

## MACS Patient Selection Criteria

The objective is to screen, on a daily basis, the Acute Care Surgical service “touches” at your hospital to identify patients who meet criteria for further data entry.

The specific patient diseases/conditions that we are interested in capturing for emergent general surgery (EGS) are:

- 1. Acute Appendicitis**
- 2. Acute Gallbladder Disease**
  - a. Acute Cholecystitis
  - b. Choledocholithiasis
  - c. Cholangitis
  - d. Gallstone Pancreatitis
- 3. Small Bowel Obstruction**
  - a. Adhesive
  - b. Hernia
- 4. Emergent Exploratory Laparotomy** (Refer to the ex-lap algorithm under the Diseases or Conditions section below for inclusion/exclusion criteria.)

The daily census for patients admitted to the Acute Care Surgery Service or seen as a consult will have to be screened. There may be other sources to accomplish this screening such as IT and we are interested in learning about these sources from you. From this census, a list can be compiled of patients with the aforementioned diseases/conditions.

The first level of data entry involves capture and entry of the patient into the MACS Qualtrics database. All patients with the identified diseases/conditions will have data entered regardless of whether or not they received an operation during admission/ED visit. The second level of data entry takes place if an existing MACS patient returns to the hospital (ED or admission) or has outcome events identified within the 30-day post-operative time frame if the patient had surgery, or within 30 days from discharge for the non-operative patients.

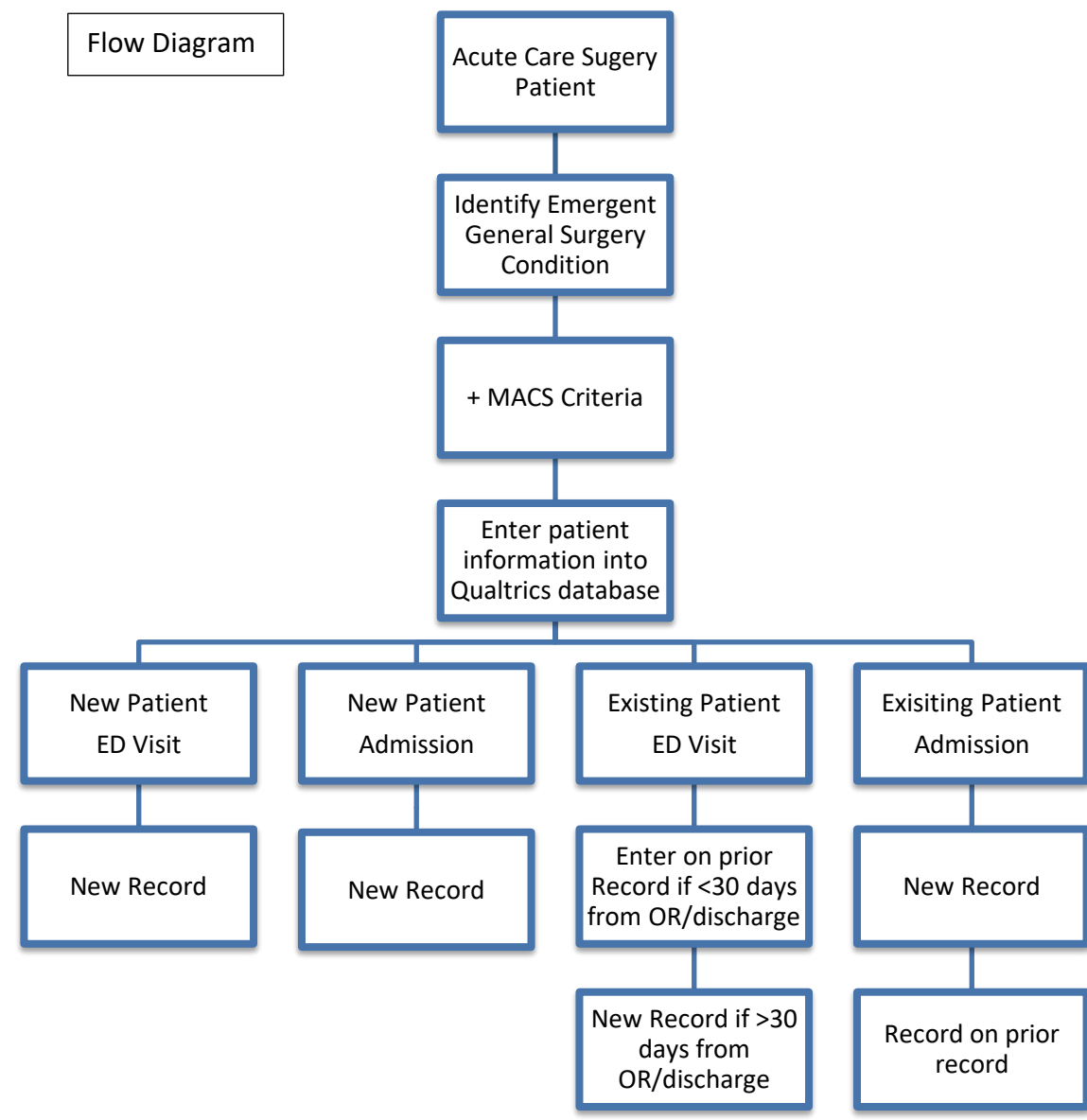
You will see that we are capturing diagnostic, interventional, and therapeutic data that extend beyond what is typically captured for MSQC patients. This includes radiologic studies, interventional procedures, types of hernia repair, and non-operative details. We will collect data on hernia repairs for patients who receive an operation for any of the indicated diseases/conditions who have a concomitant hernia present that is repaired during their operation.

Return visits to the ED that do not result in an inpatient admission are recorded as a complication/outcome on the prior MACS Qualtrics data entry for the patient. This can occur for up to 30-days after surgery, or 30 days following discharge from the hospital for non-operative patients.

Readmissions to the hospital are recorded as a new patient entry in the MACS Qualtrics database if both of the following exist:

- readmission to your facility with admit or consult to surgery service
- readmission is related to the surgical problem from the prior episode (index admit).

Please record the date of readmission on the prior patient record in the MACS Qualtrics database to assist in episode linkage.



## Diseases or Conditions based on ICD-10 CM Diagnosis Codes or Clinical Criteria

### 1. Acute Appendicitis

K35	Acute appendicitis
K35.2	Acute appendicitis w generalized peritonitis
K35.20	Acute appendicitis w generalized peritonitis, without abscess
K35.21	Acute appendicitis w generalized peritonitis, with abscess
K35.3	Acute appendicitis w localized peritonitis
K35.30	Acute appendicitis w localized peritonitis, without perforation or gangrene
K35.31	Acute appendicitis w localized peritonitis and gangrene, without perforation
K35.32	Acute appendicitis w perforation and localized peritonitis, without abscess
K35.33	Acute appendicitis w perforation and localized peritonitis, with abscess
K35.8	Other and unspecified acute appendicitis
K35.80	Unspecified acute appendicitis
K35.89	Other acute appendicitis
K35.890	Other acute appendicitis without perforation or gangrene
K35.891	Other acute appendicitis without perforation, with gangrene

### 2. Acute Gallbladder Disease

#### Cholecystitis, Choledocholithiasis

K80.0	Calculus of gallbladder w acute cholecystitis
K80.00	Calculus of gallbladder w acute cholecystitis without obstruction
K80.01	Calculus of gallbladder w acute cholecystitis with obstruction
K80.1	Calculus of gallbladder w other cholecystitis
K80.10	Calculus of gallbladder w chronic cholecystitis without obstruction
K80.11	Calculus of gallbladder w chronic cholecystitis with obstruction
K80.12	Calculus of gallbladder w acute and chronic cholecystitis without obstruction
K80.13	Calculus of gallbladder w acute and chronic cholecystitis with obstruction
K80.18	Calculus of gallbladder w other cholecystitis without obstruction
K80.19	Calculus of gallbladder w other cholecystitis with obstruction

K80.21	Calculus of gallbladder without cholecystitis with obstruction
K80.3	Calculus of bile duct with cholangitis
K80.30	Calculus of bile duct with cholangitis, unspecified, without obstruction
K80.31	Calculus of bile duct with cholangitis, unspecified, with obstruction
K80.32	Calculus of bile duct with acute cholangitis without obstruction
K80.33	Calculus of bile duct with acute cholangitis with obstruction
K80.34	Calculus of bile duct with chronic cholangitis without obstruction
K80.35	Calculus of bile duct with chronic cholangitis with obstruction
K80.36	Calculus of bile duct with acute and chronic cholangitis without obstruction
K80.37	Calculus of bile duct with acute and chronic cholangitis with obstruction
K80.4	Calculus of bile duct with cholecystitis
K80.40	Calculus of bile duct with cholecystitis, unspecified, without obstruction
K80.41	Calculus of bile duct with cholecystitis, unspecified, with obstruction
K80.42	Calculus of bile duct with acute cholecystitis without obstruction
K80.43	Calculus of bile duct with acute cholecystitis, with obstruction
K80.44	Calculus of bile duct with chronic cholecystitis without obstruction
K80.45	Calculus of bile duct with chronic cholecystitis with obstruction
K80.46	Calculus of bile duct with acute and chronic cholecystitis without obstruction
K80.47	Calculus of bile duct with acute and chronic cholecystitis with obstruction
K80.5	Calculus of bile duct without cholangitis or cholecystitis
K80.50	Calculus of bile duct without cholangitis or cholecystitis without obstruction
K80.51	Calculus of bile duct without cholangitis or cholecystitis with obstruction
K80.6	Calculus of gallbladder and bile duct with cholecystitis
K80.60	Calculus of gallbladder and bile duct with cholecystitis, unspecified, without obstruction
K80.61	Calculus of gallbladder and bile duct with cholecystitis, unspecified, with obstruction
K80.62	Calculus of gallbladder and bile duct with acute cholecystitis without obstruction
K80.63	Calculus of gallbladder and bile duct with acute cholecystitis with obstruction
K80.64	Calculus of gallbladder and bile duct with chronic cholecystitis without obstruction
K80.65	Calculus of gallbladder and bile duct with chronic cholecystitis with obstruction
K80.66	Calculus of gallbladder and bile duct with acute and chronic cholecystitis without obstruction

K80.67	Calculus of gallbladder and bile duct with acute and chronic cholecystitis with obstruction
K80.7	Calculus of gallbladder and bile duct without cholecystitis
K80.70	Calculus of gallbladder and bile duct without cholecystitis without obstruction
K80.71	Calculus of gallbladder and bile duct without cholecystitis with obstruction
K80.81	Other cholelithiasis with obstruction
K81	Cholecystitis
K81.0	Acute cholecystitis
K81.1	Chronic cholecystitis
K81.2	Acute cholecystitis w chronic cholecystitis
K81.9	Cholecystitis, unspecified
K82.A1	Gangrene of gallbladder in cholecystitis

#### Cholangitis, Gallstone Pancreatitis

K83.0	Cholangitis
K83.09	Other cholangitis
K83.1	Obstruction of bile duct
K83.2	Perforation of bile duct
K83.3	Fistula of bile duct
K85.1	Biliary acute pancreatitis
K85.10	Biliary acute pancreatitis <b>without necrosis or infection</b>
K85.11	Biliary acute pancreatitis with uninfected necrosis
K85.12	Biliary acute pancreatitis with infected necrosis

### 3. Small Bowel Obstruction

K56.50	Intestinal adhesions [bands], unspecified as to partial versus complete obstruction
K56.51	Intestinal adhesions [bands], with partial obstruction
K56.52	Intestinal adhesions [bands], with complete obstruction
K56.600	Partial intestinal obstruction, unspecified as to cause
K56.601	Complete intestinal obstruction, unspecified as to cause

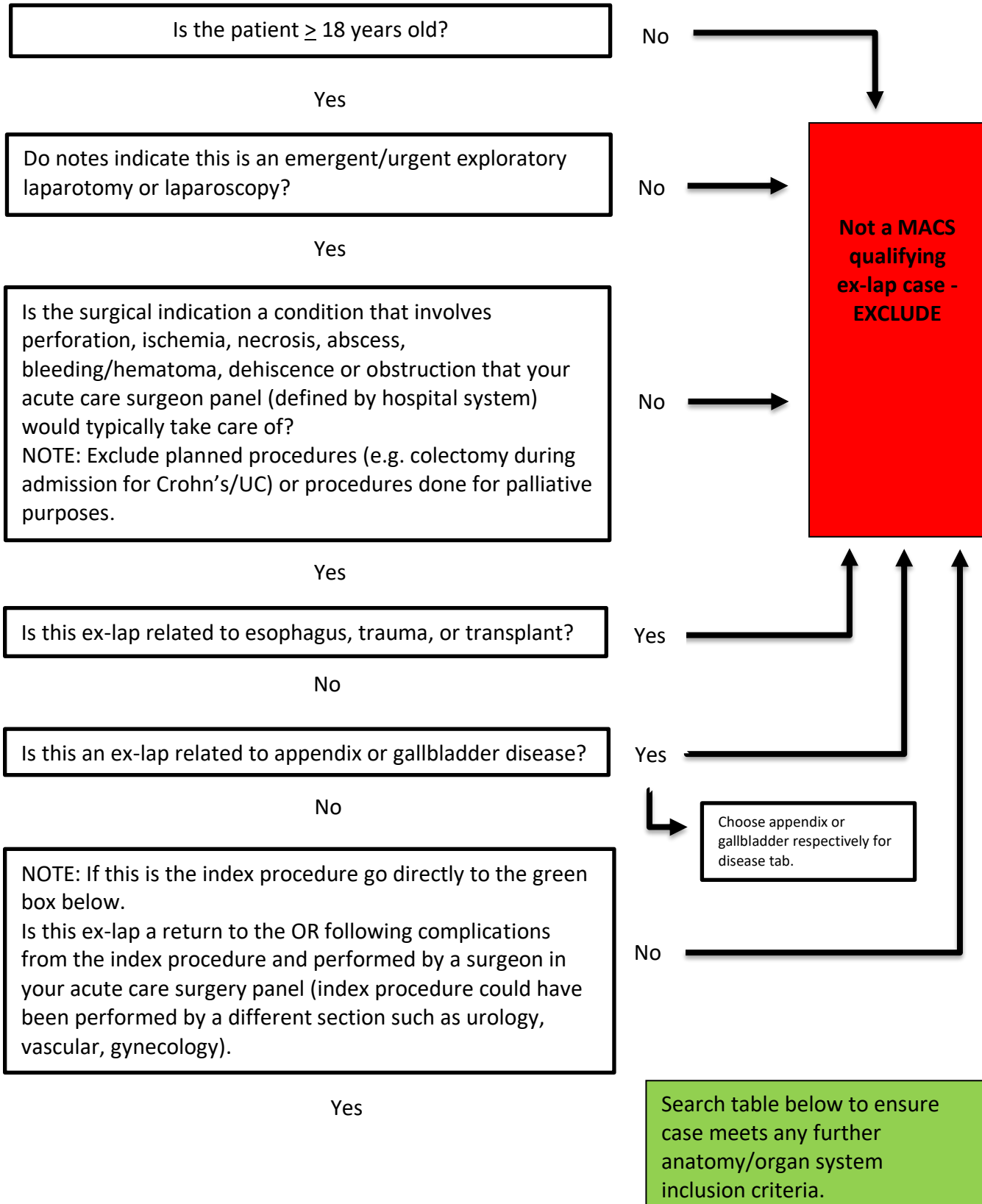
K56.609	Unspecified intestinal obstruction, unspecified as to partial versus complete obstruction
K56.690	Other partial intestinal obstruction
K56.691	Other complete intestinal obstruction
K56.699	Other intestinal obstruction unspecified as to partial versus complete obstruction

K40.00	Bilateral inguinal hernia, with obstruction, without gangrene, not specified as recurrent
K40.30	Unilateral inguinal hernia, with obstruction, without gangrene, not specified as recurrent
K40.31	Unilateral inguinal hernia, with obstruction, without gangrene, recurrent
K41.00	Bilateral femoral hernia, with obstruction, without gangrene, not specified as recurrent
K41.01	Bilateral femoral hernia, with obstruction, without gangrene, recurrent
K41.30	Unilateral femoral hernia, with obstruction, without gangrene, not specified as recurrent
K41.31	Unilateral femoral hernia, with obstruction, without gangrene, recurrent
K42.0	Umbilical hernia with obstruction, without gangrene
K43.0	Incisional hernia with obstruction, without gangrene
K43.3	Parastomal hernia with obstruction, without gangrene
K43.6	Other and unspecified ventral hernia with obstruction, without gangrene
K45.0	Other specified abdominal hernia with obstruction, without gangrene
K46.0	Unspecified abdominal hernia with obstruction, without gangrene

**4. Exploratory Laparotomy**

First follow the MACS Exploratory Laparotomy Algorithm to determine if the surgery is a MACS qualifying case. Then refer to the chart below the algorithm to ensure that the case meets any further anatomy/organ system inclusion criteria.

## MACS Exploratory Laparotomy Algorithm



### Additional Inclusion/Exclusion based on Anatomy or Organ System

	Included	Excluded
Appendix		All laparotomies where the primary pathology is appendicitis are excluded regardless of the severity of the procedure (unless an appendectomy was a part of a bowel resection for a non-appendicitis diagnosis).
Esophagus		Laparotomy/laparoscopy for esophageal pathology.
Trauma		Laparotomy/laparoscopy for any pathology caused by blunt or penetrating trauma including laparotomy for removal of foreign body from rectum/sigmoid.
Transplant		All surgery related to organ transplantation (including returns to surgery for complications of <i>recent</i> organ transplant).
Pancreas	Pancreatectomy of any type.	Whipple for cancer
Biliary System	Laparotomy/enterotomy for gallstone ileus	All surgery involving the gallbladder or biliary tree excluded, unless cholecystectomy was a part of a bowel resection for a non-gallbladder diagnosis.



Stomach	<p>Emergency laparotomy or laparoscopy for gastric pathology (e.g. gastric bleed, paraesophageal/hiatus hernia repair, perforation, ischemia, removal of gastric bands, swallowed foreign body).</p> <p>Emergency laparotomy or laparoscopy for iatrogenic gastric perforation after endoscopic procedures.</p>	
Small bowel	<p>Emergency laparotomy or laparoscopy for conditions involving small bowel (e.g. bleeding, duodenal ulcer, ischemia, perforation, gallstone ileus, removal of swallowed foreign bodies, ileostomy).</p> <p>Exploratory laparotomy or laparoscopy for small bowel obstruction caused by volvulus, hernia, internal hernia, or mass/malignancy.</p>	
Colon/ Rectum	<p>Emergency laparotomy or laparoscopy for conditions involving the colon and rectum.</p> <p>Emergency laparotomy or laparoscopy for iatrogenic colonic perforation after endoscopic procedures.</p> <p>Emergency formation of colostomy or emergent stoma formation.</p>	<p>Emergency laparotomy or laparoscopy for removal of foreign body from colon/rectum as this is considered trauma.</p>
Vascular	<p>Laparotomy for bowel ischemia</p>	<p>Emergency laparotomy for vascular pathology related to aneurysm, bleeding or compartment syndrome.</p>

GYN	Gynecological laparotomy or laparoscopy if the primary pathology is proven to be general surgical.	Gynecological laparotomy (e.g. ruptured ectopic, pelvic abscess due to pelvic inflammatory disease).
Peritoneum	Washout/drainage of peritoneal abscess or hematoma.	Removal of peritoneal dialysis catheters. Surgery related to sclerosing peritonitis
Hernias	Emergent hernia reduction and/or repair for large or small bowel obstruction. Reduction of internal hernia.	Non-emergent, non-obstructive hernias.
Adhesiolysis	Emergent/urgent laparotomy or laparoscopic adhesiolysis.	
Dehiscence	Return to surgery for major abdominal wound dehiscence (e.g. fascial dehiscence, "burst abdomen").	Minor/superficial abdominal wound dehiscence (e.g. skin/subcutaneous) unless it causes bowel pathology requiring resection.