul style="list-style-type: none"> <li>• After planning to attend a family wedding, makes the appropriate changes in the call schedule to avoid service interruptions</li> </ul>
<b>Level 5</b> <i>Develops systems to enhance other's ability to efficiently complete administrative tasks and responsibilities</i>	<ul style="list-style-type: none"> <li>• Works with the hospital information technology department to develop a resident shared file directory to facilitate resident completion of administrative requirements such as call schedule distribution and transition of patient care documents</li> </ul>
Assessment Models or Tools	<ul style="list-style-type: none"> <li>• Case logs</li> <li>• Clinical and educational work hours logs</li> <li>• Conference attendance logs</li> <li>• Evaluation compliance</li> <li>• Program director's reports documenting compliance with administrative requirements</li> </ul>
Curriculum Mapping	<ul style="list-style-type: none"> <li>•</li> </ul>
Notes or Resources	<ul style="list-style-type: none"> <li>• ACGME Program Requirements for Graduate Medical Education in Colon and Rectal Surgery <a href="https://www.acgme.org/Specialties/Program-Requirements-and-FAQs-and-Applications/pfcetid/4/Colon%20and%20Rectal%20Surgery">https://www.acgme.org/Specialties/Program-Requirements-and-FAQs-and-Applications/pfcetid/4/Colon%20and%20Rectal%20Surgery</a></li> </ul>

<b>Professionalism 4: Self-Awareness and Help-Seeking</b> <b>Overall Intent:</b> To identify, use, manage, improve, and seek help for personal and professional well-being for self and others	
Milestones	Examples
<p><b>Level 1</b> <i>Identifies the institutional resources available to manage personal, physical, and emotional health (e.g., acute and chronic disease, substance abuse, and mental health problems)</i></p> <p><i>Demonstrates knowledge of the principles of physician well-being and fatigue mitigation</i></p>	<ul style="list-style-type: none"> <li>● Completes institutional resources related to fatigue management</li> <li>● Knows how to access an institutional crisis line</li>   <li>● Requests time off for a medical or dental appointment</li> </ul>
<p><b>Level 2</b> <i>Monitors own personal health and wellness and appropriately mitigates fatigue and/or stress</i></p> <p><i>Manages own time and assures fitness for duty</i></p>	<ul style="list-style-type: none"> <li>● Recognizes when they are approaching clinical and educational work hour limits and develops a plan to ensure both compliance and fatigue mitigation</li>   <li>● Develops a regular exercise program</li> </ul>
<p><b>Level 3</b> <i>Promotes healthy habits and creates an emotionally healthy environment for self and colleagues</i></p> <p><i>Models appropriate management of personal health issues, fatigue, and stress</i></p>	<ul style="list-style-type: none"> <li>● Meets with wellness coach/champion to develop a wellness plan</li> <li>● Ensures junior residents leave the hospital at an appropriate time</li>   <li>● Stays home when ill and communicates with team</li> </ul>
<p><b>Level 4</b> <i>Recognizes and appropriately addresses signs and symptoms of burnout, depression, suicidal ideation, potential for violence, and/or substance abuse in self and other members of the health care team</i></p> <p><i>Proactively modifies schedules or intervenes in other ways to assure that those caregivers under his or her supervision maintain personal wellness and do not compromise patient safety (e.g., requires naps, counsels, refers to services, reports to program director)</i></p>	<ul style="list-style-type: none"> <li>● Brings concerns about other team members to the program director</li>   <li>● Arranges for a resident to take a day off if they are fatigued and/or approaching clinical and educational work hour limits</li> </ul>

<p><b>Level 5</b> <i>Coaches others when emotional responses or limitations in knowledge/skills do not meet professional expectations</i></p>	<ul style="list-style-type: none"> <li>● Leads a mindfulness program with residents</li> <li>● Organizes program activities to improve well-being</li> <li>● Monitors wellness landscape and suggests new wellness ideas</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Direct observation</li> <li>● Group interview or discussions for team activities</li> <li>● Individual interview</li> <li>● Institutional online training modules</li> <li>● Participation in institutional well-being programs</li> <li>● Self-assessment and personal learning plan</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● This subcompetency is not intended to evaluate a fellow’s well-being, but to ensure each fellow has the fundamental knowledge of factors that impact well-being, the mechanisms by which those factors impact well-being, and available resources and tools to improve well-being.</li> <li>● ACGME. “Well-Being Tools and Resources.” <a href="https://dl.acgme.org/pages/well-being-toolsresources">https://dl.acgme.org/pages/well-being-toolsresources</a>. Accessed 2022.</li> <li>● American Board of Pediatrics. “Entrustable Professional Activities for Subspecialties.” <a href="https://www.abp.org/content/entrustable-professional-activities-subspecialties">https://www.abp.org/content/entrustable-professional-activities-subspecialties</a>. Accessed 2022.</li> <li>● American Board of Pediatrics. “Medical Professionalism.” <a href="https://www.abp.org/content/medical-professionalism">https://www.abp.org/content/medical-professionalism</a>. Accessed 2020.</li> <li>● Hicks, Patricia J., Daniel Schumacher, Susan Guralnick, Carol Carraccio, and Ann E. Burke. 2014. “Domain of Competence: Personal and Professional Development.” <i>Academic Pediatrics</i> 14(2 Suppl): S80-97. <a href="https://www.sciencedirect.com/science/article/abs/pii/S187628591300332X">https://www.sciencedirect.com/science/article/abs/pii/S187628591300332X</a>.</li> <li>● ACGME. “Well-Being Tools and Resources.” <a href="https://dl.acgme.org/pages/well-being-tools-resources">https://dl.acgme.org/pages/well-being-tools-resources</a></li> <li>● National Academy of Medicine. Clinician resilience and well-being <a href="https://nam.edu/initiatives/clinician-resilience-and-well-being/">https://nam.edu/initiatives/clinician-resilience-and-well-being/</a></li> <li>● Local resources, including Employee Assistance programs</li> </ul>

<b>Interpersonal and Communication Skills 1: Patient and Family-Centered Communication</b>	
<b>Overall Intent:</b> To deliberately use language and behaviors to form a therapeutic relationship with a patient and his or her family; to identify communication barriers, including self-reflection on personal biases, and minimize them in the doctor-patient relationship; organize and lead communication around shared decision-making	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Communicates with patients and their families in an understandable and respectful manner</i></p> <p><i>Provides timely updates to patients and families</i></p>	<ul style="list-style-type: none"> <li>● Self-monitors and controls tone, non-verbal responses, and language and asks questions to invite the patient’s participation</li> <li>● Accurately communicates their role in the health care system to patients and families, and identifies common communication barriers (e.g., loss of hearing, language, aphasia) in patient and family encounters</li> <li>● Communicates with patients and patients’ families on changing conditions</li> <li>● Provides patients with routine information, such as abdominal x-ray obtained earlier in the day is normal, hematocrit is stable, etc.</li> </ul>
<p><b>Level 2</b> <i>Customizes communication, in the setting of personal biases and barriers (e.g., age, literacy, cognitive disabilities, cultural differences) with patients and families</i></p> <p><i>Actively listens to patients and families to elicit patient preferences and expectations</i></p>	<ul style="list-style-type: none"> <li>● Identifies complex communication barriers (e.g., culture, religious beliefs, health literacy) in patient and family encounters</li> <li>● Leads a discussion about acute post-operative pain management with the patient and the family, reassessing the patient’s and family’s understanding and anxiety</li> </ul>
<p><b>Level 3</b> <i>Delivers complex and difficult information to patients and families</i></p> <p><i>Uses shared decision making to make a personalized care plan</i></p>	<ul style="list-style-type: none"> <li>● Establishes and maintains a therapeutic relationship with a challenging patient (e.g., angry, non-compliant, substance seeking, mentally challenged)</li> <li>● Attempts to mitigate identified communication barriers, including reflection on implicit biases (e.g., preconceived ideas about patients of certain race or weight) when prompted</li> <li>● Acknowledges uncertainty in a patient’s medical complexity and prognosis</li> <li>● Independently engages in shared decision making with the patient and family, including a recommended acute pain management plan to align a patient’s unique goals with treatment options</li> </ul>
<p><b>Level 4</b> <i>Facilitates difficult discussions specific to patient and family conferences, (e.g., end-of-life, explaining complications, therapeutic uncertainty)</i></p> <p><i>Effectively negotiates and manages conflict among patients, families, and the health care team</i></p>	<ul style="list-style-type: none"> <li>● Facilitates family conference when family members disagree about the goals of care</li> <li>● Negotiates care management plan when interventions will be medically ineffective</li> </ul>

<p><b>Level 5</b> <i>Coaches others in the facilitation of crucial conversations</i></p> <p><i>Coaches others in conflict resolution</i></p>	<ul style="list-style-type: none"> <li>● Mentors/coaches and supports colleagues in self-awareness and reflection to improve therapeutic relationships with patients</li> <li>● Creates a curriculum to teach conflict resolution in family conferences</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Direct observation</li> <li>● Kalamazoo Essential Elements Communication Checklist (Adapted)</li> <li>● Mini-clinical evaluation exercise</li> <li>● Multisource feedback</li> <li>● Self-assessment including self-reflection exercises</li> <li>● Standardized patients or structured case discussions</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Laidlaw A, Hart J. Communication skills: an essential component of medical curricula. Part I: Assessment of clinical communication: AMEE Guide No. 51. <i>Med Teach</i>. 2011;33(1):6-8.</li> <li>● Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. <i>Acad Med</i>. 2001;76:390-393.</li> <li>● Makoul G. The SEGUE Framework for teaching and assessing communication skills. <i>Patient Educ Couns</i>. 2001;45(1):23-34.</li> <li>● O'Sullivan P, Chao S, Russell M, Levine S, Fabiny A. Development and implementation of an objective structured clinical examination to provide formative feedback on communication and interpersonal skills in geriatric training. <i>J Am Geriatr Soc</i>. 2008;56(9):1730-5.</li> <li>● Symons AB, Swanson A, McGuigan D, Orrange S, Akl EA. A tool for self-assessment of communication skills and professionalism in fellows. <i>BMC Med Educ</i>. 2009; 9:1.</li> <li>● American Academy of Hospice and Palliative Medicine: Hospice and Palliative Medicine Competencies Project. <a href="http://aahpm.org/fellowships/competencies#competencies-toolkit">http://aahpm.org/fellowships/competencies#competencies-toolkit</a> accessed June 6, 2017.</li> <li>● TeamSTEPPS</li> <li>● SCORE modules</li> <li>● American College of Surgeons. Communicating with patients about surgical errors and adverse outcomes. <a href="https://web4.facs.org/ebusiness/ProductCatalog/product.aspx?ID=229">https://web4.facs.org/ebusiness/ProductCatalog/product.aspx?ID=229</a></li> <li>● American College of Surgeons. Disclosing surgical error vignettes. <a href="https://web4.facs.org/ebusiness/ProductCatalog/product.aspx?ID=157">https://web4.facs.org/ebusiness/ProductCatalog/product.aspx?ID=157</a></li> <li>● Baile WF, Buckman R, Lenzi R, et al. SPIKES - a six-step protocol for delivering bad news: application to the patient with cancer. <i>Oncologist</i>. 2000;5:302-311.</li> </ul>

<b>Interpersonal and Communication Skills 2: Interprofessional and Team Communication</b>	
<b>Overall Intent:</b> To effectively communicate with the health care team, including with consultants, in both straightforward and complex situations	
<b>Milestones</b>	<b>Examples</b>
<p><b>Level 1</b> <i>Respectfully requests and receives a consultation</i></p> <p><i>Uses language that values all members of the health care team</i></p>	<ul style="list-style-type: none"> <li>● Allows others to express their opinions</li> <li>● Politely accepts requests for consult in the emergency department and thanks the department for the consult</li> <li>● Consistently uses inclusive language</li> </ul>
<p><b>Level 2</b> <i>Clearly and concisely requests and responds to a consultation</i></p> <p><i>Communicates information effectively with all health care team members</i></p> <p><i>Solicits feedback on performance as a member of the health care team</i></p>	<ul style="list-style-type: none"> <li>● Informs consult service of the recommendation</li> <li>● Asks gastroenterology service for help in medical management of patient with Crohn's flare</li> <li>● Specifies urgency of consult request</li> </ul>
<p><b>Level 3</b> <i>Verifies understanding of recommendations when providing or receiving a consultation</i></p> <p><i>Uses active listening to adapt communication style to fit team needs</i></p> <p><i>Communicates concerns and provides constructive feedback to peers and learners</i></p>	<ul style="list-style-type: none"> <li>● Uses closed-loop communications and restating to verify emergency department understands plan for admission to surgical service and operation</li> <li>● Demonstrates active listening by asking team members about their concerns and questions during patient rounds</li> <li>● Respectfully provides feedback to medical students about their presentations during morning rounds</li> </ul>
<p><b>Level 4</b> <i>Coordinates recommendations from different members of the health care team to optimize patient care, resolving conflict when needed</i></p> <p><i>Maintains effective communication in crisis situation</i></p> <p><i>Communicates constructive feedback to superiors</i></p>	<ul style="list-style-type: none"> <li>● Leads a complex rapid-response, using closed-loop communication, to ensure each patient care task is assigned and completed</li> <li>● Provides feedback to faculty members when expectations are not clear (e.g., coverage in clinic or operating room)</li> </ul>

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<p><b>Level 5</b> <i>Coaches flexible communication strategies that value input from all health care team members</i></p> <p><i>Facilitates regular health care team-based feedback in complex situations</i></p>	<ul style="list-style-type: none"> <li>● Mentors/coaches junior resident to improve communication skills within the team</li> <li>● Leads a team debrief after a patient death</li> </ul>
<p>Assessment Models or Tools</p>	<ul style="list-style-type: none"> <li>● Direct observation</li> <li>● Multisource feedback</li> <li>● Simulated encounters</li> <li>● Standardized patient encounters or OSCE</li> </ul>
<p>Curriculum Mapping</p>	<ul style="list-style-type: none"> <li>●</li> </ul>
<p>Notes or Resources</p>	<ul style="list-style-type: none"> <li>● Mills P, Neily J, Dunn E. Teamwork and communication in surgical teams: implications for patient safety. <i>JACS</i>. 206;107-112:2008</li> <li>● Team training courses</li> <li>● Non-technical training skills for surgeons. NOTSS. <a href="https://www.notss.org">https://www.notss.org</a></li> </ul>

<b>Interpersonal and Communication Skills 3: Communication within Health Care Systems</b> <b>Overall Intent:</b> To develop skills and behaviors that allows the resident to communicate effectively within the context of a health care system	
Milestones	Examples
<b>Level 1</b> <i>Accurately records information in the patient record, including appropriate use of documentation templates</i>	<ul style="list-style-type: none"> <li>● Fills in all elements of a documentation template with the most up-to-date information available</li> </ul>
<b>Level 2</b> <i>Demonstrates efficient use of electronic medical record to communicate with the health care team</i>	<ul style="list-style-type: none"> <li>● Creates accurate, original notes that do not contain extraneous information such as verbatim transcriptions of radiology reports, and concisely summarizes the assessment and plan</li> </ul>
<b>Level 3</b> <i>Integrates and synthesizes all relevant data from outside systems and prior encounters into the health record</i>	<ul style="list-style-type: none"> <li>● Collects information from outside health care systems and then accurately and succinctly incorporates that information into the electronic health record</li> </ul>
<b>Level 4</b> <i>Appropriately selects method and urgency of communication based on context</i>	<ul style="list-style-type: none"> <li>● Calls the attending in the middle of the night when the patient has an emergent change in clinical status</li> <li>● Texts attending with change in operating room schedule</li> </ul>
<b>Level 5</b> <i>Guides departmental or institutional communication around policies and procedures</i>	<ul style="list-style-type: none"> <li>● Mentors/coaches colleagues how to improve clinical notes, including terminology, billing compliance, conciseness, and inclusion of all required elements</li> <li>● Creates a policy around HIPAA compliant electronic communication (e.g., texting)</li> </ul>
Assessment Models or Tools	<ul style="list-style-type: none"> <li>● Chart stimulated recall</li> <li>● Direct observation</li> <li>● Medical record (chart) audit</li> <li>● Multisource feedback</li> </ul>
Curriculum Mapping	<ul style="list-style-type: none"> <li>●</li> </ul>
Notes or Resources	<ul style="list-style-type: none"> <li>● Bierman JA, Hufmeyer KK, Liss DT, Weaver AC, Heiman HL. Promoting responsible electronic documentation: validity evidence for a checklist to assess progress notes in the electronic health record. <i>Teach Learn Med.</i> 2017 Oct-Dec;29(4):420-432.</li> <li>● U.S. Department of Health &amp; Human Services. Health information privacy. <a href="https://www.hhs.gov/hipaa">HHS.gov/hipaa</a></li> </ul>

### Available Milestones Resources

*Milestones 2.0: Assessment, Implementation, and Clinical Competency Committees Supplement, 2021* - <https://meridian.allenpress.com/jgme/issue/13/2s>

*Milestones Guidebooks:* <https://www.acgme.org/milestones/resources/>

- *Assessment Guidebook*
- *Clinical Competency Committee Guidebook*
- *Clinical Competency Committee Guidebook Executive Summaries*
- *Implementation Guidebook*
- *Milestones Guidebook*

*Milestones Guidebook for Residents and Fellows:* <https://www.acgme.org/residents-and-fellows/the-acgme-for-residents-and-fellows/>

- *Milestones Guidebook for Residents and Fellows*
- *Milestones Guidebook for Residents and Fellows Presentation*
- *Milestones 2.0 Guide Sheet for Residents and Fellows*

*Milestones Research and Reports:* <https://www.acgme.org/milestones/research/>

- *Milestones National Report*, updated each fall
- *Milestones Predictive Probability Report*, updated each fall
- *Milestones Bibliography*, updated twice each year

*Developing Faculty Competencies in Assessment courses* - <https://www.acgme.org/meetings-and-educational-activities/courses-and-workshops/developing-faculty-competencies-in-assessment/>

Assessment Tool: Direct Observation of Clinical Care (DOCC) - <https://dl.acgme.org/pages/assessment>

Assessment Tool: Teamwork Effectiveness Assessment Module (TEAM) - <https://team.acgme.org/>

Improving Assessment Using Direct Observation Toolkit - <https://dl.acgme.org/pages/acgme-faculty-development-toolkit-improving-assessment-using-direct-observation>

Learn at ACGME has several courses on Assessment and Milestones - <https://dl.acgme.org/>