Minimally Invasive Surgery

This introductory document about our service will give you a glimpse of what our service is about.

The document will hopefully better prepare you for the service by providing a guideline on what the day to day activities are as well as give you some general tools to help each member function optimally for good patient care and a exceptional experience for each team member.

Our expectations are for everyone to be as prepared as possible to interact in outpatient clinics, on the wards, in multidisciplinary meetings, in the operating room and the endoscopy suite.

You will have the opportunity to work with several physicians, advanced practice providers, students (medical and nursing) and other trainees.

This should be an opportunity to learn as much as you can from each person and gain a better understanding of multidisciplinary teamwork.

We would hope you are interactive during the entire rotation.

A progression is expected during the rotation, when we see that you progress (both technically and in patient care), more opportunities will be given to you.

The overall cases residents and students will be exposed to include general surgery and endoscopy. An emphasis will be on MIS, however the opportunity to learn about general surgical principles should be the main focus. For students, this includes understanding how to interview a patient, perform physicals, assess and plan. For junior and mid-level residents this includes understanding the pathophysiology of common diseases that affect the gastrointestinal system including the esophagus, stomach, biliary system and the abdominal wall.
Trainees

To help keep you on track during the rotation, residents will be assigned modules on SCORE. Please complete them by mid-rotation. This is for all residents at each level. These modules will allow you to critically evaluate a patient or disease process. The tools in SCORE will include textbooks, radiologic imaging and videos of commonly performed procedures (open, laparoscopic, robotic and endoscopy). These modules will be assigned throughout the rotation. Please check the assignments on a weekly basis.

Senior Trainees

We encourage PGY-5 residents to be present in as many of the OR cases as feasible. We expect PGY-5 residents to send the team a message, page or phone call at the conclusion of morning rounds (around 7:30 AM or 8:00 AM) to let them know of recent events and discuss management plan for that day.

We expect PGY-5 residents to present cases at M&M conferences if our service is chosen to present a case.

We encourage the PGY-5 resident to present a case at the DHC conference (see below).

We expect PGY-5 residents to manage the team and assign tasks and coverage as deemed appropriate to ensure an efficient service.

On the Wednesday afternoons we will review the upcoming weekly schedule and help assign coverage for clinics and OR cases. A email, sent by the senior, will need to go to all team members including all resident complement, attending, students, and APNs and include the upcoming week. This will give each person ample time to prepare for the case, clinics, conferences, etc.

Junior Trainees

We expect junior residents to be present in the OR as much as possible. There are tasks that can be directed to the junior resident and there is a lot to learn by being in the OR and interacting with team members.

Our goal is to have as much interaction with the junior residents on the wards, clinics and in the OR.
Advance Practice providers (when available) will assist in the daily notes and discharge planning for patients on the floors. This will give the junior residents the opportunity to be present in the OR and clinics as much as possible.

Medical Students

We expect medical students to be present in the OR, on the wards and in the clinics as much as possible to gain an exposure to the entire spectrum of patient care. It is expected they perform placement of a Foley catheter in an independent fashion by the end of the rotation. They should also learn proper positioning, closing of skin and other wounds. Students should be able to perform a History and Physical on new patients and assess patients on the hospital wards and clinics. Students should be writing notes and presenting patients to residents and other team members.

We expect medical students to read on the patient (chart and imaging review and question/examine the patient in the pre-op area, if appropriate) and read on the pathophysiology of the underlying disease, the therapeutic options, the operation planned, as well as the surgical anatomy concerning the procedure planned.

Medical students are expected to participate in daily rounds with the residents and present their patients when rounding with the attending.

Medical students are expected to study and read on advanced laparoscopic surgery/bariatrics (see articles and textbook references attached) but also do the necessary readings to cover the objectives of their Surgery rotation.

Advanced Practice Providers

We have several APPs on the service that function both in the Inpatient and Outpatient setting. All members of the team should work together to provide an environment that allows for the best patient care.

The inpatient APPs will assist in seeing new consults, writing notes, discharging and admitting patients and care coordination with the other services and our outpatient teams.

The APPS will cover the pager for the residents during the protected educational time on Wednesday mornings.
Simulation Lab

We hope for all trainees will utilize the simulation lab as much as possible. Once you have mastered techniques in the lab is we hope you are better prepared in treating patients.

The Simulation lab includes areas for box training for laparoscopy (part of the FLS), a simulator for endoscopy (FES) and a robotic simulator. Please work with the medical school group to make sure you are using the equipment properly and are registered for the tasks.

We will host training at the simulation lab and/or have conferences from 3:30 to 4:30 on Wednesdays, all available team members are expected to be present.

Tasks in the operating room are progressing in terms of difficulty, only once you complete each of them will you be asked to perform a task on “the next level”, and this varies due to your level of training (both clinical year and technical skills).

An example of such skills progression (for a gastric bypass) would be:

Second assistant (holding camera) -> First assistant (trocar placement, handling EEA, exposure and fluidity in steps of the operation) -> Operator (Different steps of the operation)

For the operator, the tasks could be divided as
• Initial peritoneal access
• Omental split
• Liver retractor placement
• Running the bowel (measuring BP and Roux limb)
• Scapling (transecting candy cane, transecting bowel, creating gastric pouch)
• Laparoscopic suturing (G, closing common enterotomy and mesenteric defect on J)
• Doing a side-to-side anastomosis

Residents are to prove they are comfortable and proficient as a robotic bedside assistant prior to have the opportunity to operate on the console.

Residents should follow the Robotic Curriculum as part of the department of surgery curriculum.

Residents should follow the Fundamentals of Endoscopy Curriculum (FEC) as well to help guide them.
GI Lab

Participation from residents and students in the GI lab is expected and should not be limited to writing notes and putting in orders. All residents need to make sure they reach their required numbers and expertise to perform endoscopy, both upper and lower. The resident/student assigned to the GI lab will be determined by the senior resident with input from attending.

Residents will be asked to perform endoscopic maneuvers that are relative to their proficiency. The majority of tests performed include diagnostic upper and lower endoscopy.

Residents will need to complete SCORE modules assigned by the end of their rotation and achieve FES certification in order to be board-eligible.

Residents are required to follow the Fundamental of Endoscopic Surgery as part of the department of surgery curriculum.

Residents should be working with attendings and completing the GAGES assessment forms for upper and lower endoscopy.

Conferences

It would be ideal for senior residents to present at least one case at the bimonthly multidisciplinary DHC conference (a 10 minute PowerPoint presentation oriented on a challenging part of a case (most of these are active cases either in the hospital or on a recent clinic visit), with appropriate imaging/pictures of the case and a quick discussion and review.

This conference is attended by students, residents, GI fellows and attending radiologist surgeons and gastroenterologist. The presenting services include MIS/Colorectal/Surgical oncology, radiology and gastroenterology.

We encourage all residents and medical students to prepare a 15-minute presentation on a theme of their choice related to the team at the weekly Wednesday MIS service conference from 3:30PM to 4:30PM.

All members of the team are expected to attend DHC conference, M and M, Wed morning and afternoon conferences (Grand rounds and educational service conference).

If you will not be able to attend then you must let the chief know and have it posted on the weekly schedule prior to the start of the week. This includes the students that have other educational events.
Assessments

Evaluations and feedback will include an in-person meeting with faculty prior to the start of the rotation, during the mid-point of the rotation and at the end of the rotation. This will allow for constructive feedback regarding technical skill acquisition for the fundamentals of laparoscopy (FLS), fundamentals of endoscopy (FES) and fundamental use of safe energy (FUSE). Each of these links are available through the SAGES website.

Please remember to complete the Operative Assessment forms as discussed above

Please remember to complete the SCORE modules assigned during the rotation

Please review the GAGES evaluation forms with the attending to see progress throughout the rotation

As you are presenting cases, the attending will also discuss/grade your presentations.

Please enter all your cases each week of the rotation and discuss the cases with the attending for educational value

Example Week

A typical week on the service would be

**MONDAY**

7 AM  Digestive Health Center (DHC) Conference (2nd and 4th of the month)

AM    Chand OR                       Marcotte MSBC clinic

PM    Chand LUMC GI lab             Marcotte OR

5 PM  M&M Conference

**TUESDAY**

AM    Chand MSBC Clinic             Marcotte LOC clinic

PM    Chand GMH GI lab              Marcotte MSBC clinic

**WEDNESDAY**

7 AM  Department of Surgery Grand Rounds

AM    OR (Chand and Marcotte)

PM    OR (Chand)
3:30 PM       Simulation lab and MIS Service Academic Conference

THURSDAY
AM   Chand OR    Marcotte GMH GI lab
PM   Chand GMH GI lab   Marcotte OR    Chand/Marcotte POB Clinic

FRIDAY
AM   Marcotte OR    Chand LOC clinic
PM   Marcotte OR

Summary
Below are some educational and clinical pearls that will help you on the rotation. Each is intended to help on an operational process for the rotation.

1. Each member of the team (resident and students) should plan on being in the OR and outpatient clinic. All notes should be written in the morning and discharges in prior to 10 AM for noon discharge.

2. Each member should take the opportunity to review the patients history (OR, wards, outpatient clinic) in advance to the encounter. Consents are to be obtained electronically using iMed consent tool. Please try to use the Loyola created documents to aide in the consent process.

3. Each member should prepare for each case in the OR, review the steps and execution in order to demonstrate progression during the rotation. Ask for a video copy of the procedure. Video debriefing can also help learning and mastering the steps of the procedure.

4. Each member should plan on not only attending educational conferences but also presenting and interacting during the conferences.

5. Each member should make an emphasis to round with the attending (medical students
that are following the patient should not only write the note but make a thorough assessment and plan and present the patient to the respective attending).

6. Each week a schedule should be sent by the senior.

7. Each week the resident should review SCORE for assignments (they will be given at the start of the rotation and at the beginning of the week).

8. Each level of resident must complete one or two Operative Assessment Forms as well as their GAGES endoscopy skills evaluations forms.

9. Each senior resident must have completed FLS prior to the start of the rotation. It is encouraged that the residents actively work on FES and FUSE during the rotation.

10. Please use the resources (Smart text, Order sets, Patient Handbooks, Educational videos) that are part of the rotation. Please ask questions if unclear.

11. Each member should meet with Dr. Chand and Dr. Marcotte at the beginning, mid- and at the end of the rotation. Set this up with Saundrya Lomax #72820.
Appendix

Guidelines for ordering tests and for correct documentation for bariatric surgery patients (preoperative and postoperative)

NPV (Initial clinic visit)- use MSBCINITIAL CONSULT note

1. Verify what has already been ordered by other providers and cross reference what is recommended by our center for each type of procedure (gastric bypass, sleeve gastrectomy, adjustable gastric band, duodenal switch) and risk of patient (green, yellow, orange and red pathway). Preoperative and post-operative order sets are in EPIC under MSBC.

2. Open the MSBC INITIAL VISIT-2013 smartset and complete each required dropdown. Do not delete or alter what is requested. This is to be done only if bariatrician/APN did not already place these orders in.

3. Look for the tab with the anticipated surgery. If unsure, select gastric bypass.

4. Click all items in that tab. If a patient had a cholecystectomy, they do not need an abdominal U/S.

5. In the ORDERS tab, order an EGD to be performed at GOTTLIEB (unless instructed otherwise).
   - When asked If Yes, please select Endoscopist: select Dr. Chand or Dr. Marcotte (attending that evaluated the patient, first available, or patient choice)

- Order a colonoscopy if they are 50 yo or more and did not have a recent colonoscopy done. If African American order a colonoscopy if they are 45 yo or more and did not have a recent one done.
   - When asked If Yes, please select Endoscopist: select Dr. Chand or Dr. Marcotte (attending that evaluated the patient, first available, or patient choice).

**Please give pt and explain the handout for the appropriate testing (EGD /colonoscopy). The patient will need prescriptions for Golytely and Magnesium Citrate (APN will provide closer to date of exam).

6. In the CARDIOLOGY ORDERS tab, order an EKG 12-LEAD-ALL LOYOLA LOCATIONS, unless an EKG or stress test has been done within the past year. If the patient is already followed by a cardiologist, will need cardiac clearance (pre-operative testing deferred to cardiologist).

7. If instructed to, order a SLEEP STUDY WITH CONSULT – LOYOLA

8. Select appropriate DIAGNOSES and be sure to add them to the active problem list.
H&P (pre-op apt)- use smart text note MSBC Pre-op progress note

1. Review the pathology findings at the time Endoscopy (ie biopsy results for H.Pylori) and document the findings and treatment. Document any cardiac or pulmonary testing and any lab abnormalities.

2. Please assure the electronic consent (with iMed) is completed (no abbreviations should be used). Select the robotic procedure if that is what is planned.

3. Prescribe the required medications:
   - Protonix 40 mg tab take 1 tab daily Dispense 30, 2 refills (give unless they are already on a PPI)
   - Colace 100 mg capsules Take BID PRN Dispense 60, 3 refills
   - Zofran ODT 8mg Take 1 tab q 8 h PRN Dispense 10, 3 refills
   - Scopolamine (Transderm-Scop) 1.5 mg. Apply one patch and change Q72 hours Dispense 4 patches, 2 refills
   - Tylenol 325 mg Take 2 tabs q 6 h PRN Dispense 60 tabs. 0 refill
   - Oxycodone 5 mg immediate release Take 1 tab q 6 h PRN Dispense 10 tabs. 0 refill
   - Neurontin 300 mg Take 1 capsule q 8 h PRN. Dispense 21 Cap. 0 refill
   - Carafate 1gm/10ml solution. Take 10 ml 4 times a day. Dispense 420 ml 2 Refills (Only needed if on NSAIDS including Aspirin)

4. Make sure that the medical assistant has given the patient the red handout titled “It’s official you have a surgery date”

DAY OF SURGERY orders: “Phases of care”
1. On the days preceding the operation, open the patient’s chart from the schedule.
2. Thoroughly review the patient’s chart (this will allow you to prepare for the case)
3. Open “Surg/Proc Nav” navigator
4. Select “Pre” on top of the screen
5. Open the Inpt/Pre Ordersets tab
6. Use the “IP MSBC BARIATRIC SURGERY DAY OF SURGERY ORDERS” orderset
7. Fill out necessary orders. Do not forget to order prophylactic antibiotics.
   Note the need to increase dosage of Ancef to 3g for patients over 120 kg.
If they have a Penicillin allergy, please order Aztreonam AND Vancomycin, not one or the other. Note the dose of Vanc of 1.5 grams for patients over 90 kg. For MRSA positive patients, please order Vancomycin 1g IV. **Vanc takes more than 1 hour to infuse so should be started at least 1.5 hour before the start of the case.**

8. Use “IP ADULT PREOPERATIVE/PREPROCEDURE GLUCOSE MANAGEMENT” orderset
9. Sign the orders
10. Select the case to link those orders to. **DAY OF ENDOSCOPY orders: “Phases of care”**
   1. On the days preceding the endoscopy, open the patient's chart from the schedule.
   2. Thoroughly review the patient's chart (this will allow you to prepare for the case)
   3. Open “Surg/Proc Nav” navigator
   4. Select “Pre” on top of the screen
   5. Open the **Inpt/Pre Ordersets** tab
   6. Use the “GI LAB INPATIENT/OUTPATIENT PRE-ORDERS” orderset
   7. Select the appropriate procedures(s) to be done
   8. Fill out necessary orders. Do not forget to order prophylactic antibiotics if a PEG will be placed or dilation will be done. Note the need to increase dosage of Anecef to 3g for patients over 120 kg. If they have a Penicillin allergy, please order Aztreonam AND Vancomycin, not one or the other. Note the dose of Vanc of 1.5 grams for patients over 90 kg. For MRSA positive patients, please order Vancomycin 1g IV. **Vanc takes more than 1 hour to infuse so should be started at least 1.5 hour before the start of the case.**
   9. Use “IP ADULT PREOPERATIVE/PREPROCEDURE GLUCOSE MANAGEMENT” orderset
10. Sign the orders
11. Select the case to link those orders to.

**POST-OPERATIVE orders: “Phases of care”**

1. On the day of the operation, open the patient's chart from the schedule.
2. Open “Surg/Proc Nav” navigator
3. Select “Post to Floor” on top of the screen
4. Open the **Med/Orders Rec** tab
5. Review current orders
6. Click “Next” to Reorder Prior to Admission Meds
7. For each entry, choose “Order”, “Replace”, “Don’t Order” or “Discontinue”
8. Click “Next” to put in New Orders
9. Use the “MSBC BARIATRIC SURGERY POSTOP ADMISSION ORDERS (LUMC)” orderset
10. Click and fill out necessary orders.
   Sign the orders

**Daily ROUNDS orders**

1. On the day of rounds, open the patient's chart from the Patient List.
2. Open “Rounding” navigator
3. Open the **Med/Orders Rec** tab
4. Review Prior to Admission Meds
5. Click “Next” to Reorder Prior to Admission Meds
6. For each entry, choose “Order”, “Replace”, “Don’t Order” or “Discontinue”
7. Click “Next” to put in New Admission Orders
8. Sign the orders

**DISCHARGE-use the “Discharge” navigator**

1. On the day of discharge, open the patient’s chart from the Patient List.
2. Open “Discharge” navigator
3. Open the Med/Orders Rec tab
4. Review Prior to Admission Meds
5. Click “Next” to Review Orders for Discharge
6. For each entry, choose “Modify/New Prescription”, “Resume”, “Stop Taking” or “Don’t Prescribe”
7. Click “Next” to put in New Orders for Discharge
8. Sign the orders
9. Write discharge instructions using smart text note MSBC Bariatric Surgery Discharge Instructions
10. Write Discharge Summary using .msbcdissummary

**RPV (Post-op visits)-use .MSBCINITIALPOSTOP note**

1. Review and document the liver pathology findings at the 1 week post-op visit
   • If the patient has fibrosis or if their NASH score is 4 or above order a hepatology referral for Dr. Kallwitz. All post-op orders are in the MSBC OP Follow-up orders 2013 order set

2. At the 1 month post-op, visit Actigall should be ordered if their pre-op ultrasound was negative for gallstones
   • Ursodiol 300 mg capsule. Take 1 capsule BID for a total of 6 months. Dispense 60, 5 Refills
REFERENCES

Attached are Classic Papers and Guidelines in the field of metabolic and bariatric surgery as well as advanced laparoscopic surgery that we invite you to review before the start of your rotation.

Resident will be assigned these modules on SCORE which you are expected to complete by mid-rotation

Junior Residents

Morbid Obesity

Gastroesophageal Reflux/Barrett's Esophagus

Dysphagia

Inguinal and Femoral Hernia

Ventral Hernia

Morbid Obesity - Operation

MIS Equipment and Troubleshooting

Physiologic Changes Associated with Pneumoperitoneum

Videos

Colonoscopy

Endoscopy, Flexible, Upper Gastrointestinal

Laparoscopic Cholecystectomy
MIS Surgery PGY5 - First month

Morbid Obesity - Operation
MIS Equipment and Troubleshooting
Principles and Techniques of Abdominal Access
Physiologic Changes Associated with Pneumoperitoneum
Morbid Obesity

Videos

Endoscopy, Flexible, Upper Gastrointestinal
Colonoscopy
Laparoscopic Cholecystectomy
Laparoscopic Ventral Hernia Repair
Laparoscopic Roux-en-Y Gastric Bypass

MIS Surgery PGY5 - Second month

Hiatal Hernias
Antireflux Procedure - Laparoscopic
Gastroesophageal Reflux/Barrett's Esophagus
Esophagomyotomy (Heller)
Paraesophageal Hernia - Laparoscopic Repair
Abdominal Wall Reconstruction - Components Separation

Videos

Laparoscopic Heller Myotomy
Laparoscopic Inguinal Hernia Repair
Laparoscopic Paraesophageal Hernia Repair
Laparoscopic Nissen Fundoplication
We identified several textbooks as a reference for this rotation:

**Minimally Invasive Bariatric Surgery**

which you can access online through the Loyola library at

http://pegasus.luc.edu/vwebv/holdingsInfo?searchId=805&recCount=25&recPointer=3&bibId=2152733

We recommend you read these chapters first

7. Patient Selection: Pathways to Surgery
9. Operating Room Setup for Laparoscopic Bariatric Surgery
10. Anesthesia for Minimally Invasive Bariatric Surgery
11. Postoperative Pathways in Minimally Invasive Surgery

**Sleeve gastrectomy**
14. Technical aspects
15. Outcomes
16. Complications

**Laparoscopic Adjustable Gastric Banding**
19. Technique
20. Outcomes
21. Post-op management
22. Complications

**Gastric Bypass**
24. Transoral Circular Stapled Gastrojejunostomy Technique
28. Outcomes
29. Complications
31. Nutrition
38. Endoluminal Bariatric Procedures
44. The High-Risk Bariatric Surgery Patient
**Additional Textbooks**

**Evidence Based Approach to Minimally Invasive Surgery**

Two copies are in the resident room

However, if you cannot locate one of these, please stop by Dr Chand’s office and he will be able to give you a copy for the rotation.

Sections in the textbook that are relevant include

1. General
2. Esophageal
3. Gastric
4. Biliary Tract Surgery
5. Hernia Surgery

**Bariatric Endoscopy Textbook**

This is available from Dr. Chand. Please request at the beginning of the rotation

If you have any questions please do not hesitate to ask.
# OPERATING ROOM: RESIDENT EVALUATION

**RESIDENT:**  
**DATE:**  
**PGY Level:**  
**FACULTY:**  
**OPERATION:**

<table>
<thead>
<tr>
<th>PREPARATION:</th>
<th>RESIDENT</th>
<th>STAFF</th>
<th>STAFF COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reviewed radiology/workup</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
</tr>
<tr>
<td>Participated in Huddle</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
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<tr>
<td>Participated in Time Out</td>
<td>F M E</td>
<td>F M E</td>
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<thead>
<tr>
<th>OPERATION:</th>
<th>RESIDENT</th>
<th>STAFF</th>
<th>STAFF COMMENTS</th>
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<tbody>
<tr>
<td>Knowledge of appropriate incision and approach</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
</tr>
<tr>
<td>Knowledge of relevant anatomy</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
</tr>
<tr>
<td>Anticipates steps in procedure</td>
<td>F M E</td>
<td>F M E</td>
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<tr>
<td>Knowledge of critical points of operation</td>
<td>F M E</td>
<td>F M E</td>
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<tr>
<td>Demonstrates proper handling of tissue and instruments</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
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<tr>
<td>Good basic skills: suturing/knot tying</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
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<tr>
<td>Follows a logical sequence in case</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
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<tr>
<td>Responds appropriately to acute events</td>
<td>F M E</td>
<td>F M E</td>
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<thead>
<tr>
<th>FOLLOW-UP:</th>
<th>RESIDENT</th>
<th>STAFF</th>
<th>STAFF COMMENTS</th>
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<tbody>
<tr>
<td>Completed Sign-out</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
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<tr>
<td>Completed post-operative orders</td>
<td>F M E</td>
<td>F M E</td>
<td></td>
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<tr>
<td>Saw patient in recovery room</td>
<td>F M E</td>
<td>F M E</td>
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**Resident Self-Assessment:** What did you learn from this case:  

______________________________________________________________________

**Staff Assessment:** What would you recommend to help the resident improve their skills/preparation:  

______________________________________________________________________

**Overall Assessment:**

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*Signature*
<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>5</td>
<td>Expertly able to manipulate the scope in the GI tract autonomously</td>
</tr>
<tr>
<td>4</td>
<td>Requires verbal guidance to completely navigate the lower GI tract</td>
</tr>
<tr>
<td>3</td>
<td>Not able to achieve goals despite detailed verbal guidance requiring takeover</td>
</tr>
<tr>
<td>2</td>
<td>Expert use of appropriate strategies for advancement of the scope while optimizing patient comfort</td>
</tr>
<tr>
<td>1</td>
<td>Use of some strategies appropriately, but requires moderate verbal guidance</td>
</tr>
<tr>
<td></td>
<td>Unable to utilize appropriate strategies for scope advancement despite verbal assistance</td>
</tr>
<tr>
<td>5</td>
<td>Uses insufflation, suction, and irrigation optimally to maintain clear view of endoscopic field</td>
</tr>
<tr>
<td>4</td>
<td>Requires moderate prompting to maintain clear view</td>
</tr>
<tr>
<td>3</td>
<td>Inability to maintain view despite extensive verbal cues</td>
</tr>
<tr>
<td>2</td>
<td>Expertly directs instrument to desired target</td>
</tr>
<tr>
<td>1</td>
<td>Requires some guidance and/or multiple attempts to direct instrument to target</td>
</tr>
<tr>
<td></td>
<td>Unable to direct instrument to target despite coaching</td>
</tr>
<tr>
<td>5</td>
<td>Expertly completes the exam efficiently and comfortably</td>
</tr>
<tr>
<td>4</td>
<td>Requires moderate assistance to accomplish a complete and comfortable exam</td>
</tr>
<tr>
<td>3</td>
<td>Could not perform a satisfactory exam despite verbal and manual assistance requiring takeover of the procedure</td>
</tr>
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OVERALL SCORE: □
<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>5</td>
<td>Able to independently (successfully) intubate esophagus without patient discomfort</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Requires detailed prompting and cues</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Unable to properly intubate requiring take over</td>
<td></td>
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<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>5</td>
<td>Expertly able to manipulate the scope in the upper GI tract autonomously.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Requires verbal guidance to completely navigate the upper GI tract</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Not able to achieve goals despite detailed verbal cues, requiring take over</td>
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<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Uses insufflation, suction, and irrigation optimally to maintain clear view of endoscopic field</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Requires moderate prompting to maintain clear view</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Inability to maintain view despite extensive verbal cues</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>5</td>
<td>Expertly directs instrument to desired target</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Requires some guidance and/or multiple attempts to direct instrument to target</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Unable to direct instrument to target despite coaching</td>
<td></td>
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<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
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<tbody>
<tr>
<td>5</td>
<td>Expertly completes the exam efficiently and comfortably</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Requires moderate assistance to accomplish a complete and comfortable exam</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Could not perform a satisfactory exam despite verbal and manual assistance requiring takeover of the procedure</td>
<td></td>
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</tbody>
</table>


OVERALL SCORE: □
### FEC Tracking Sheet

<table>
<thead>
<tr>
<th>Level</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cognitive Milestones Completed</strong></td>
<td></td>
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<tr>
<td>Score EGD module</td>
<td>☑</td>
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<tr>
<td>Score Colonoscopy module</td>
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<tr>
<td><strong>Technical Milestones Completed</strong></td>
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<tr>
<td>One handed wheel deflection</td>
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<tr>
<td>Control of suction</td>
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<tr>
<td>Irrigation</td>
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<tr>
<td>Insufflation</td>
<td></td>
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<tr>
<td>Passage of instruments</td>
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<tr>
<td>Proper Scope setup and function</td>
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<tr>
<td>Trouble shooting</td>
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<tr>
<td>Scope manipulation</td>
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<td></td>
</tr>
<tr>
<td>20 Upper Endoscopy GAGES scoresheets returned</td>
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<td></td>
</tr>
<tr>
<td>20 Lower Endoscopy GAGES scoresheets returned</td>
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<tr>
<td>5 Upper Endoscopies with a minimum GAGES score of 18</td>
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<tr>
<td>5 Lower Endoscopies with a minimum GAGES score of 18</td>
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<tr>
<td>Assist with 5 ERCPs</td>
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<tr>
<td>5 Upper or Lower Endoscopies with GAGES score of 18</td>
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<tr>
<td>Obtain FES certification</td>
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</tbody>
</table>

Residents must complete all requirements for each level to progress to next level

Attestation of FEC Completion by Program Director