

M•ACS

2022 Data Dictionary

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Tab 1 – Identifiers

1) Center

Intent: Identify the medical center entering data into the MACS/Qualtrics workstation.

Definition: The two initial code assigned to the medical center by the MACS coordinating center.

Variable Options:

- a. BO
- b. DR
- c. HP
- d. MC
- e. MH
- f. MM
- g. SH
- h. SJ
- i. SP
- j. UM

Include: All

Exclude: N/A

Notes:

2) Medical Record Number (MRN)

Intent: To provide a means to identify a specific patient in the MACS database.

Definition: The Medical Record Number (MRN) is a unique number assigned by the hospital that permanently identifies the patient in the database.

Variable Options: The MRN assigned by the hospital.

Include: All

Exclude: N/A

Notes:

- All cases for an individual patient will track to a single MRN.
- Ensure the MRN is entered the same way every time (including or excluding leading zero's as appropriate for the hospital).

3) Visit Number (CSN)

Intent: To provide a means to identify a specific visit (case) for internal tracking purposes.

Definition: A number assigned by the hospital for a specific visit (case).

Variable Options: Any number assigned by the hospital.

Include: All

Exclude: N/A

Notes:

4) MACS Case Number

Intent: To provide a means to identify a specific patient touch (entry) by the Acute Care Surgery/General Surgery physicians for entry into the MACS/Qualtrics database.

Definition: A unique number assigned by the abstractor at the time of entry into Qualtrics.

Variable Options: Sequential number.

Include: All

Exclude: N/A

Notes:

- Should not be the medical record number or visit number.
- Avoid use of duplicate numbering.

5) SCOAP Case Number

Intent: To provide a means to identify a specific case in the SCOAP database for internal tracking purposes.

Definition: The number assigned by the SCOAP workstation for a specific case.

Variable Options: Any number assigned by the workstation.

Include: All cases entered into the SCOAP database.

Exclude: Patients not entered into the SCOAP database.

Notes:

- Currently, it only applies to UM

Tab 2 – Demographics

6) First Name

Intent: To provide a means to identify a patient for internal tracking purposes.

Definition: First name of the patient.

Variable Options: Name

Include: All

Exclude: N/A

Notes:

- If a name is hyphenated, remove the hyphen and leave a space.
- Enter the patient's legal name.

7) Last Name

Intent: To provide a means to identify a patient for internal tracking purposes.

Definition: Last name of the patient.

Variable Options: Name

Include: All

Exclude: N/A

Notes:

- If a name is hyphenated, remove the hyphen and leave a space.
- Enter the patient's legal name.

8) Date of Birth (mm/dd/yyyy)

Intent: To provide the means to calculate the patient's age at the time of the admit/principal operative procedure to ensure that the patient meets program inclusion criteria (≥ 18 years). It may also be used in analysis to predict risk by calculating the patient's age.

Definition: The month, day, and year the patient was born.

Variable Options: Date in mm/dd/yyyy format.

Include: All

Exclude: N/A

Notes:

9) Sex

Intent: To capture the genetic sex of the patient. It may also be used in analysis to predict risk.

Definition: Differentiation between males and females.

Variable Options:

- a) Female
- b) Male
- c) Unknown

Include: All

Exclude: N/A

Notes:

- The genetic sex of the patient at the time of their birth is to be used to answer this question.

10) Race

Intent: To capture the race of the patient. It may also be used when investigating disparities in care or outcomes.

Definition: "The racial categories...generally reflect a social definition of race recognized...and not an attempt to define race biologically, anthropologically, or genetically. In addition, it is recognized that the categories of the race item include racial and national origin or sociocultural groups...People who identify their origin as Hispanic, Latino, or Spanish may be of any race" (US

Census Bureau). Race may be assigned per hospital internal policy or self-identified by the patient.

Variable Options:

- a. White: A person having origins in any of the original peoples of Europe, North Africa, or the Middle East
- b. Black or African American: A person having origins in any of the black racial groups of Africa. Terms such as “Haitian” or “Negro” may appear in the medical record in addition to “Black or African American.”
- c. Asian: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam
- d. Native Hawaiian or Pacific Islander: A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- e. American Indian or Alaska Native: A person having origins in any of the original peoples of North and South America (including Central America) and who maintains tribal affiliation or community attachment
- f. Unknown

Include: All

Exclude: N/A

Notes:

- If the patient’s race is documented only as Hispanic/Latino, choose “White” **and** select “Hispanic or Latino” for ethnicity.
- If the patient’s race is documented as mixed Hispanic/Latino with another race, choose whatever race is listed – for example, if “Black/Hispanic” is noted, select “Black or African American” **and** “Hispanic or Latino” for the ethnicity.
- If the patient declined to answer, include in Unknown.

Resources: US Office of Management and Budget Classification of Federal Data on Race and Ethnicity. US Census Bureau

11) Ethnicity

Intent: To capture the ethnicity of the patient. It may also be used when investigating disparities in care or outcomes.

Definition: Hispanic or Latino is a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race.

Variable Options:

- a. Hispanic or Latino
- b. Not Hispanic or Latino
- c. Unknown

Include: All

Exclude: N/A

Notes:

- “Race” is required in addition to the variable.
- If the ethnicity is unknown, select “Not Hispanic or Latino.”

12) Address (1234 Main Street)

Intent: Capture the patient’s current address.

Definition: The patient’s current address (street number and street name).

Variable Options: Format example 1234 Main Street

Include: All

Exclude: N/A

Notes:

- If no address is available, please leave blank.

13) City

Intent: Capture the patient’s current address.

Definition: The patient’s city of residence.

Variable Options: Free Text

Include: All

Exclude: N/A

Notes:

- If no address is available, please leave blank.

14) State

Intent: Capture the patient's current address.

Definition: The patient's state of residence.

Variable Options: Select state from the dropdown menu

Include: All

Exclude: N/A

Notes:

- If no address is available, please leave "Michigan."

15) ZIP Code

Intent: Capture the patient's current address.

Definition: The patient's zip code.

Variable Options: 5-digit number, Format example 12345

Include: All

Exclude: N/A

Notes:

- If no address is available, please leave blank.
- Enter the first five digits.

16) Phone (XXX-XXX-XXXX)

Intent: Capture the patient's phone number.

Definition: The patient's phone number.

Variable Options: Format XXX-XXX-XXXX

Include: All

Exclude: N/A

Notes:

- If no phone number is available, please leave it blank.

17) Email

Intent: Capture the patient's email.

Definition: The patient's current email.

Variable Options: Free Text

Include: All

Exclude: N/A

Note: If no email is available, please leave blank.

18) Insurance

Intent: To capture the insurance or payment type for the admission.

Definition: Indicate the patient's primary insurance/payer at discharge.

Variable Options:

- a. Government Medicaid (straight)
- b. Government Medicare (all)
- c. Government Medicare & Medicaid
- d. Government Other Payer (e.g., TriCare, VA Health Benefits)
- e. HMO BCN Medicare Advantage (Blue Care Network (BCN))
- f. HMO BCN Michigan
- g. HMO Commercial (non-BCN)
- h. HMO Medicaid (e.g., Blue Cross Complete of Michigan) For a list of additional Medicaid HMO plans by county, go to:
https://www.michigan.gov/documents/mdch/MHP_Service_Area_Listing_326102_7.pdf
- i. Non-HMO BCBSM-Medicare Advantage (Blue Cross Blue Shield Michigan (BCBSM), e.g., Medicare Plus Blue PPO)
- j. Non-HMO BCBS Michigan (Blue Cross Blue Shield (BCBS) Michigan PPO or EPO)
- k. Non-HMO Commercial (e.g., non-Michigan BCBS PPO or EPO, other payer non-HMO, worker' comp/auto insurance)
- l. Self-Pay with Insurance (patient has insurance, but it is not being used for this admission)
- m. Uninsured/Self-Pay without Insurance (includes Medicaid pending and international insurance)

Include: All

Exclude: N/A

Note:

Tab 3 - Arrival

19) ED Arrival Date

Intent: To capture the first date that the patient is available to be seen by a physician provider in the ED to track timeframes.

Definition: The date the patient first reaches a healthcare provider.

Variable Options: Date in mm/dd/yyyy format

Include: All patients seen in the ED.

Exclude: N/A

Notes:

- Use ED arrival date from the ED record. Do not use the arrival date listed on an EMS run sheet for this variable.
- If the patient is transferred from another hospital's ED, capture the date the patient arrives at your ED.
- Leave blank if the patient was not treated in the ED.
- Patients admitted from OB triage or Women's triage leave the ED Arrival date and time blank.

20) ED Arrival Time (Military Time 00:00)

Intent: To capture the first time the patient is available to be seen by a physician provider in the ED to track timeframes.

Definition: The time the patient first reaches a healthcare provider.

Variable Options: military time in hh:mm format

Include: All patients seen in the ED.

Exclude: N/A

Notes:

- Use ED arrival time from the ED records. Do not use the arrival time listed on an EMS run sheet for this variable.
- If the patient is transferred from another hospital's ED, capture the time the patient arrives at your ED.
- Leave 00:99 if the patient was not treated in the ED.
- Patients admitted from OB triage or Women's triage leave the ED Arrival date and time blank.

21) Admit Date

Intent: To capture the date the patient started treatment outside of an ED stay.

Definition: The date the patient was admitted or placed in observation.

Variable Options: Date in mm/dd/yyyy format

Include: N/A

Exclude: Patients treated only in the ED.

Notes:

- Leave blank if the patient was managed only in the ED and did not have surgery.
- Admit date for patients directly admitted from the outside to an inpatient unit or going from the ED to a unit (inpatient/observation) will be the ADT unit admit date.
- Admit date for patients not admitted before going to the OR (e.g., ED to OR) will be the in-room date from the anesthesia record.
- Patients admitted from OB triage or Women's triage leave the ED Arrival date and time blank but complete the Admit date and time.

22) Admit Time (Military Time 00:00)

Intent: To capture the time the patient started treatment outside of an ED stay.

Definition: The date the patient was admitted or placed in observation.

Variable Options: military time in hh:mm format

Include: N/A

Exclude: Patients treated only in the ED.

Notes:

- Leave 00:99 if the patient was managed only in the ED and did not have surgery.
- Admit time for patients directly admitted from the outside to an inpatient unit or going from the ED to a unit (inpatient/observation) will be the ADT unit admit time.
- Admit time for pts going from the ED to the OR will be the in-room time from the anesthesia record.

23) Point of Entry

Intent: To capture the patient's location before being admitted to your hospital if needed for case-mix adjustment.

Definition: To capture the patient's location before being admitted to your hospital.

Variable Options:

- Home/Direct Admit (e.g., home, assisted living facility, group home, jail/prison).
 - Include patients directly admitted from a physician's office or urgent care.
- Direct from Skilled Care (e.g., skilled nursing home, transitional care unit, sub-acute hospital, ventilator bed, long-term acute care facility)
 - Patients directly admitted from a skilled nursing facility.
- ED
 - Patient presents from home to your ED.
 - If the patient presents to an outside ED and then presents to your ED by private car **without** transfer paperwork/orders.
 - Patients who present from a skilled nursing facility to the ED.
- Transfer from Outside Hospital ED
 - If the patient presents to an outside ED and then presents to your ED or hospital by private car **with** transfer paperwork/orders.
- Transfer from Outside Hospital (e.g., inpatient at transferring hospital to inpatient at your hospital)
- Transfer Other (e.g., a psychiatric unit, hospice unit, ambulatory surgery center directly to an inpatient bed)
- Emergency Department Only/Not Admitted
 - A patient who is never admitted and never has surgery.
- Other (e.g., Admit via OB/women's triage, admit from inpatient rehab)

Include: All

Exclude: N/A

Notes:

24) Transport Mode

Definition: Identify the mode of transport delivering the patient to your hospital.

Values:

- a. Ground Ambulance
- b. Helicopter Ambulance
- c. Fixed-wing Ambulance
- d. Private/Public Vehicle/Walk-in
- e. Police
- f. Other

Include: All patients who are transferred to your hospital.

Exclude: Patients who are not transferred to your hospital.

Notes:

25) Surgery Consult Date (mm/dd/yyyy)

Intent: To allow the hospital/service to track timeframes from visit start to the date the patient is seen by the general surgery service.

Definition: Indicate the date the first general surgeon saw the patient

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Consult Inpatient New, Consult in ED or Admit H & P are all acceptable sources.
- The date of the first note should be used if there is more than one general surgeon who sees the patient (e.g., an ED consult and then an inpatient H & P, use the ED consult date).
- Use the general surgery consult date if there is a general surgery consult and a surgical critical care consult.
- If the patient is a home/direct admit to the operating room **or** a consult in the operating room, put the surgery date from the Anesthesia record.

26) Consult Surgeon

Intent: To allow the hospital/service to track each surgeon's consults/admits to allow for surgeon-specific data reporting.

Definition: Identify the name of the first general surgery physician to see the patient for consult/admit.

Variable Options: Select the appropriate surgeon's name.

Include: All

Exclude: N/A

Notes:

- Consult Inpatient New, Consult in ED or Admit H & P are all acceptable sources.
- The general surgery attending physician listed on the first note should be used if more than one (e.g., an ED consult and then an inpatient H & P, use the ED consult date).
- If there is a general surgery consult and a surgical critical care consult, use the surgeon's name from the general surgery consult.
- If the patient is a home/direct admit to the operating room **or** a consult in the operating room, put the primary attending general surgeon who performed the surgery from the operative note.

27) ACS Service

Intent: To allow the hospital to provide service-specific data reporting when multiple general surgery teams are available.

Definition: Document the name of the general surgery service that provides the first consult/admit.

Variable Options: Select the appropriate general surgery service for your hospital.

Include: All

Exclude: N/A

Notes:

- There may be multiple services within an institution covering emergency general surgery/surgical critical care. In a community setting, numerous physician practices may share call for emergency general surgery/surgical critical care. The service or practice group assigned to each variable option will be identified by each hospital to best meet their reporting needs.

28) Type of Service

Intent: To allow the hospital to provide service-specific information on the number of patients seen who are consults only and those admitted to the general surgery service.

Definition: Indicate if the service was seeing the patient as an outpatient, a consultant or if the patient was admitted to the general surgery service.

Variable Options:

- a. Admit – primary responsibility for this patient’s care lies with general surgery
- b. Consult – general surgery is consulted to see the patient, but the primary responsibility for the care of this patient is with another service (e.g., medicine, neurosurgery)
- c. Outpatient – patients who present for outpatient surgery and are not admitted post-op

Include: All

Exclude: N/A

Notes:

- Select “Consult” for all patients the service sees in the ED who are discharged from the ED (not admitted to the hospital).
- If SA1, SA2, or SCC is the primary service, mark it as “Admit.”

Tab 4 – Risk Factors**29) Height (cm)**

Intent: To capture the patient’s height for risk stratification.

Definition: The patient’s height as documented in the medical record before surgery or on admission for medically managed patients.

Variable Options: Height in centimeters (cm)

Include: All patients with a recorded height between 102-244 cm.

Exclude: patients with a recorded height outside the range above or who do not have a height in the medical record.

Notes:

30) Weight (kg)

Intent: To capture the weight of the patient for risk stratification.

Definition: The patient's weight as documented in the medical record before surgery or on admission for medically managed patients.

Variable Options: Weight in kilograms (kg)

Include: All patients with a recorded weight between 27-635 kg.

Exclude: patients with a recorded weight outside the range above or who do not have a weight recorded in the medical record.

Notes:

- If multiple weights are recorded, use the closest to the surgery date/time or the closest to ED/admission for non-surgery patients.
- If actual weight and patient stated weight are both listed, enter the patient's actual weight.

31) Ascites

Intent: To capture patients with ascites due to liver disease or malignancy for risk stratification.

Definition: The patient had accumulated fluid in the peritoneal cavity related to liver disease or malignancy noted on physical examination, paracentesis, radiology results, or found during the principal operative procedure (if the patient had surgery). Ascites noted within 30 days before the principal operative procedure for surgery patients or within 30 days before admission for medically managed patients should be included.

Variable Options:

- a. Yes - Ascites due to liver disease or malignant ascites due to cancer (patient should have documentation of liver disease or cancer in the medical record)
- b. No

Include: All

Exclude: N/A

Note:

- Select "No" for "Minimal," "trace," or "small amount" of ascites noted.
- Select "No" for ascites unrelated to liver disease or cancer.

32) CHF w/in 30 Days

Intent: To identify patients with a new diagnosis of congestive heart failure (CHF) or patients with chronic CHF who had a recent acute exacerbation for risk stratification.

Definition: The patient has a new diagnosis of CHF or chronic CHF with a recent acute exacerbation (new signs or symptoms) within 30 days before surgery or 30 days before admission for medically managed patients. CHF should be noted in the medical record.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Note:

- Select "Yes" for patients who have an LVAD in place.

33) COPD (Severe)

Intent: To identify patients with severe chronic obstructive pulmonary disease (COPD) for risk stratification.

Definition: The patient has a documented diagnosis of COPD and at least one of four indicators of severe COPD.

Variable Options:

- a. Yes – Diagnosis of COPD **and** one or more of the following:
 - Functional disability from COPD (e.g., dyspnea or inability to perform ADLs)
 - Chronic bronchodilator therapy (oral or inhaled)
 - Past hospital admission (does not include ED only not admitted) for treatment of COPD
 - An FEV₁ of <75% of predicted on pulmonary function testing
- b. No
 - Patients with diffuse interstitial fibrosis, sarcoidosis, cystic fibrosis, or silicosis

Include: All

Exclude: N/A

Notes:

- Select “No” for patients diagnosed with asthma, seasonal asthma, or exercise-induced asthma.
- PRN use of a bronchodilator does not meet the criteria for “chronic bronchodilator therapy.”

34) COVID-19

Intent: To identify patients with a known or suspected COVID-19 infection on admission for risk stratification.

Definition: Determine the likelihood that the patient had a COVID-19 infection on admission.

Variable Options:

- a. Confirmed Positive Active – tested and confirmed positive on this admission
- b. Confirmed Positive Historic – tested and confirmed positive within the last 12 months
- c. Suspected – signs and symptoms consistent with COVID-19 but not tested
- d. Unlikely – no symptoms of COVID-19 and not tested
- e. Confirmed Negative – tested and confirmed negative

Include: All

Exclude: N/A

Notes:

35) Current Cancer/Malignancy

Intent: To identify patients with an existing malignancy for risk stratification.

Definition: The patient has a known malignancy before admit or is diagnosed with a malignancy during this admission.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes: If the answer to the above question is “Yes,” the Disseminated Cancer variable must be completed.

- Select “Yes” if the patient received treatment (e.g., chemotherapy, radiation therapy, hormone therapy, surgery) for a malignancy within one year before the admit date.
- Select “Yes” if the malignancy is identified during surgery (operative note or positive pathology result).
- Select “No” for patients with basal cell or superficial squamous cell skin cancer
- Select “No” for patients “in remission” or who do not have evidence of active disease.

36) Diabetes Mellitus

Intent: To identify the chronic management of a patient’s diabetes before admission for risk stratification.

Definition: Identify the diagnosis and management of diabetes in the patient before admission.

Variable Options:

- a. Insulin - Diagnosis of diabetes and patient requires insulin daily (with or without non-insulin agents).
- b. Non-Insulin – Diagnosis of diabetes and patient uses oral/non-insulin injectable anti-diabetic agent or injectable hypoglycemic agents.
- c. No (e.g., no diagnosis of diabetes, borderline/pre-diabetes, insulin resistance, gestational diabetes (only diabetes during pregnancy), patients with diet-controlled diabetes)

Include: All

Exclude: N/A

Notes:

- Select “No” if a temporary sliding scale is the only use of insulin.
- Before admission, if a patient was managing their diabetes without insulin, do not select “Insulin” if they are started on IV insulin infusion or sliding scale insulin as part of preoperative management.
- Include patients with documented pre-diabetes requiring parenteral insulin or an oral hypoglycemic agent.

37) Dialysis w/in 2 Weeks

Intent: To identify patients with severe renal compromise requiring dialysis for risk stratification purposes.

Definition: The patient has acute or chronic renal failure requiring dialysis (e.g., peritoneal, hemodialysis, hemofiltration, hemodiafiltration, ultrafiltration) in the two weeks before surgery or during any time the admission for medically managed patients.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

- If the patient refuses needed dialysis or dialysis must be delayed until after emergent surgery, select "Yes."

38) Disseminated Cancer

Intent: To identify patients with pre-existing disseminated cancer for risk stratification.

Definition: The patient has cancer that has spread to one or more sites outside of the primary site and who has cancer known to be widespread or near terminal.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

- Select "Yes" for patients who have "untreatable" cancer or for patients who choose not to treat their metastatic cancer.
- For surgical patients, select "Yes" if it is determined that the patient had disseminated cancer at the time of the principal operative procedure (e.g., pathology, additional testing within 30 days post-operatively).
- Disseminated cancer could be noted as "diffuse," "widely metastatic," "carcinomatosis," or AJCC "Stage IV."

39) Hypertension

Intent: To identify patients with hypertension requiring management for risk stratification purposes.

Definition: The patient has a documented diagnosis of hypertension **and** has been prescribed/taking antihypertensive medication (e.g., ACE inhibitors, beta-blockers, calcium channel blockers, diuretics).

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

- To answer “Yes,” must have both a diagnosis and an antihypertensive treatment.
- Exclude if documentation reports medication noncompliance.
- Exclude hypertension controlled only by diet and exercise.

40) Functional Health Status

Intent: To capture the lowest functional health status (ability to perform activities of daily living (ADLs) of the patient for risk stratification.

Definition: Identify the patient’s ability to perform ADLs on admission.

Variable Options:

- a. Not Independent – Requires assistance from another person.
- b. Independent – Doesn’t need assistance from another person.
- c. Unknown - Unable to determine the functional status of the patient.

Include: All

Exclude: N/A

Notes: If the patient’s level of ability declines before surgery, select the lowest functional level.

41) Personal History of DVT/PE

Intent: To identify patients with a history of venous thromboembolism (VTE) for risk stratification purposes.

Definition: The patient has a personal history of VTE (i.e., deep vein thrombosis (DVT), pulmonary embolism (PE)).

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

- Select “No” for patients with a history of “thrombophlebitis.”
- Select “Yes” if the patient has a history of clots/thrombi in any of the following: axillary, brachial, deep femoral, femoral/“superficial femoral,” fibular, gastrocnemius, iliac, internal jugular, peroneal, popliteal, portal, radial, soleal, subclavian, tibial, ulnar or vena cava.
- Select “Yes” if the patient was diagnosed with a DVT or PE during this admission before their general surgery operation.
 - Example: A patient with no prior history of DVT is admitted for cardiac surgery. After the cardiac surgery, the patient develops a DVT. The patient then develops ischemic bowel, and acute care surgery is consulted. The patient undergoes emergent ex-lap with ACS for bowel ischemia. Select “Yes” for Personal History of DVT/PE.

42) Pregnancy

Intent: To identify currently pregnant patients for preoperative risk stratification purposes.

Definition: The patient has one of the following documented:

- Current pregnancy is documented in the H&P or progress notes.
- Positive pregnancy test documented preoperatively or on admission for non-operative patients.

Variable Options:

- a. Yes
- b. No

Include: All people determined to be genetic females at birth.

Exclude: All people determined to be genetic males at birth.

Notes:

43) Preoperative Sepsis

Intent: To identify patients with pre-existing sepsis for risk stratification purposes.

Definition: The patient has Sepsis or Severe Sepsis/Septic Shock meeting the criteria in the table below before surgery or on admission for non-surgical cases.

Sepsis	Infection Source: Documentation of a new confirmed or suspected infection source within 72 hours before the surgery start time.	And	At least TWO of the following Systemic Signs/Symptoms : <ul style="list-style-type: none"> Heart Rate (HR) > 90 beats per minute Respiratory Rate (RR) > 20 breaths per minute Temperature > 38° C or < 36° C White blood cell count > 12,000/cu mm or < 4,000/cu mm or immature (band) forms > 10% Note: <ul style="list-style-type: none"> A maximum of one calendar day allowed between new Infection Source documentation and Systemic Signs/Symptoms. A maximum of 6 hours is allowed between any two of the Systemic Signs/Symptoms. Systemic Signs/Symptoms must be new and not related to a chronic condition
Severe Sepsis/Septic Shock	Must meet the above criteria for Sepsis. Note: A maximum of 6 hours is allowed between System Signs/Symptoms of (Sepsis criteria above) and signs of Organ Dysfunction .	And	At least ONE of the following signs of Organ Dysfunction : <ul style="list-style-type: none"> Systolic Blood Pressure (SBP) < 90 mmHg Mean Arterial Pressure (MAP) < 65 mmHg Systolic Blood Pressure (SBP) decrease > 40 mmHg from baseline Lactate > 2 mmol/L INR > 1.5 or aPTT > 60 seconds Platelet count < 100,000 μL Bilirubin > 2mg/dL Creatinine > 2 mg/dL Urine output < 0.5 mL/kg/hour x 2 Hypotension requiring vasopressor therapy to maintain or elevate MAP > 65 mmHg Note: <ul style="list-style-type: none"> Organ dysfunction criteria cannot be related to a chronic condition (e.g. low urine output with chronic renal failure).

			<ul style="list-style-type: none"> • Organ dysfunction criteria must be remote from the infection source. • Only documented blood pressures are to be used regardless of vasopressor administration.
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Variable Options:

- a. Severe Sepsis/Septic Shock
- b. Sepsis
- c. No

Include: All

Exclude: N/A

Notes:

- Acute pancreatitis is NOT an infection source.
- "Suspected Sepsis" is NOT a documented source of infection.
- "Suspected infection from ____" is an acceptable source of infection.
- Nursing documentation referencing an infection source or treatment of a new infection is acceptable.
- Select the highest level of sepsis that the patient meets the criteria for.

44) Prior Opioid Use

Intent: To determine if a patient has been taking opioids before admission.

Definition: Descriptors documented in the patient's medical record consistent with prescribed or recreational opioid use within a 5-day timeframe before admission.

Variable Options:

- i. Yes
- ii. No

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)

- All routes of administration are included

45) Sleep Apnea

Intent: To capture patients with suspected or documented sleep apnea for risk stratification purposes.

Definition: The patient has one of the following documented:

- A diagnosis of sleep apnea or “suspicion” of sleep apnea
- Use of treatment at home (CPAP, BiPAP, VPAP, APAP, professionally fitted oral appliance (not over the counter), neuro-stimulation therapy).
- Documentation of at least 3 of the following “STOP-BANG” assessment criteria:
 - High blood pressure
 - BMI >35
 - Age >50 years
 - Male gender
 - Snoring
 - Tired, fatigued during the day
 - Observed not breathing while sleeping
 - Neck circumference > 40 cm (16 inches)

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

46) Solid Organ Transplant

Intent: To identify patients who have a history of solid organ transplant for risk stratification purposes.

Definition: The patient has had a solid organ transplant.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

- A solid organ is the heart, lung, kidney, pancreas, liver, or small bowel.

47) Steroid/Immunosuppressive Medication

Intent: To identify patients on long-term corticosteroids or immunosuppressive therapy for risk stratification purposes.

Definition: The patient regularly received corticosteroids (oral or parenteral) for a chronic condition **or** immunosuppressive medications for one of the following: chemotherapy, autoimmune disease, non-autoimmune inflammatory disease, or to prevent organ transplant rejection within 30 days before surgery or within 30 days before admission for medically managed patients.

Variable Options:

- Yes
- No

Include: All

Exclude: N/A

Notes:

- Select "No" if the patient received steroids for a duration of 10 days or less in the 30 days prior.
- Select "No" if the corticosteroid is applied topically to the skin, inhaled, or taken rectally.
- Interferons are not steroid or immunosuppressive medications.

Steroid Examples	
Brand Name	Generic
Celestone	betamethasone
	betamethasone sodium phosphate
Cortone	cortisone acetate
Decadron	dexamethasone
Decadron - LA	dexamethasone acetate
Decadron Phosphate	dexamethasone sodium phosphate
Cortef	hydrocortisone, hydrocortisone cypionate
	hydrocortisone sodium phosphate
Solucortef	hydrocortisone sodium succinate
Medrol, Meprolone	methylprednisolone

Depo-Medrol	methylprednisolone acetate
Solu-Medrol	methylprednisolone sodium succinate
Delta-Cortef	prednisolone
Prelone	prednisolone sodium phosphate
	prednisolone acetate
Pediapred	prednisolone sodium
Meticorten	prednisone
Aristocort, Kenacort, Atolone	triamcinolone
Entocort	budesonide
Hydrocortone	hydrocortisone
Kenalog	triamcinolone acetonide
Aristocort	triamcinolone diacetate

Immunosuppressant Examples	
Brand Name	Generic
Humira	adalimumab
Imuran	azathioprine
Cimzia	certolizumab pegol
Neoral, Sandimmune	cyclosporine
Enbrel	etanercept
Remicade	infliximab
Rheumatrex, Trexall	methotrexate
CellCept, Myfortic	mycophenolate
Tysabri	natalizumab
Rapamune	sirolimus
Prograf	tacrolimus

48) Tobacco w/in 1 year – Cigarette

Intent: To identify patients who have recently smoked tobacco cigarettes for risk stratification purposes.

Definition: The patient smoked a tobacco-containing cigarette within the 12 months before admission.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: NA

Notes:

- Select “No” if smoking electronic cigarettes (no tobacco), marijuana, cigars, or hookah/shisha.
- Select “No” for chewing tobacco or vaping.

49) Ventilator Dependent w/in 48 Hours

Intent: To capture for risk stratification purposes patients who required ventilator support.

Definition: A patient with a tracheotomy or endotracheal tube who requires ventilator-assisted respirations at any time during the 48 hours before the principal operative procedure if they had surgery or at any time during the admit if they were medically managed.

Variable Options:

- a. Yes
- b. No (e.g., no ventilator required, CPAP/BiPAP for sleep apnea or respiratory distress)

Include: All

Exclude: N/A

Notes:

Tab 5 – Readmission

50) MACS Readmit

Intent: To capture patients who have previously been included in the MACS database to evaluate management outcomes.

Definition: The patient has been previously entered into the MACS/Qualtrics database.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

51) Index Disease

Intent: To capture the index disease category for patients who have previously been abstracted in the MACS database to evaluate management outcomes.

Definition: The disease category that the patient had qualified for during prior or index admission.

Variable Options:

- a. Appendix
- b. Gallbladder
- c. Small Bowel
- d. Exploratory Laparotomy

Include: All patients having hospital readmission following discharge.

Exclude: N/A

Notes:

- The purpose of this question is to associate a readmission case to a MACS Index Disease.
- If readmission reason is completely unrelated to the prior index admit disease and based on Primary ICD-10 coding, the readmission qualifies for another MACS Organ System disease, then consider this readmission as a new index disease and select the current reason for admission.
 - **For example**, if a patient had a prior appendectomy and is readmitted for a cholecystectomy, select “Gallbladder” for Index Disease.
 - A patient had an emergent exploratory laparotomy during their index admission and is readmitted with a small bowel obstruction due to adhesions from the surgery. During readmission, the small bowel obstruction is managed medically. Select “Exploratory Laparotomy” for Index Disease.
 - A small bowel obstruction patient is managed medically during the index admission. They are then readmitted and undergo an emergent exploratory laparotomy for treatment of the small bowel obstruction. Select “Small Bowel” for Index Disease.

52) Prior Appendectomy

Intent: To capture patients who have previously had an appendectomy before this hospital readmission.

Definition: The patient has had their appendix removed at your center, an outside hospital, or an outside surgery center before this readmission.

Variable Options:

- a. Yes
- b. No

Include: All patients who are a MACS readmit.

Exclude: Patients who are not a MACS readmit.

Notes:

- The purpose of this question is to identify patients who had their appendix removed before readmission. This could be at your hospital, another hospital, or an outpatient surgical facility.
- This will assist in the capture of complications related to appendix removal such as stump appendicitis, abscess, etc.

53) Prior Cholecystectomy

Intent: To capture patients who have previously had a cholecystectomy before this hospital readmission.

Definition: The patient has had their gallbladder removed at your center, an outside hospital, or an outside surgery center before this readmission.

Variable Options:

- a. Yes
- b. No

Include: All patients who are a MACS readmit.

Exclude: Patients who are not a MACS readmit.

Notes:

- The purpose of this question is to identify patients who had their gallbladder removed before readmission. This could be at your hospital, another hospital, or an outpatient surgical facility.
- This will assist in the capture of complications related to gallbladder removal such as cystic duct stump leak, abscess, recurrent cholecystitis in a gallbladder remnant from prior partial cholecystectomy, etc.

Tab 6 – Disease

54) PRIMARY ICD-10 Code

Intent: To identify the primary reason the patient was admitted or was seen by General Surgery.

Definition: The post-discharge ICD-10 that best defines the General Surgery problem for which the patient was seen.

Variable Options: Enter the appropriate ICD-10 diagnosis code.

Include: All patients with an ICD-10 code available.

Exclude: Patients that an ICD-10 code cannot be identified.

Notes:

- Use the primary billing diagnosis code for the admission (final after discharge) if appropriate to the reason for General Surgery consult.
- If the primary billing code is not available or not related to General Surgery, use the billing code that best describes the reason General Surgery was caring for the patient.

Example:

- A patient with ruptured AAA will likely have a code for ruptured AAA as their primary admission diagnosis code. However, if General Surgery sees the patient for ischemic colitis, the code recorded in MACS as the PRIMARY should be for ischemic colitis.

55) SECONDARY ICD-10 Code

Definition: A significant post-discharge ICD-10 code that reflects a related or unrelated problem that will add further description to the general surgery problem.

Variable Options: Enter the appropriate ICD-10 diagnosis code.

Include: All patients with a secondary ICD-10 code available.

Exclude: Patients that a secondary ICD-10 code is not identified.

Notes:

- May use an ICD-10 code related to the general surgery problem that will further add to the description of the general surgery problem.

Example:

- A patient with ruptured AAA will likely have a code for ruptured AAA as their primary admission diagnosis code. However, if General Surgery sees the patient for ischemic colitis, the code recorded in MACS as the PRIMARY ICD-10 would be ischemic colitis, and the SECONDARY ICD-10 would be ruptured AAA.

- An ex-lap patient has a cancerous mass that causes a bowel obstruction, leading to small bowel ischemia. The PRIMARY ICD-10 would be bowel ischemia, and the SECONDARY ICD-10 would be cancerous mass.

Notes:

- May alternatively use an ICD-10 code that reflects a diagnosis significant to the patient's admission/management but *not* related to the General Surgery problem.

56) Organ System

Intent: To identify patients with select disease processes for in-depth review.

Definition: Indicate if the patient meets MACS criteria for the appendix (acute appendicitis), gallbladder (acute gallbladder disease), small bowel obstruction, or emergent/urgent exploratory laparotomy. An emergent exploratory laparotomy case is defined by the surgeon or anesthesia using an "E" in the ASA score. An urgent exploratory laparotomy case is one that goes to the operating room within 48 hours of the decision to operate.

Variable Options:

- Appendix
- Gallbladder
- Small Bowel
- Exploratory Laparotomy
- None

Include: All

Exclude: N/A

Notes:

- Select "None" if this is a READMISSION case AND if the PRIMARY ICD-10 code is not reflective of a MACS qualifying appendicitis, gallbladder disease, or small bowel obstruction diagnosis and the patient did not have an exploratory laparotomy on this readmit.
For example, if the patient had a cholecystectomy and got readmitted with Primary ICD-10 code K65.1 (peritoneal abscess), select "None." If the patient gets readmitted with Primary ICD-10 code K80.50 (choledocholithiasis), which is a MACS qualifying gallbladder disease code, then select "Gallbladder."
- Select "Exploratory Laparotomy" if an appendectomy was a part of a bowel resection for a non-appendicitis diagnosis and does meet criteria for "Exploratory Laparotomy."
- Select "Appendix" if the patient is having surgery for an interval appendectomy.

- Select “Appendix” if the patient had a prior appendectomy and is admitted with stump appendicitis.
- If the patient has an emergent exploratory laparotomy to manage a small bowel obstruction caused by volvulus, hernia, internal hernia, or mass/malignancy, select “Exploratory Laparotomy.”
- If there is a large bowel obstruction only, do NOT select small bowel obstruction.
- Ileus criteria - Consider excluding the patient from SBO data capture if criteria 1-3 are present:
 1. The abdominal/pelvic CT scan does not identify a transition point.
 2. The patient resolves the ileus with no operative intervention.
 3. The progress notes or consult notes suggest that ileus is the more likely diagnosis.
 4. It is okay to phone or email the surgeon to ask for clarification. Please document the conversation in your records/log.

Tab 6 - Appendix

Note: if *interval appendectomy*, then skip ahead to “Pathology Result (question #63)” and “Appendicitis Type (question #64)” and then skip ahead to *Appendectomy within 12 months* (question #76 in the data dictionary).

57) Diagnosis CT Scan

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if a CT scan was performed as a part of the initial workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All acute appendicitis patients.

Exclude: Patients treated for a diagnosis other than acute appendicitis.

Notes:

- May include any CT that leads to information helpful to determining management (e.g., CT from an outside hospital with an internal read).

58) CT Results

Intent: To capture the results of tests utilized to determine management options.

Definition: Identify the results of CT testing related to appendicitis management.

Variable Options:

- a. Positive (for appendicitis)
- b. Negative (for appendicitis)
- c. Equivocal (does not definitively point to appendicitis)

Include: All appendicitis patients who had a diagnosis CT.

Exclude: Patients who did not have a diagnosis CT.

Notes:

- If not appendicitis but other CT findings (e.g., mass, carcinomatosis, cyst) that could be related to the final diagnosis, select Equivocal.

59) CT Findings

Intent: To capture the testing results utilized to determine the management of small bowel obstruction.

Definition: Determine if the following variable options were identified in the CT report or the surgeon's note(s) regarding CT results.

Variable Options:

- a. Abscess
 - i. Yes
 - ii. No
- b. Fecalith
 - i. Yes
 - ii. No
- c. Free Air
 - i. Yes
 - ii. No
- d. Free Fluid
 - i. Yes
 - ii. No
- e. Phlegmon
 - i. Yes
 - ii. No

Include: All patients with a positive or equivocal CT scan for appendicitis.

Exclude: Appendicitis patients who do not have a CT scan.

Notes:

60) Diagnosis Ultrasound

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if an ultrasound was performed as a part of the initial workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All acute appendicitis patients.

Exclude: Patients treated for a diagnosis other than acute appendicitis.

Notes:

- May include any ultrasound that leads to information helpful to determining management (e.g., ultrasound from an outside hospital with an internal read).

61) Ultrasound Results

Intent: To capture the results of tests utilized to determine management options.

Definition: Identify the results of ultrasound testing related to appendicitis management.

Variable Options:

- a. Positive (for appendicitis)
- b. Negative (for appendicitis)
- c. Equivocal (does not definitively point to appendicitis)

Include: All appendicitis patients who had a diagnosis ultrasound.

Exclude: Patients who did not have a diagnosis ultrasound.

Notes:

- If ultrasound does not visualize the appendix, select Equivocal.

- If not appendicitis but other ultrasound findings (e.g., mass, carcinomatosis, cyst) that could be related to the final diagnosis, select Equivocal.

62) Diagnosis MRI

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if an MRI was performed as a part of the initial workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All acute appendicitis patients.

Exclude: Patients treated for a diagnosis other than acute appendicitis.

Notes:

- May include any MRI that leads to information helpful to determining management (e.g., MRI from an outside hospital with an internal read).

63) MRI Results

Intent: To capture the results of tests utilized to determine management options.

Definition: Identify the results of MRI testing related to appendicitis management.

Variable Options:

- a. Positive (for appendicitis)
- b. Negative (for appendicitis)
- c. Equivocal (does not definitively point to appendicitis)

Include: All appendicitis patients who had a diagnosis MRI.

Exclude: Patients who did not have a diagnosis MRI.

Notes:

- If not appendicitis but other MRI findings (e.g., mass, carcinomatosis, cyst) that could be related to the final diagnosis, select Equivocal.

64) Pathology Result

Intent: To allow the hospital/service to track negative pathology in appendectomy patients and provide service/surgeon-specific data reporting.

Definition: Document the anatomical pathology results.

Variable Options:

- a. Positive (e.g., acute appendicitis, gangrenous appendicitis, acute appendicitis, and serositis, acute appendicitis limited to diverticula, acute perforated appendicitis, or sequela of prior appendicitis such as scarring, atrophy, or other findings consistent with prior appendicitis)
- b. Negative (e.g., no significant abnormality, appendix without diagnostic abnormality)
- c. Equivocal (e.g., other significant findings such as carcinoma, inflammatory mass)
- d. No Operation

Include: All appendectomies performed for acute appendicitis.

Exclude: Appendectomy performed for non-appendicitis purposes.

Notes:

- Do not complete pathology results if appendectomy was a part of bowel resection for a non-appendicitis diagnosis.
- Sequela of prior acute appendicitis can be found in the pathology report or noted by the surgeon in the operative report.

65) Appendicitis Type

Intent: To collect information that helps determine the patient's health status before appendicitis management.

Definition: Identify the most appropriate health status of the patient before appendicitis management.

Variable Options:

- a. Uncomplicated (e.g., non-perforated appendicitis)
 - i. CT or physicians' notes indicate uncomplicated appendicitis
- b. Complicated-Comorbidity (e.g., patient with non-perforated appendicitis but who cannot be operated on due to other pre-existing conditions)
- c. Complicated (e.g., perforated appendicitis, appendiceal carcinoma)

Include: All acute appendicitis patients.

Exclude: Patients treated for a diagnosis other than acute appendicitis.

Notes:

66) Medical Management

Intent: To determine the volume of patients who have acute appendicitis and are managed without surgery.

Definition: Identify all patients who receive medical management for their acute appendicitis.

Variable Options:

- a. Yes
- b. No

Include: All acute appendicitis patients.

Exclude: Patients treated for a diagnosis other than acute appendicitis.

Notes:

- For all surgical patients, the answer will be No.

*If the appendicitis patient is being **treated surgically**, do not answer the antibiotic questions (#67-76 in the data dictionary). Go directly to "Appendectomy within 12 months" (question #77 in the data dictionary).*

67) IV Antibiotic #1 Class

Intent: To determine the type of IV antibiotics used in the medical management of acute appendicitis.

Definition: Identify the class of IV antibiotic administered for medical management of acute appendicitis.

Variable Options:

- a. Aminoglycoside (e.g., Gentamicin, Tobramycin, Neomycin)
- b. Carbapenem (e.g. Imipenem, Meropenem)
- c. Cephalosporin – Generation 1 (e.g., cefazolin, cephalexin)
- d. Cephalosporin – Generation 2 (e.g., cefotetan, cefoxitin, cefuroxime)
- e. Cephalosporin – Generation 3 (e.g., cefixime, cefotaxime, ceftriaxone)
- f. Cephalosporin – Generation 4 (e.g., cefepime)
- g. Lincosamide

- h. Macrolide
- i. Monobactam
- j. Penicillin (e.g., Zosyn, Augmentin)
- k. Quinolone (e.g. ciprofloxacin, levofloxacin)
- l. Sulfonamide
- m. Tetracycline
- n. Other (e.g., Vancomycin, Vancocin, metronidazole(Flagyl), Bactrim)

Include: All medically managed appendicitis patients.

Exclude: N/A

Notes:

- If more than three classes of IV antibiotics are administered, enter the three administered the greatest number of days.

68) Duration of IV Antibiotic #1 (calendar days)

Intent: To determine the duration of IV antibiotics used in the medical management of acute appendicitis.

Definition: Identify the number of calendar days that the patient received at least one dose of the antibiotic class # 1.

Variable Options: A whole number

Include: All medically managed appendicitis patients.

Exclude: N/A

Notes:

69) IV Antibiotic #2 Class

Intent: To determine the type of IV antibiotics used in the medical management of acute appendicitis.

Definition: Identify the class of IV antibiotic administered for medical management of acute appendicitis.

Variable Options:

- a. Aminoglycoside (e.g., Gentamicin, Tobramycin, Neomycin)

- b. Carbapenem (e.g. Imipenem, Meropenem)
- c. Cephalosporin – Generation 1 (e.g., cefazolin, cephalexin)
- d. Cephalosporin – Generation 2 (e.g., cefotetan, ceftiofur, cefuroxime)
- e. Cephalosporin – Generation 3 (e.g., ceftazidime, ceftiofur, ceftazidime)
- f. Cephalosporin – Generation 4 (e.g., ceftazidime)
- g. Lincosamide
- h. Macrolide
- i. Monobactam
- j. Penicillin (e.g., Zosyn, Augmentin)
- k. Quinolone (e.g. ciprofloxacin, levofloxacin)
- l. Sulfonamide
- m. Tetracycline
- n. Other (e.g., Vancomycin, Vancocin, metronidazole(Flagyl), Bactrim)

Include: All medically managed appendicitis patients.

Exclude: N/A

Notes: If more than three classes of IV antibiotics are administered, enter the three administered the greatest number of days.

70) Duration of IV Antibiotic #2 (calendar days)

Intent: To determine the duration of IV antibiotics used in the medical management of acute appendicitis.

Definition: Identify the number of calendar days that the patient received at least one dose of the antibiotic class # 2.

Variable Options: A whole number

Include: All medically managed appendicitis patients.

Exclude: N/A

Notes:

71) IV Antibiotic #3 Class

Intent: To determine the type of IV antibiotics used in the medical management of acute appendicitis.

Definition: Identify the class of IV antibiotic administered for medical management of acute appendicitis.

Variable Options:

- a. Aminoglycoside (e.g., Gentamicin, Tobramycin, Neomycin)
- b. Carbapenem (e.g. Imipenem, Meropenem)
- c. Cephalosporin – Generation 1 (e.g., cefazolin, cephalexin)
- d. Cephalosporin – Generation 2 (e.g., cefotetan, ceftiofur, cefuroxime)
- e. Cephalosporin – Generation 3 (e.g., cefixime, cefotaxime, ceftriaxone)
- f. Cephalosporin – Generation 4 (e.g., cefepime)
- g. Lincosamide
- h. Macrolide
- i. Monobactam
- j. Penicillin (e.g., Zosyn, Augmentin)
- k. Quinolone (e.g. ciprofloxacin, levofloxacin)
- l. Sulfonamide
- m. Tetracycline
- n. Other (e.g., Vancomycin, Vancocin, metronidazole(Flagyl), Bactrim)

Include: All medically managed appendicitis patients.

Exclude: N/A

Notes: If more than three classes of IV antibiotics are administered, enter the three administered the greatest number of days.

72) Duration of IV Antibiotic #3 (calendar days)

Intent: To determine the duration of IV antibiotics used in the medical management of acute appendicitis.

Definition: Identify the number of calendar days that the patient received at least one dose of the antibiotic class # 3.

Variable Options: A whole number

Include: All medically managed appendicitis patients.

Exclude: N/A

Notes:

73) Duration of Home Antibiotic (calendar days)

Intent: To determine the duration of antibiotics prescribed at discharge for patients who had a medical managed acute appendicitis.

Definition: Identify the number of calendar days the patient was prescribed antibiotics after discharge.

Variable Options: A whole number

Include: All medically managed appendicitis patients.

Exclude: N/A

Notes:

- Possible sources include but are not limited to progress notes, discharge record, or orders.
- If there are different durations for home antibiotics, enter the longer duration.

74) Home Oral Antibiotic #1 Class

Intent: To determine the type of oral antibiotics prescribed at discharge for patients who had a medical managed acute appendicitis.

Definition: Identify the class of oral antibiotic prescribed at discharge for the patient who had a medical managed acute appendicitis.

Variable Options:

- a. Aminoglycoside (e.g., Gentamicin, Tobramycin, Neomycin)
- b. Carbapenem (e.g. Imipenem, Meropenem)
- c. Cephalosporin – Generation 1 (e.g., cefazolin, cephalexin)
- d. Cephalosporin – Generation 2 (e.g., cefotetan, cefoxitin, cefuroxime)
- e. Cephalosporin – Generation 3 (e.g., cefixime, cefotaxime, ceftriaxone)
- f. Cephalosporin – Generation 4 (e.g., cefepime)
- g. Lincosamide
- h. Macrolide
- i. Monobactam
- j. Penicillin (e.g., Zosyn, Augmentin))
- k. Quinolone (e.g. ciprofloxacin, levofloxacin)
- l. Sulfonamide
- m. Tetracycline
- n. Other (e.g., Vancomycin, Vancocin, metronidazole(Flagyl), Bactrim)

Include: All medically managed appendicitis patients prescribed an oral antibiotic at discharge.

Exclude: N/A

Notes:

- If more than two oral antibiotics are prescribed at discharge, enter the 2 with the longest duration.

75) Home Oral Antibiotic #2 Class

Intent: To determine the type of oral antibiotics prescribed at discharge for patients who had a medical managed acute appendicitis.

Definition: Identify the class of oral antibiotic prescribed at discharge for the patient who had a medical managed acute appendicitis.

Variable Options:

- Aminoglycoside (e.g., Gentamicin, Tobramycin, Neomycin)
- Carbapenem (e.g. Imipenem, Meropenem)
- Cephalosporin – Generation 1 (e.g., cefazolin, cephalexin)
- Cephalosporin – Generation 2 (e.g., cefotetan, cefoxitin, cefuroxime)
- Cephalosporin – Generation 3 (e.g., cefixime, cefotaxime, ceftriaxone)
- Cephalosporin – Generation 4 (e.g., cefepime)
- Lincosamide
- Macrolide
- Monobactam
- Penicillin (e.g., Zosyn, Augmentin))
- Quinolone (e.g. ciprofloxacin, levofloxacin)
- Sulfonamide
- Tetracycline
- Other (e.g., Vancomycin, Vancocin, metronidazole(Flagyl), Bactrim)

Include: All medically managed appendicitis patients prescribed an oral antibiotic at discharge.

Exclude: N/A

Notes:

- If more than two oral antibiotics are prescribed at discharge, enter the 2 with the longest duration.

76) Home IV Antibiotic Class

Intent: To determine the type of IV antibiotics prescribed at discharge for patients who had a medical managed acute appendicitis.

Definition: Identify the class of IV antibiotic prescribed at discharge for the patient who had a medical managed acute appendicitis.

Variable Options:

- a. Aminoglycoside (e.g., Gentamicin, Tobramycin, Neomycin)
- b. Carbapenem (e.g. Imipenem, Meropenem)
- c. Cephalosporin – Generation 1 (e.g., cefazolin, cephalexin)
- d. Cephalosporin – Generation 2 (e.g., cefotetan, cefoxitin, cefuroxime)
- e. Cephalosporin – Generation 3 (e.g., cefixime, cefotaxime, ceftriaxone)
- f. Cephalosporin – Generation 4 (e.g., cefepime)
- g. Lincosamide
- h. Macrolide
- i. Monobactam
- j. Penicillin (e.g., Zosyn, Augmentin))
- k. Quinolone (e.g. ciprofloxacin, levofloxacin)
- l. Sulfonamide
- m. Tetracycline
- n. Other (e.g., Vancomycin, Vancocin, metronidazole(Flagyl), Bactrim)

Include: All medically managed appendicitis patients prescribed an IV antibiotic at discharge.

Exclude: N/A

Notes:

- If more than 1 IV antibiotic is prescribed at discharge, enter the 1 with the longest duration.

77) Appendectomy Within 12 Months

Intent: To determine the prevalence of patients who have an appendectomy within 12 months of being medically managed for acute appendicitis.

Definition: Identify if the patient had a medically managed appendicitis 12 months before the appendectomy.

Variable Options:

- a. Emergent (Recurrence) – a patient who was medically managed for acute appendicitis in the prior 12 months and presented to the hospital with symptoms of acute appendicitis leading to appendectomy.

- b. Interval – a patient returns within 12 months for an elective appendectomy as a follow-up to the prior medically managed acute appendicitis.
- c. No – no medically managed acute appendicitis within 12 months before the appendectomy.

Include: All acute appendicitis patients.

Exclude: N/A

Note:

- If the patient receives medical management for acute appendicitis during this admission, leave as “No.”

Tab 7 - Gallbladder

78) Diagnosis Ultrasound

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if an ultrasound was performed as a part of initial gallbladder workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All gallbladder patients.

Exclude: N/A

Notes:

79) Diagnosis CT Scan

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if a CT scan was performed as a part of initial gallbladder workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All gallbladder patients.

Exclude: N/A

Notes:

80) Diagnosis HIDA

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if a HIDA was performed as a part of initial gallbladder workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All gallbladder patients.

Exclude: N/A

Notes:

81) Diagnosis EUS

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if an EUS was performed as a part of initial gallbladder workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All gallbladder patients.

Exclude: N/A

Notes:

82) Diagnosis ERCP

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if an ERCP was performed as a part of initial gallbladder workup (e.g., before surgery if surgical management or during admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All gallbladder patients.

Exclude: N/A

Notes:

- If the patient did not have an ERCP for diagnosis or medical management, skip to Question #88 Diagnosis MRI/MRCP.

83) Diagnosis ERCP Procedure 1

Intent: To evaluate the use of selected procedures performed during ERCP as a treatment for gallbladder disease patients.

Definition: Identify the gallbladder procedure performed during Diagnosis ERCP.

Variable Options:

- a. Stent Placement - Common Bile Duct
 - i. Yes
 - ii. No
- b. Stent Placement - Cystic Duct
 - i. Yes
 - ii. No
- c. Stent Placement - Pancreatic Duct
 - i. Yes
 - ii. No
- d. Stent Placement - Other
 - i. Yes
 - ii. No
- e. Gallstone/Sludge Removal
 - i. Yes
 - ii. No
- f. Sphincterotomy
 - i. Yes
 - ii. No

Include: All patients who had an ERCP procedure for gallbladder disease.

Exclude: Patients who did not have an ERCP procedure for gallbladder disease.

Notes:

- This section is for ERCP procedures performed for diagnosis and treatment before, or instead of, a cholecystectomy.
- For ERCP procedures performed after cholecystectomy, enter the procedure after "Secondary ERCP" below.
- Include ERCP procedures performed at any point during the admission.
- Include outpatient ERCP procedures performed following discharge from the admission.

84) Diagnosis ERCP Procedure Date 1 (mm/dd/yyyy)

Definition: The date the ERCP procedure was performed.

Variable Options: Date in mm/dd/yyyy format.

Include: All patients who had an ERCP procedure for gallbladder disease.

Exclude: Patients who did not have an ERCP procedure for gallbladder disease.

Notes:

- Multiple dates are often listed on reports and notes for the same procedure. Use the procedure end date if available.

85) Diagnosis ERCP Procedure Time 1 (hh:mm)

Definition: The time the ERCP procedure was performed.

Variable Options: Military time in hh:mm format.

Include: All patients who had an ERCP procedure for gallbladder disease.

Exclude: Patients who did not have an ERCP procedure for gallbladder disease.

Notes:

- Multiple times are often listed on reports and notes for the same procedure. Use the procedure end time if available.

86) Diagnosis ERCP Procedure 2

Intent: To evaluate the use of selected procedures performed during an additional ERCP as a treatment for gallbladder disease patients.

Definition: Identify the procedures performed during an additional Diagnosis ERCP.

Variable Options:

- a. Stent Placement - Common Bile Duct
 - i. Yes
 - ii. No
- b. Stent Placement - Cystic Duct
 - i. Yes
 - ii. No
- c. Stent Placement - Pancreatic Duct
 - i. Yes
 - ii. No
- d. Stent Placement - Other
 - i. Yes
 - ii. No
- e. Gallstone/Sludge Removal
 - i. Yes
 - ii. No
- f. Sphincterotomy
 - i. Yes
 - ii. No

Include: All patients who had an additional ERCP procedure for gallbladder disease.

Exclude: Patients who did not have an additional ERCP procedure for gallbladder disease.

Notes:

- This section is for ERCP procedures performed for diagnosis and treatment before, or instead of, a cholecystectomy.
- For ERCP procedures performed after cholecystectomy, enter the procedure after "Secondary ERCP" below.
- Include ERCP procedures performed at any point during the admission.
- Include outpatient ERCP procedures performed following discharge from the admission.

87) Diagnosis ERCP Procedure Date 2 (mm/dd/yyyy)

Definition: The date the additional ERCP procedure was performed.

Variable Options: Date in mm/dd/yyyy format.

Include: All patients who had an additional ERCP procedure for gallbladder disease.

Exclude: Patients who did not have an additional ERCP procedure for gallbladder disease.

Notes:

- Multiple dates are often listed on reports and notes for the same procedure. Use the procedure end date if available.

88) Diagnosis ERCP Procedure Time 2 (hh:mm)

Definition: The time the additional ERCP procedure was performed.

Variable Options: Military time in hh:mm format.

Include: All patients who had an additional ERCP procedure for gallbladder disease.

Exclude: Patients who did not have an additional ERCP procedure for gallbladder disease.

Notes:

- Multiple times are often listed on reports and notes for the same procedure. Use the procedure end time if available.

89) Diagnosis MRI/MRCP

Intent: To capture the types of testing utilized to determine management options.

Definition: Identify if an MRI was performed as a part of the initial gallbladder workup (e.g., before surgery if surgical management or near the time of admission for medically managed).

Variable Options:

- a. Yes
- b. No

Include: All gallbladder patients.

Exclude: N/A

Notes:

Note: For *medically managed gallbladder patients*, go to # 103 and leave numbers 90 through 102 as “No.”

90) Intra-Op Cholangiogram

Intent: To capture the testing utilized with surgical management of gallbladder disease.

Definition: Identify if an intra-operative cholangiogram was performed with surgical management of gallbladder disease.

Variable Options:

- a. Yes
- b. No

Include: All cholecystectomy patients.

Exclude: N/A

Notes:

- If the patient was medically managed, leave as “No.”

91) Secondary Ultrasound

Intent: To capture the types of testing utilized for further evaluation post-surgery.

Definition: Identify if a post-operative ultrasound was performed.

Variable Options:

- a. Yes
- b. No

Include: All cholecystectomy patients.

Exclude: N/A

Notes:

- Include ultrasound studies performed at any point post-operative.
- Include ultrasound studies performed following discharge from index admission.

92) Secondary CT Scan

Intent: To capture the types of testing utilized for further evaluation post-surgery.

Definition: Identify if a post-operative CT scan was performed.

Variable Options:

- a. Yes
- b. No

Include: All cholecystectomy patients.

Exclude: N/A

Notes:

- Include CT scans performed at any point post-operative.
- Include CT scans performed following discharge from index admission.

93) Secondary HIDA

Intent: To capture the types of testing utilized for further evaluation post-surgery.

Definition: Identify if a post-operative HIDA was performed.

Variable Options:

- a. Yes
- b. No

Include: All cholecystectomy patients.

Exclude: N/A

Notes:

- Include HIDA scans performed at any point post-operative.
- Include HIDA scans performed following discharge from index admission.

94) Secondary EUS

Intent: To capture the types of testing utilized for further evaluation post-surgery.

Definition: Identify if a post-operative EUS was performed.

Variable Options:

- a. Yes
- b. No

Include: All cholecystectomy patients.

Exclude: N/A

Notes:

- Include EUS performed at any point post-operative.
- Include EUS performed following discharge from index admission.

95) Secondary ERCP

Intent: To capture the types of testing and procedures utilized to evaluate and treat patients after cholecystectomy.

Definition: Identify if a post-operative ERCP was performed.

Variable Options:

- a. Yes
- b. No

Include: All cholecystectomy patients.

Exclude: N/A

Notes:

- Include ERCP performed at any point post-operative.
- Include outpatient ERCP performed following discharge.

96) Secondary ERCP Procedure Type 1

Intent: To evaluate the use of selected procedures performed during ERCP after cholecystectomy.

Definition: Identify the gallbladder procedure performed during Secondary ERCP.

Variable Options:

- a. Stent Placement - Common Bile Duct
 - i. Yes
 - ii. No
- b. Stent Placement - Cystic Duct
 - i. Yes
 - ii. No
- c. Stent Placement - Pancreatic Duct

- i. Yes
 - ii. No
- d. Stent Placement - Other
 - i. Yes
 - ii. No
- e. Gallstone/Sludge Removal
 - i. Yes
 - ii. No
- f. Sphincterotomy
 - i. Yes
 - ii. No

Include: All patients who had an ERCP procedure performed after cholecystectomy.

Exclude: Patients who did not have an ERCP procedure after cholecystectomy.

Notes:

- This section is for ERCP procedures performed for diagnosis and treatment after a cholecystectomy.
- For ERCP procedures performed before or instead of cholecystectomy, enter these under “Diagnosis ERCP” above.
- Include ERCP procedures performed at any point during the admission.
- Include outpatient ERCP procedures performed following discharge.

97) Secondary ERCP Procedure Date 1 (mm/dd/yyyy)

Definition: The date the Secondary ERCP procedure was performed.

Variable Options: Date in mm/dd/yyyy format.

Include: All patients who had an ERCP procedure after cholecystectomy.

Exclude: Patients who did not have an ERCP procedure after cholecystectomy.

Notes:

- Multiple dates are often listed on reports and notes for the same procedure. Use the procedure end date if available.

98) Secondary ERCP Procedure Time 1 (hh:mm)

Definition: The time the Secondary ERCP procedure was performed.

Variable Options: Military time in hh:mm format.

Include: All patients who had an ERCP procedure after cholecystectomy.

Exclude: Patients who did not have an ERCP procedure after cholecystectomy.

Notes:

- Multiple times are often listed on reports and notes for the same procedure. Use the procedure end time if available.

99) Secondary ERCP Procedure 2

Intent: To evaluate the use of selected procedures performed during additional ERCP after cholecystectomy.

Definition: Identify the procedures performed during an additional Secondary ERCP.

Variable Options:

- a. Stent Placement - Common Bile Duct
 - i. Yes
 - ii. No
- b. Stent Placement - Cystic Duct
 - i. Yes
 - ii. No
- c. Stent Placement - Pancreatic Duct
 - i. Yes
 - ii. No
- d. Stent Placement - Other
 - i. Yes
 - ii. No
- e. Gallstone/Sludge Removal
 - i. Yes
 - ii. No
- f. Sphincterotomy
 - i. Yes
 - ii. No

Include: All patients who had an additional Secondary ERCP procedure post-surgery.

Exclude: Patients who did not have an additional Secondary ERCP procedure post-surgery.

Notes:

- This section is for ERCP procedures performed for diagnosis and treatment after a cholecystectomy.
- For ERCP procedures performed before or instead of cholecystectomy, enter these under “Diagnosis ERCP” above.
- Include ERCP procedures performed at any point during the admission.
- Include outpatient ERCP procedures performed following discharge.

100) Secondary ERCP Procedure Date 2 (mm/dd/yyyy)

Definition: The date the additional Secondary ERCP procedure was performed.

Variable Options: Date in mm/dd/yyyy format.

Include: All patients who had an additional Secondary ERCP procedure after cholecystectomy.

Exclude: Patients who did not have an additional Secondary ERCP procedure after cholecystectomy.

Notes:

- Multiple dates are often listed on reports and notes for the same procedure. Use the procedure end date if available.

101) Secondary ERCP Procedure Time 2 (hh:mm)

Definition: The time the additional Secondary ERCP procedure was performed.

Variable Options: Military time in hh:mm format.

Include: All patients who had an additional Secondary ERCP procedure after cholecystectomy.

Exclude: Patients who did not have an additional Secondary ERCP procedure after cholecystectomy.

Notes:

- Multiple times are often listed on reports and notes for the same procedure. Use the procedure end time if available.

102) Secondary MRI/MRCP

Intent: To capture the types of testing utilized for further evaluation post-surgery.

Definition: Identify if a post-operative MRI was performed.

Variable Options:

- a. Yes
- b. No

Include: All cholecystectomy patients.

Exclude: N/A

Notes:

- Include MRI/MRCP performed at any point post-operative.
- Include MRI/MRCP performed following discharge from index admission.

103) Non-Operative Management

Intent: To determine the volume of patients who have gallbladder disease managed without surgery.

Definition: Identify all patients who receive medical management for their gallbladder disease.

Variable Options:

- a. Yes
- b. No

Include: All patients with gallbladder disease.

Exclude: Patients treated for a diagnosis other than gallbladder.

Notes:

Tab 8 - Small Bowel Obstruction

104) Prior Small Bowel Obstruction

Intent: To track the incidence of recurring small bowel obstruction.

Definition: Identify if the patient has had any prior admission(s)/observation with management of a small bowel obstruction.

Variable Options:

- a. Yes

b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

- Do not include the current admission/observation.
- If a patient was managed at an outside hospital for small bowel obstruction and then is transferred to your hospital for continued management of the same small bowel obstruction, do not include this as a prior small bowel obstruction.
- Include admission/observation for small bowel obstruction at an outside hospital(s). Include self-reported (patient/family/guardian/caregiver) incidence of small bowel obstruction managed at outside hospitals.

105) Number Prior Admits for Small Bowel Obstruction

Intent: To track the incidence of recurring small bowel obstruction.

Definition: Identify the number of times the patient has had a prior admission(s)/observation with management of a small bowel obstruction.

Variable Options:

- 1
- 2
- 3-10
- > 10
- Multiple (exact number unknown)
- Unknown

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

- Do not include the current admission/observation
- If a patient was managed at an outside hospital for small bowel obstruction and then is transferred to your hospital for continued management of the same small bowel obstruction, do not include this as a prior small bowel obstruction.
- Include admission/observation for small bowel obstruction at an outside hospital(s).
- Include self-reported (patient/family/guardian/caregiver) incidence of small bowel obstruction managed at outside hospitals.

106) Prior Abdominal Procedures

Intent: To identify factors related to the development of small bowel obstruction.

Definition: Determine if the patient has had prior abdominal surgery.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

- Answer “Yes” for surgery with entry into the peritoneum, including ventral/incisional hernia repair.
- It is acceptable to use descriptions of prior incisions in the physician’s physical exam notes to answer questions 106, 107, and 108.

107) Prior Open Laparotomy

Intent: To identify factors related to the development of small bowel obstruction.

Definition: Determine if the patient has had prior open abdominal surgery.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

- It is acceptable to use descriptions of prior incisions in the physician’s physical exam notes to answer questions 106, 107, and 108.

108) Prior Laparoscopy

Intent: To identify factors related to the development of small bowel obstruction.

Definition: Determine if the patient has had prior laparoscopic abdominal surgery.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

- It is acceptable to use descriptions of prior incisions in the physician's physical exam notes to answer questions 106, 107, and 108.

109) Prior Mesh

Intent: To identify factors related to the development of small bowel obstruction.

Definition: Determine if the patient has had prior abdominal surgery with mesh placement.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

110) Prior Radiation

Intent: To identify factors related to the development of small bowel obstruction.

Definition: Determine if the patient has had prior radiation treatment to intra-abdominal structures.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

111) Metastatic Malignancy

Intent: To identify factors related to the development of small bowel obstruction.

Definition: Determine if the patient has metastatic malignancy in intra-abdominal structures.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

112) CT Scan

Intent: To capture testing utilized to determine management.

Definition: Identify if a CT was performed as part of a small bowel obstruction evaluation.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

113) CT Scan Date (mm/dd/yyyy)

Intent: To identify the date the CT procedure was performed.

Definition: Indicate the date the CT procedure occurred.

Variable Options: Date in mm/dd/yyyy format.

Include: Patients with a small bowel obstruction who have a CT.

Exclude: Small bowel obstruction who did not have a CT.

Notes:

114) CT Scan Time (Military Time 00:00)

Intent: To identify the time the CT procedure was performed.

Definition: Indicate the time the CT procedure occurred.

Variable Options: military time in hh:mm format.

Include: Patients with a small bowel obstruction who have a CT.

Exclude: Small bowel obstruction who did not have a CT.

Notes:

115) Enteral Contrast

Intent: To identify if enteral contrast was given before the CT.

Definition: Indicate if enteral contrast was given before the CT.

Variable Options:

- a. Yes
- b. No

Include: Patients with a small bowel obstruction who have a CT.

Exclude: Small bowel obstruction patient that did not have a CT.

Notes:

- Examples of enteral contrast include but are not limited to Gastrografin, Hypaque, VoLumen, READI-CAT.

116) CT Findings

Intent: To capture the testing results utilized to determine the management of small bowel obstruction.

Definition: Determine if the following variable options were identified in the CT report or the surgeon's note(s) regarding CT results.

Variable Options:

- a. Free Fluid
 - i. Yes
 - ii. No
- b. Fecalization
 - i. Yes
 - ii. No
- c. Pneumatosis
 - i. Yes
 - ii. No
- d. Swirl Sign (e.g., swirl, twisted)
 - i. Yes
 - ii. No
- e. Ischemic/Dead Bowel
 - i. Yes
 - ii. No
- f. Obstruction
 - i. Yes
 - ii. No
- g. Other (e.g., volvulus of the small bowel)
 - i. Yes
 - ii. No

Include: Patients with a small bowel obstruction who have a CT.

Exclude: Small bowel obstruction who did not have a CT.

Notes:

- If the answer to Obstruction is "Yes," answer the "Obstruction Related to Adhesions" question below.
- If the answer to Other is "Yes," answer the "Other CT Findings" question below.

117) Other CT Findings

Intent: To identify other CT findings that may relate to the patient's symptoms or management for potential future inclusion in data collection.

Definition: Determine if other CT findings are related to the patient's symptoms or management.

Variable Options: Free Text

Include: Patients with a small bowel obstruction who have a CT result of "Other."

Exclude: N/A

Notes:

- Include potential causes of the patient's symptoms such as volvulus, mass, hernia, etc.

118) Obstruction Related to Adhesions

Intent: To track patients with a small bowel obstruction that is likely related to adhesions.

Definition: Determine if the small bowel obstruction is likely related to adhesions.

Variable Options:

- a. Yes
- b. No

Include: Patients with a small bowel obstruction.

Exclude: N/A

Notes:

- If adhesions or "possible adhesion-related" is not documented in the medical record (CT results, physician notes), select "No."

119) Gastrografin Challenge

Intent: To capture the testing results utilized to determine the management of small bowel obstruction.

Definition: Identify if a Gastrografin challenge was performed as part of small bowel obstruction evaluation.

Variable Options:

- a. Yes
- b. No

Include: All patients with a small bowel obstruction.

Exclude: Patients without a small bowel obstruction.

Notes:

- A small bowel follow-through (Gastrografin administration followed by fluoroscopy) should be captured as a Gastrografin challenge.

120) Gastrografin Challenge Date (mm/dd/yyyy)

Intent: Identify the date that results were available from a Gastrografin challenge performed to decide ongoing surgical or non-surgical management.

Definition: Date of Gastrografin x-ray to confirm.

Variable Options: Date in mm/dd/yyyy format

Include: Patients who had a Gastrografin challenge.

Exclude: N/A

Notes:

121) Gastrografin Challenge Time (Military Time 00:00)

Intent: Identify when results were available from a Gastrografin challenge performed to decide ongoing surgical or non-surgical management.

Definition: Time of Gastrografin x-ray to confirm.

Variable Options: military time in hh:mm format

Include: Patients who had a Gastrografin challenge.

Exclude: N/A

Notes:

122) Gastrografin Result

Intent: To capture the testing results utilized to determine the management of small bowel obstruction.

Definition: Determine the final results of the Gastrografin challenge.

Variable Options:

- a. Positive Colon – contrast found in the colon (part or all)
- b. Negative Colon – contrast not found in the colon
- c. Other

Include: Patients who had a Gastrografin challenge.

Exclude: N/A

Notes:

- Gastrografin Result should be marked “Positive Colon” if the contrast makes it to the colon, even if the x-ray had to be repeated multiple times.

Tab 9 – Exploratory Laparotomy

123) Abdominal X-Ray

Intent: To capture testing utilized to determine management.

Definition: Identify if an abdominal X-ray was performed as part of the evaluation of the patient before receiving an emergent exploratory laparotomy.

Variable Options:

- a. Yes
- b. No

Include: All patients who had an emergent exploratory laparotomy.

Exclude: Patients without an emergent exploratory laparotomy.

Notes:

124) Abdominal X-Ray Date (mm/dd/yyyy)

Intent: To identify the date the abdominal X-ray was performed.

Definition: Indicate the date the abdominal X-ray occurred.

Variable Options: Date in mm/dd/yyyy format.

Include: Patients who have an abdominal X-ray before an emergent exploratory laparotomy.

Exclude: Emergent exploratory laparotomy patients who did not have an abdominal X-ray.

Notes:

125) Abdominal X-Ray Time (Military Time 00:00)

Intent: To identify the time the abdominal X-ray was performed.

Definition: Indicate the time the abdominal X-ray occurred.

Variable Options: military time in hh:mm format

Include: Patients who have an abdominal X-ray before an emergent exploratory laparotomy.

Exclude: Emergent exploratory laparotomy patients who did not have an abdominal X-ray.

Notes:

126) CT Scan

Intent: To capture testing utilized to determine management.

Definition: Identify if a CT was performed as part of the evaluation in patients who receive an emergent exploratory laparotomy.

Variable Options:

- a. Yes
- b. No

Include: All patients who had an emergent exploratory laparotomy.

Exclude: Patients without an emergent exploratory laparotomy.

Notes:

127) CT Scan Date (mm/dd/yyyy)

Intent: To identify the date the CT was performed.

Definition: Indicate the date the CT occurred.

Variable Options: Date in mm/dd/yyyy format.

Include: Patients who have a CT before an emergent exploratory laparotomy.

Exclude: Emergent exploratory laparotomy patients who did not have a CT.

Notes:

- If multiple CT scans were performed, list the CT scan date done closest to the operation time.

128) CT Scan Time (Military Time 00:00)

Intent: Intent: To identify the time the CT was performed.

Definition: Indicate the time the CT occurred.

Variable Options: military time in hh:mm format

Include: Patients who have a CT before an emergent exploratory laparotomy.

Exclude: Emergent exploratory laparotomy patients who did not have a CT.

Notes:

- If multiple CT scans were performed, list the CT scan time closest to the operation time.

129) CT Findings

Intent: To capture the testing results utilized to determine management in patients who received an emergent exploratory laparotomy.

Definition: Determine if the following variable options were identified in the CT report or the surgeon's note(s) regarding CT results.

Variable Options:

- a. Free Air
 - i. Yes
 - ii. No
- b. Free Fluid
 - i. Yes

- ii. No
- c. Fecalization
 - i. Yes
 - ii. No
- d. Pneumatosis
 - i. Yes
 - ii. No
- e. Swirl Sign (e.g., swirl, twisted)
 - i. Yes
 - ii. No
- f. Ischemic/Dead Bowel
 - i. Yes
 - ii. No
- g. Obstruction
 - i. Yes
 - ii. No
- h. Other
 - i. Yes
 - ii. No

Include: Patients who have a CT before an emergent exploratory laparotomy.

Exclude: Emergent exploratory laparotomy patients who did not have a CT.

Notes:

130) Other CT Findings

Intent: To identify other CT findings that may relate to the patient's symptoms or management for potential future inclusion in data collection.

Definition: Determine if other CT findings are related to the patient's symptoms or management.

Variable Options: Free Text

Include: Patients with an emergent exploratory laparotomy who have a CT result of "Other."

Exclude: N/A

Notes:

- Include potential causes of the patient's symptoms such as volvulus, mass, hernia, etc.

NOTE: All NEWS 2 Score, SIRS Criteria, and ABG variables:

- Values should be obtained within 12 hours before the exploratory laparotomy incision time.
- If there are no values available for a variable within the 12 hours before laparotomy incision time, leave the item default.
- If there are multiple results within the 12 hours prior, select the set of worst values before incision time.
- Review how the NEWS 2 values are scored at <https://www.mdcalc.com/national-early-warning-score-news-2>. The highest point values are reflective of the worst patient condition.
- All values should be from around the same time. For example, do not select values from two different blood gases.

131) NEWS 2 Score – Respiratory Rate (bpm)

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

Definition: The patient's respiratory rate in breaths per minute.

Variable Options:

- a. ≤ 8
- b. 9-11
- c. 12-20
- d. 21-24
- e. ≥ 25

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

132) NEWS 2 Score – Hypercapnic Respiratory Failure

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

Definition: The patient has a $\text{PaCO}_2 > 45$ mmHg within 12 hours before emergent exploratory laparotomy.

Variable Options:

- a. Yes
- b. No

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

133) NEWS 2 Score – SpO2

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

To use the National Early Warning Score (NEWS) 2 to determine the degree of illness before emergent exploratory laparotomy.

Definition: The patient's oxygen saturation.

Variable Options:

- a. $\leq 91\%$
- b. 92-93%
- c. 94-95%
- d. $\geq 96\%$

Include: Patients who have an emergent exploratory laparotomy but no hypercapnic respiratory failure.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

134) NEWS 2 Score – SpO2 in Respiratory Failure

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

To use the National Early Warning Score (NEWS) 2 to determine the degree of illness before emergent exploratory laparotomy.

Definition: The patient's oxygen saturation, including supplemental oxygen.

Variable Options:

- a. $\leq 83\%$

- b. 84-85%
- c. 86-87%
- d. 88-92%, $\geq 93\%$ on room air
- e. 93-94% on Supplemental O2
- f. 95-96% on Supplemental O2
- g. $\geq 97\%$ on Supplemental O2

Include: Patients who have an emergent exploratory laparotomy and hypercapnic respiratory failure.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Note:

135) NEWS 2 Score – Supplemental O2 or Room Air

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness before emergent exploratory laparotomy.

Definition: The patient is on room air or supplemental O2 within 12 hours before emergent exploratory laparotomy.

Variable Options:

- a. Supplemental O2
- b. Room Air

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

136) NEWS 2 Score – Temperature

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness before emergent exploratory laparotomy.

Definition: The patient's temperature within 12 hours before emergent exploratory laparotomy.

Variable Options:

- a. ≤ 35.0 C
- b. 35.1-36.0 C
- c. 36.1-38.0 C

- d. 38.1-39.0 C
- e. ≥ 39.1 C

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

137) NEWS 2 Score – Systolic Blood Pressure (mmHg)

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

Definition: The patient's systolic blood pressure within 12 hours before emergent exploratory laparotomy.

Variable Options:

- a. ≤ 90
- b. 91-100
- c. 101-110
- d. 111-219
- e. ≥ 220

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

138) NEWS 2 Score – Pulse (bpm)

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

Definition: The patient's pulse within 12 hours before emergent exploratory laparotomy.

Variable Options:

- a. ≤ 40
- b. 41-50
- c. 51-90
- d. 91-110
- e. 111-130

f. ≥ 131

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

139) NEWS 2 Score – Consciousness

Intent: To use the National Early Warning Score (NEWS) 2 to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

Definition: The patient's level of consciousness.

Variable Options:

- a. Altered Consciousness
 - Confusion – New (presumed new) or worsening confusion, disorientation (includes a new reduction in Glasgow Coma Scale or delirium), or altered mentation.
 - Voice – A patient who is not fully awake, response in some way when you talk to them
 - Pain – A patient who is not alert and not responding to voice makes a response to painful stimuli.
 - Unresponsive (no eye, voice, or motor response to voice or pain stimulation)
- b. Alert – A fully awake patient with spontaneous eye-opening, responding to voice and motor function.

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

140) SIRS Criteria – WBC > 12,000/mm, <4,000/mm, or > 10% bands

Intent: To use the SIRS criteria to determine the degree of illness within 12 hours before emergent exploratory laparotomy.

Definition: The patients WBC was >12,000/mm, <4,000/mm, or > 10% bands.

Variable Options:

- a. Yes

- b. No

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

141) Blood Gas Type

Intent: To identify the type of blood gas values being entered in the question below.

Definition: The type of blood gas values being entered in the question below.

Variable Options:

- a. Arterial
- b. Venous

Include: All patients who have an emergent exploratory laparotomy and a blood gas within the appropriate time frame.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- If the patient has both arterial and venous gases during the appropriate time frame, please select "Arterial."

142) Blood Gas Values

Intent: To determine the degree of illness before emergent exploratory laparotomy.

Definition: The patient's blood gas values within 12 hours before emergent exploratory laparotomy.

Variable Options:

- a. pH
- b. pCO₂
- c. pO₂
- d. HCO₃
- e. O₂Hb
- f. Lactate

Include: All patients who have an emergent exploratory laparotomy and have a blood gas obtained within 12 hours of surgery.

Exclude: Patients who do not have an emergent exploratory laparotomy or do not have a blood gas.

Notes:

- If the patient has both arterial and venous gases during the appropriate time frame, please enter the values for the arterial blood gas.

143) Sepsis Antibiotic Date (mm/dd/yyyy)

Intent: To identify the date that antibiotics were initiated for sepsis management.

Definition: The date the patient received the first dose of IV antibiotics.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- Antibiotics given in the operating room may be included.

144) Sepsis Antibiotic Time (Military Time 00:00)

Intent: To identify the time that antibiotics were initiated for sepsis management.

Definition: The time the patient received the first dose of IV antibiotics.

Variable Options: military time in hh:mm format

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- Antibiotics given in the operating room may be included.

145) Goal-Directed Fluid Therapy

Intent: To identify the monitoring modality used to guide goal-directed fluid therapy.

Definition: The patient had the following types of monitoring during their preoperative or intraoperative period.

Variable Options:

- a. Esophageal Doppler Monitor
 - i. Yes
 - ii. No
- b. Flo-Trac
 - i. Yes
 - ii. No
- c. Serial ABG/Lactate
 - i. Yes
 - ii. No

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

146) Total Ventilator Calendar Days

Intent: To determine the duration of days the patient remained on a ventilator following the exploratory laparotomy for the length of stay/complication purposes.

Definition: Identify the number of calendar days the patient received ventilator-assisted breaths during any portion of the day following exploratory laparotomy.

Variable Options: A whole number

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- Include POD #0 as a calendar day.
- Example: A patient has an operation, remains intubated post-op, and is transported to the ICU. The ICU staff then extubate the patient 8 hours later, within the same calendar day as surgery. Enter "1" for total ventilator calendar days.

147) ICU Admission Date (mm/dd/yyyy)

Intent: To track the date the patient was first admitted to the ICU.

Definition: The date the patient was first admitted to the ICU.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- Select the date closest to the exploratory laparotomy if the patient has multiple ICU admits.

148) ICU Admission Time (Military Time 00:00)

Intent: To track the time that the patient was first admitted to the ICU.

Definition: Definition: The time the patient was first admitted to the ICU.

Variable Options: military time in hh:mm format

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- Select the time closest to the exploratory laparotomy if the patient has multiple ICU admits.

149) ICU Discharge Date (mm/dd/yyyy)

Intent: To track the date the patient was discharged out of the ICU.

Definition: The date the patient was discharged out of the ICU.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- If the patient has multiple ICU admits, select the date of discharge associated with the admit closest to the exploratory laparotomy.

150) ICU Discharge Time (Military Time 00:00)

Intent: To track the time that the patient was discharged out of the ICU.

Definition: The time the patient was discharged out of the ICU.

Variable Options: military time in hh:mm format

Include: All patients who have an emergent exploratory laparotomy.

Exclude: Patients who do not have an emergent exploratory laparotomy.

Notes:

- If the patient has multiple ICU admits, select the time of discharge associated with the admit closest to the exploratory laparotomy.

Tab 10 – Interventional Radiology

151) Interventional Radiology

Intent: To evaluate the use of select interventional radiology procedures in general surgery and surgical critical care patients.

Definition: Identify if the patient had any IR procedures listed in the Variable Options for question 151 below.

Variable Options:

- a. Yes
- b. No

Include: All

Exclude: N/A

Notes:

152) IR Procedure Type 1

Intent: To evaluate the use of select interventional radiology procedures in general surgery and surgical critical care patients.

Definition: Identify the IR procedure performed.

Variable Options:

- a. Aspiration
- b. Angiogram
- c. Biopsy
- d. Cholecystostomy Tube Exchange
- e. Cholecystostomy Tube Placement
- f. Cholecystostomy Tube Removal
- g. Drain
- h. Embolization – with Angiogram
- i. Gallbladder Ablation
- j. Gallstone Extraction
- k. IVC Filter
- l. Paracentesis
- m. Percutaneous Transhepatic Cholangiogram (PTC) Tube
- n. Thoracentesis
- o. Transjugular Intrahepatic Portosystemic Shunt (TIPS)
- p. None

Include: All patients who had an IR procedure listed in the Variable Options above.

Exclude: N/A

Notes:

- If this is a gallbladder case, list pertinent gallbladder procedures first.

153) IR Procedure Date 1 (mm/dd/yyyy)

Intent: To identify the date the IR procedure was performed.

Definition: Indicate the date the IR procedure occurred.

Variable Options: Date in mm/dd/yyyy format.

Include: All patients who have an IR procedure.

Exclude: N/A

Notes:

- Use the exam end date if available.

154) IR Procedure Time 1 (Military Time 00:00)

Intent: To identify the time the IR procedure was performed.

Definition: Indicate the time the IR procedure occurred.

Variable Options: Military time in hh:mm format.

Include: All patients who have an IR procedure.

Exclude: N/A

Notes:

- Multiple times are often listed on Radiology reports and notes for the same procedure. Use the exam end time if available.

155) IR Procedure Type 2

Intent: To evaluate the use of select interventional radiology procedures in general surgery and surgical critical care patients.

Definition: Identify the IR procedure performed.

Variable Options:

- Aspiration
- Angiogram
- Biopsy
- Cholecystostomy Tube Exchange
- Cholecystostomy Tube Placement
- Cholecystostomy Tube Removal
- Drain
- Embolization – with Angiogram
- Gallbladder Ablation
- Gallstone Extraction
- IVC Filter
- Paracentesis
- Percutaneous Transhepatic Cholangiogram (PTC) Tube
- Thoracentesis
- Transjugular Intrahepatic Portosystemic Shunt (TIPS)
- None

Include: All patients who had an IR procedure listed in the Variable Options above.

Exclude: N/A

Notes:

- If this is a gallbladder case, list pertinent gallbladder studies first.

156) IR Procedure Date 2 (mm/dd/yyyy)

Intent: To identify the date the IR procedure was performed.

Definition: Indicate the date the IR procedure occurred.

Variable Options: Date in mm/dd/yyyy format.

Include: All patients who have an IR procedure.

Exclude: N/A

Notes:

- Use the exam end date if available.

157) IR Procedure Time 2 (Military Time 00:00)

Intent: To identify the time the IR procedure was performed.

Definition: Indicate the time the IR procedure occurred.

Variable Options: Military time in hh:mm format.

Include: All patients who have an IR procedure.

Exclude: N/A

Notes:

- Multiple times are often listed on Radiology reports and notes for the same procedure. Use the exam end time if available.

158) IR Procedure Type 3

Intent: To evaluate the use of select interventional radiology procedures in general surgery and surgical critical care patients.

Definition: Identify the IR procedure performed.

Variable Options:

- a. Aspiration
- b. Angiogram
- c. Biopsy
- d. Cholecystostomy Tube Exchange
- e. Cholecystostomy Tube Placement
- f. Cholecystostomy Tube Removal
- g. Drain
- h. Embolization – with Angiogram
- i. Gallbladder Ablation
- j. Gallstone Extraction
- k. IVC Filter
- l. Paracentesis
- m. Percutaneous Transhepatic Cholangiogram (PTC) Tube
- n. Thoracentesis
- o. Transjugular Intrahepatic Portosystemic Shunt (TIPS)
- p. None

Include: All patients who had an IR procedure listed in the Variable Options above.

Exclude: N/A

Notes:

- If this is a gallbladder case, list pertinent gallbladder studies first.

159) IR Procedure Date 3 (mm/dd/yyyy)

Intent: To identify the date the IR procedure was performed.

Definition: Indicate the date the IR procedure occurred.

Variable Options: Date in mm/dd/yyyy format.

Include: All patients who have an IR procedure.

Exclude: N/A

Notes:

- Use the exam end date if available.

160) IR Procedure Time 3 (Military Time 00:00)

Intent: To identify the time the IR procedure was performed.

Definition: Indicate the time the IR procedure occurred.

Variable Options: Military time in hh:mm format.

Include: All patients who have an IR procedure.

Exclude: N/A

Notes:

- Multiple times are often listed on Radiology reports and notes for the same procedure. Use the exam end time if available.

Tab 11 – Operation

161) Operation

Intent: To identify patients who have surgery as part of management.

Definition: Indicate if the patient had surgery in the operating room or critical care unit.

Variable Options:

- a. Yes
- b. No

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Select “Yes” for surgical procedures performed at the bedside in a critical care unit.

Tab 12 – Operation 1

162) Operation Incision Date 1 (mm/dd/yyyy)

Intent: To identify the date the surgical procedure was performed.

Definition: Indicate the date the surgical incision occurred.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Include surgery procedures performed at the bedside in a critical care unit.

163) Operation Incision Time 1 (Military Time 00:00)

Intent: To identify the time the surgical procedure was performed.

Definition: Indicate the time the surgical incision occurred.

Variable Options: military time in hh:mm format

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Include surgery procedures performed at the bedside in a critical care unit.

164) Operation Dressing Date 1 (mm/dd/yyyy)

Intent: To identify the date the surgical procedure ended.

Definition: Indicate the date the surgical dressing was completed.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Include surgery procedures performed at the bedside in a critical care unit.

- If your hospital does not record operation dressing date, enter what your hospital records for similar operation end dates.

165) Operation Dressing Time 1 (Military Time 00:00)

Intent: To identify the time the surgical procedure ended.

Definition: Indicate the time the surgical dressing was completed.

Variable Options: military time in hh:mm format

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Include surgery procedures performed at the bedside in a critical care unit.
- If your hospital does not record operation dressing time, enter what your hospital records for similar operation end time.

166) Operative Surgeon 1

Intent: To identify the primary attending general surgeon for the operative procedure.

Definition: Indicate the name of the primary attending general surgeon for the procedure.

Variable Options: Select the appropriate surgeons' name

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- If more than one attending general surgeon is listed on the operative note without indicating the primary surgeon, use the surgeon who billed for the primary procedure as the primary surgeon.

167) Operative Surgeon 1 Other (Last name, First name)

Intent: To identify the primary attending general surgeon for the operative procedure if the surgeon's name is not available on the drop-down list above.

Definition: Indicate the name of the primary attending general surgeon for the procedure if not available in the drop-down list above.

Variable Options: Last name, First name

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- If more than one attending general surgeon is listed on the operative note without indicating the primary surgeon, use the surgeon who billed for the primary procedure as the primary surgeon.

168) ASA Score

Intent: To track the American Society of Anesthesiologists (ASA) Physical Status Classification System score.

Definition: Indicate the ASA score as it appears on the Anesthesia record.

Variable Options:

- 1
- 2
- 3
- 4
- 5
- 6

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Include surgery procedures performed at the bedside in a critical care unit.

169) Operative Type 1

Intent: To identify the potential for pre-operative preparation of the patient.

Definition: Indicate how the patient presented for surgery.

Variable Options:

- a. Emergent – Surgeon/Anesthesia documents the case as emergent or the patient has an emergent medical condition that requires immediate (usually within 12 hours) medical attention to prevent loss of life/limb/organ function.
- b. Urgent– The patient presents to the hospital, and then the decision to take the patient to surgery occurs. The patient requires the intervention before discharge.
 - For Exploratory Laparotomy cases, this is defined as patients who go to the operating room within 48 hours of the decision to operate.
 - For Appendix, Gallbladder, and Small Bowel cases, this is defined as patients who go to the operating room during current admission.
- c. Elective – Surgery is scheduled in advance with an outpatient interval between the decision to operate and the actual operation.

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- Anesthesia could define a case as emergent by adding an “E” to the end of the ASA score.

170) Conversion

Intent: To track the use of minimally invasive surgery and cases where a minimally invasive option had to be aborted during the procedure.

Definition: The approach used by the surgeon to perform the principal procedure.

Variable Options:

- a. Open – One or more incisions are made to expose the underlying tissue/cavity and provide direct access to complete the procedure.
- b. Laparoscopic – Procedure done through several small incisions and performed through the vision of the laparoscope.
- c. Laparoscopic to Open – A procedure that is started laparoscopic but due to operative findings (e.g., preexisting condition, iatrogenic injury, safety) must be converted to an open procedure.
- d. Robotic Technique – The surgeon utilizes a robotic device for assistance during the case.

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

171) AAST Grade

Intent: To capture the additional measure of anatomical severity of disease that impacts patient outcome.

Definition: Indicate the [AAST grade](#) for appendectomy and cholecystectomy patients.

Variable Options:

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5
- f. N/A

Include: Patients with an Appendectomy or Cholecystectomy CPT code.

Exclude: Patients having an interval appendectomy.

Notes:

- See the hyperlink above for definitions of grades.
- Only complete for appendix and gallbladder removal.

Resource: The American Association for The Surgery of Trauma (AAST). Data Dictionaries for AAST Grading System for EGS Conditions, Emergency General Surgery Anatomic Severity Tables.

<https://www.aast.org/emergency-general-surgery-anatomic-grading-scales>

172) Procedure CPT Code 1

Intent: To identify the principal (primary) surgical procedure performed by general surgery.

Definition: The CPT for the principal operative procedure (see notes below).

Variable Options: The Current Procedural Terminology (CPT)

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- The principal operative procedure is usually the one that is related to the disease or diagnosis that led to the surgery or the more acute indication for the surgery as described in the operative report.
- For patients with bowel left in discontinuity at the end of the first surgery, note the CPT code in Qualtrics indicating which anatomical part was removed or fixed.
- Do not add lysis of adhesions coding to your hospital's coding unless this was all that the surgeon performed, or the surgeon asked to use Modifier 22 in the operative note due to significant lysis of adhesions, or if the surgeon indicated in the operative note that lysis of adhesions was a significant part of the case.

173) Cholecystectomy Technique

Intent: To capture the complexity of the cholecystectomy being performed.

Definition: Indicate the cholecystectomy technique used during surgery.

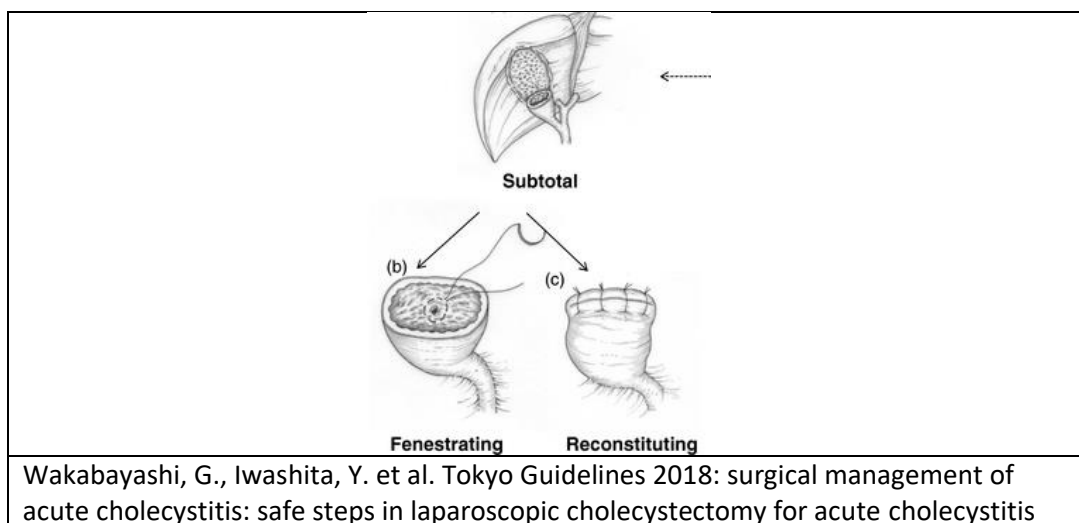
Variable Options:

- Total Excision
- Sub-Total Excision w/Fenestration (gallbladder is opened, and then the cystic duct is potentially closed from the inside)
- Sub-Total Excision w/Reconstitution (the walls of the gallbladder remnant are sutured or stapled together to close the remnant).
- Sub-Total Excision Other/Not Specified

Include: Patients with a Cholecystectomy CPT code.

Exclude: Patients who do not have a cholecystectomy.

Notes:



(with videos). J. Hepatobiliary Pancreatic Sciences (2018) 25:73-86.
<https://onlinelibrary.wiley.com/doi/full/10.1002/jhbp.517>

174) Operation

Intent: To track select procedures performed during surgical management for small bowel obstruction.

Definition: Identify which variable options below occurred during surgery for small bowel obstruction.

Variable Options:

- a. Lysis of Adhesions
 - i. Yes
 - ii. No
- b. Bypass
 - i. Yes
 - ii. No
- c. Resection with Anastomosis
 - i. Yes
 - ii. No
- d. Resection with Stoma
 - i. Yes
 - ii. No
- e. Anti-Adhesion Barrier Use
 - i. Yes
 - ii. No
- f. Hernia Repair Primary
 - i. Yes
 - ii. No
- g. Hernia Repair Mesh
 - i. Yes
 - ii. No
- h. Milking the bowel
 - i. Yes
 - ii. No

Include: Patients who had surgical management of small bowel obstruction.

Exclude: N/A

Notes:

- Leave all fields checked “No” if surgery was not performed (medical management).

175) Operative Findings

Intent: To track select surgeon findings during surgical management of small bowel obstruction.

Definition: Identify which variable options below were found during surgery for small bowel obstruction.

Variable Options:

- a. Negative Exploration
 - i. Yes
 - ii. No
- b. Single Band Adhesion
 - i. Yes
 - ii. No
- c. Multiple Band/Dense Adhesion
 - i. Yes
 - ii. No
- d. Obstruction
 - i. Yes
 - ii. No
- e. Ischemic Bowel
 - i. Yes
 - ii. No
- f. Dead Bowel
 - i. Yes
 - ii. No
- g. Inadvertent Enterotomy
 - i. Yes
 - ii. No
- h. Other
 - i. Yes
 - ii. No

Include: Patients who had surgical management of small bowel obstruction.

Exclude: N/A

Notes:

- Leave all fields checked “No” if surgery was not performed (medical management).

176) Other Operative Findings

Intent: To identify other operative findings that may relate to the patient's symptoms or surgical management for potential future inclusion in data collection.

Definition: Determine if other operative findings are related to the patient's symptoms or surgical management.

Variable Options: Free text

Include: Patients with a small bowel obstruction who have an operative finding of "Other."

Exclude: N/A

Notes:

177) Additional Operations

Intent: To capture information about the number and types of surgical procedures performed over the course of the patient's General Surgical management.

Definition: The patient returned to the OR after the principal operative procedure or had multiple procedures (multiple CPTs) during the same surgery case.

Variable Options:

- a. Yes
- b. No

Include: All patients who had surgery.

Exclude: Patients who did not have surgery.

Note:

Example:

- Multiple CPT in one surgery - A patient went to surgery for diverticulitis with perforation. The principal operative procedure was a colectomy (CPT 44140) and mobilization of the splenic flexure (CPT 44139). To record the second CPT, answer "Yes" to additional operation and complete "Operation 2" with the same date, time, surgeon, and operation type as Operation 1 but with the second CPT.

Tab 13 – Operation 2-8

178) Operation Incision Date 2-8 (mm/dd/yyyy)

Intent: To identify the date the surgical procedure was performed.

Definition: Indicate the date the surgical incision occurred.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Include surgery procedures performed at the bedside in a critical care unit.

179) Operation Incision Time 2-8 (Military Time 00:00)

Intent: To identify the time the surgical procedure was performed.

Definition: Indicate the time the surgical incision occurred.

Variable Options: military time in hh:mm format

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who have surgical procedures in areas other than the operating room or critical care unit.

Notes:

- Include surgery procedures performed at the bedside in a critical care unit.

180) Operative Surgeon 2-8

Intent: To identify the primary attending general surgeon for the operative procedure.

Definition: Indicate the name of the primary attending general surgeon for the procedure.

Variable Options: Select the appropriate surgeons' name

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- If more than one attending general surgeon is listed on the operative note without indicating the primary surgeon, use the surgeon who billed for the primary procedure as the primary surgeon.

181) Operative Surgeon 2-8 Other (Last name, First name)

Intent: To identify the primary attending general surgeon for the operative procedure if the surgeon's name is not listed above.

Definition: Indicate the name of the primary attending general surgeon for the procedure if not included in the list above.

Variable Options: Last name, First name

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- If more than one attending general surgeon is listed on the operative note without indicating the primary surgeon, use the surgeon who billed for the primary procedure as the primary surgeon.

182) Operative Type 2-8

Intent: To identify the potential for pre-operative preparation of the patient.

Definition: Indicate how the patient presented for surgery.

Variable Options:

- a. Emergent – Surgeon/Anesthesia documents the case as emergent or the patient has an emergent medical condition that requires immediate (usually within 12 hours) medical attention to prevent loss of life/limb/organ function.
- b. Urgent– The patient presents to the hospital, and then the decision to take the patient to surgery occurs. The patient requires the intervention before discharge.
 - For Exploratory Laparotomy cases, this is defined as patients who go to the operating room within 48 hours of the decision to operate.
 - For Appendix, Gallbladder, and Small Bowel cases, this is defined as patients who go to the operating room during current admission.

- c. Elective – Surgery is scheduled in advance with an outpatient interval between the decision to operate and the actual operation.

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- Anesthesia could define a case as emergent by adding an “E” to the end of the ASA score.

183) Procedure CPT Code 2-8

Intent: To identify the principal (primary) surgical procedure performed by general surgery.

Definition: The CPT for the principal operative procedure (see notes below).

Variable Options: The Current Procedural Terminology (CPT)

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Notes:

- The principal operative procedure is usually the one that is related to the disease or diagnosis that led to the surgery or the more acute indication for the surgery as described in the operative report.
- For patients with bowel left in discontinuity, note the CPT code in Qualtrics indicating which anatomical part was removed or fixed.
- Do not add lysis of adhesions coding to your hospital’s coding unless this was all that the surgeon performed, or the surgeon asked to use Modifier 22 in the operative note due to significant lysis of adhesions, or if the surgeon indicated in the operative note that lysis of adhesions was a significant part of the case.

Tab 14 - Intraoperative

184) Bowel Anastomosis Technique

Intent: To track the type of bowel anastomosis performed during the surgery to compare complication rates.

Definition: What type of anastomosis technique was documented for this patient.

Variable Options:

- a. Stapled with an EEA (or circular) stapler (end-to-end)
- b. Stapled with an EEA (or circular) stapler (side-to-end)
- c. Stapled with an EEA (or circular) stapler (with pouch or coloplasty created)
- d. Stapled with an EEA (or circular) stapler and hand-sutured
- e. Stapled with a GIA stapler (side-to-side) – “functional end to end”
- f. Stapled with a GIA stapler (side-to-side) and hand-sutured
- g. Hand-sutured through the abdomen
- h. Hand-sutured through the anus
- i. Combination stapled with hand-sutured (for multiple anastomoses)
- j. No anastomosis was performed

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who do not have a surgical procedure.

Notes:

- Select “No anastomosis was performed” for abdominoperineal resection (APR) or Hartmann’s procedure.
- This variable is relevant to cases where the patient has an ileostomy or colostomy if they also had an anastomosis performed (e.g., anastomosis downstream from the ostomy).
- If more than one anastomosis is performed, base the answer on the more distal anastomosis.
- If more than one anastomosis is performed due to multiple returns to surgery, select the type for the first anastomosis.
- Select option i. “Combination stapled with hand-sutured” only if the patient has more than one anastomosis created.
 - Example: If a patient has one anastomosis created with an EEA stapler and a separate anastomosis created by hand suturing, select “Combination stapled with hand sutured.”

185) Ostomy Performed

Intent: To track the type of ostomy performed during the surgery to compare complication rates.

Definition: Documentation of an ileostomy or colostomy being performed during this admission.

Variable Options:

- a. Ileostomy
- b. Colostomy

c. No

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: Patients who do not have a surgical procedure.

Note:

- Select “No” if the patient has an existing ostomy that is not altered or revised during this admission.

186) Associated Hernia Requiring Repair

Intent: To track hernia repairs as the primary or secondary procedure during surgery.

Definition: Identify patients who have a hernia repair during their surgery.

Variable Options:

- a. Yes
- b. No

Include: All patients who have a surgical procedure in the operating room or critical care unit.

Exclude: N/A

Note:

- Answer “Yes” for all cases with a hernia repair, including both primary surgical procedure (e.g., inguinal hernia repair only) or secondary procedure (e.g., duodenal ulcer repair is the primary procedure, but the patient also had an incisional hernia that was repaired).
- For internal hernia (e.g., mesenteric), answer “No.”

Tab 15 – Hernia Repair

187) Established Hernia Care

Intent: To capture instances where the patient has established care with a general surgeon for their hernia, but the hernia repair has not occurred before the patient’s current admission.

Definition: Identify if a patient had established care with a general surgeon for their hernia before this admission.

Variable Options:

- a. Yes
- b. No

Include: All patients who had surgery for a hernia repair.

Exclude: N/A

Notes:

- Examples of why patients may not be scheduled for an elective hernia repair include but are not limited to high BMI, current tobacco use, cardiac or pulmonary problems, immunosuppression, etc.

188) Previous Hernia Repair

Intent: To capture instances where the patient has a history of prior hernia repair to assess the complexity of the current repair and complications.

Definition: The patient had a prior hernia repair surgery involving the ventral or abdominal region.

Variable Options:

- a. Yes
- b. No

Include: All patients who have a hernia repair.

Exclude: Patients who did not have a hernia repair.

Notes:

189) Hernia Type

Intent: To track the type of hernias being repaired.

Definition: Identify the type of hernia that is being repaired.

Variable Options:

- a. Femoral
- b. Inguinal
- c. Umbilical
- d. Ventral/Incisional
- e. Other

Include: All patients who have a hernia repair.

Exclude: N/A

Notes:

190) Hernia Location

Intent: To track the location of abdominal wall (i.e., ventral/incisional, umbilical) hernias being repaired.

Definition: Identify the location of the abdominal wall hernia based on the surgeon's documentation.

Variable Options:

- a. Epigastric (M2) – Include Subxiphoid (M1) in Epigastric
- b. Umbilical (M3)
- c. Infraumbilical (M4)
- d. Suprapubic (M5)
- e. No Midline Component – Include subcostal (L1), flank (L2), iliac (L3), and lumbar (L4).

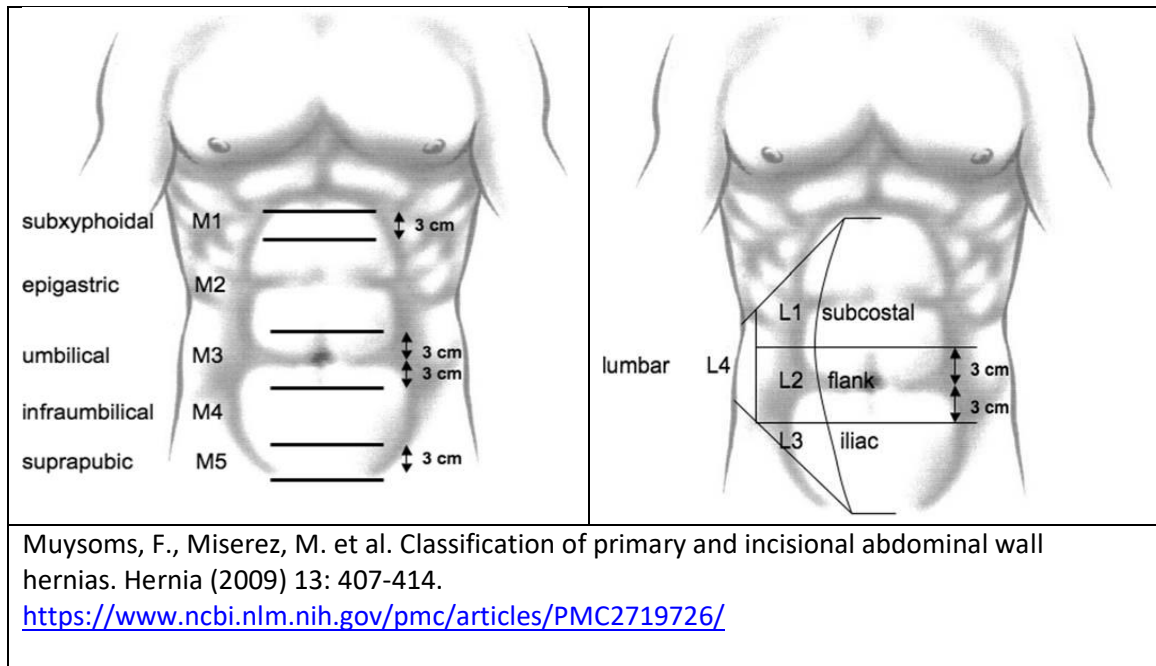
Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Notes:

- The surgeon may describe the region (e.g., "Epigastric") or may provide the EHS/AHS classification zone (e.g., "M2").
- L4 region (lumbar) will only be captured if it is an incisional hernia.
- CPT 49540 (Repair lumbar hernia) is excluded.
- To assist with the identification of the location, see the table below.

Midline (Options 1 thru 4)	No Midline (Option 5)
----------------------------	-----------------------



191) Hernia Length (cm)

Intent: To track the size of the hernia defect to better understand the complexity of the repair.

Definition: To report the length (most cranial to most caudal) of the hernia defect in centimeters (cm). This measurement is based on the largest distance between the vertical margins of the hernia defect.

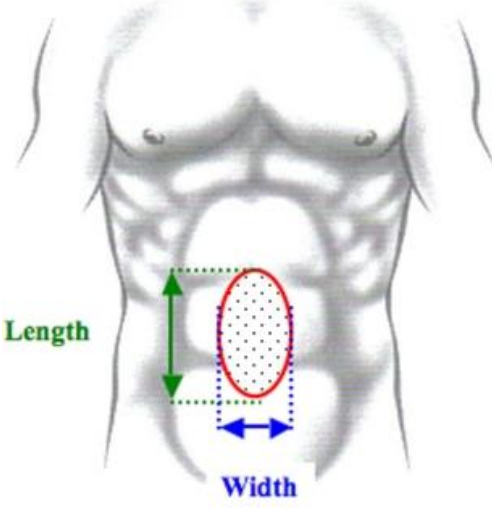
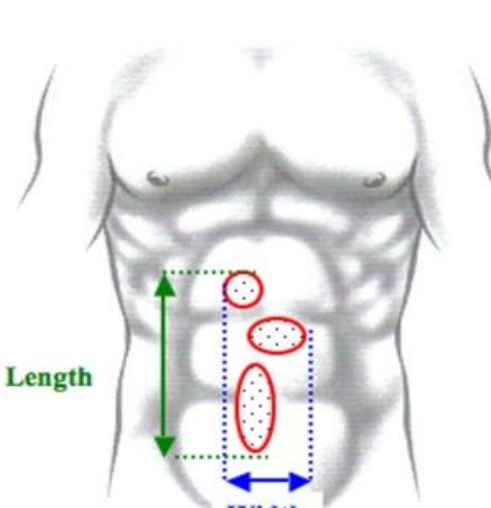
Variable Options: Any number from 0-100 in cm. Can include one digit beyond the decimal point (e.g., 5.3).

Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Notes:

- If the actual hernia size is not available, leave it as 0.
- Fill in both the width and length with the same number if only one number is given for the size.
- If there are multiple hernia defects, the total length for all hernias should be used. See the table below for examples. Exception: for multiple incisional hernias, report only the largest single vertical dimension.

Single Hernia Measurement	Multiple Hernia Measurement
	
<p>Muysoms, F., Miserez, M. et al. Classification of primary and incisional abdominal wall hernias. <i>Hernia</i> (2009) 13: 407-414. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2719726/</p>	

192) Hernia Width (cm)

Intent: To track the size of the hernia defect to better understand the complexity of the repair.

Definition: To report the width (side to side) of the hernia defect in centimeters (cm). This measurement is based on the largest distance between the lateral margins of the hernia defect.

Variable Options: Any number from 0-100 in cm. Can include one digit beyond the decimal point (e.g., 5.3).

Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Notes:

- If the actual hernia size is not available, leave it as 0.
- Fill in both the width and length with the same number if only one number is given for the size.
- If there are multiple hernia defects, the total width for all hernias (outer-most lateral margins) should be used. See the table above for examples. **Exception to this note:** for multiple incisional hernias, report only the largest single-width dimension.

193) Mesh Location

Intent: To track mesh use in hernia repair to better understand the complexity of the repair.

Definition: Identify the location of mesh placement.

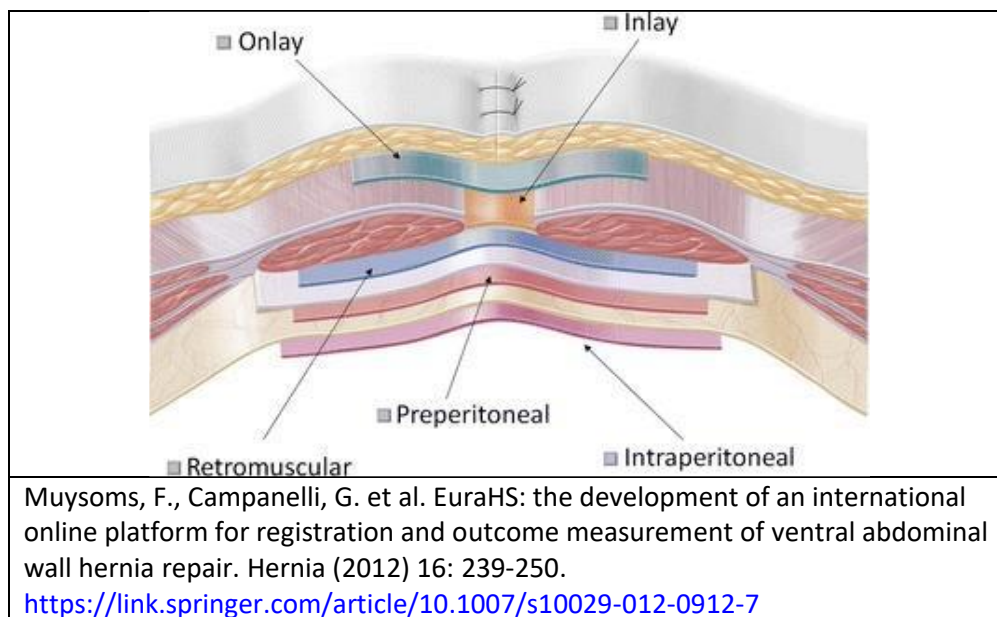
Variable Options:

- a. Onlay – The mesh is above the abdominal wall muscles/fascia and behind the subcutaneous fat.
- b. Inlay – The mesh is between the edges of the fascia or in the hernia defect and fixated to the margins of the defect.
- c. Sublay – The mesh is positioned below the rectus (abdominal wall) muscle.
- d. Inguinal/Femoral (Mesh) – Mesh was used during the inguinal or femoral hernia repair.
- e. Primary (No Mesh)

Include: All patients who have a hernia repair.

Exclude: Patients who did not have a hernia repair.

Notes: See figure below for mesh locations.

**Tab 16 – Hernia Mesh****194) Sublay Position**

Intent: To track mesh use in hernia repair to better understand the complexity of the repair.

Definition: Identify the sublay mesh placement.

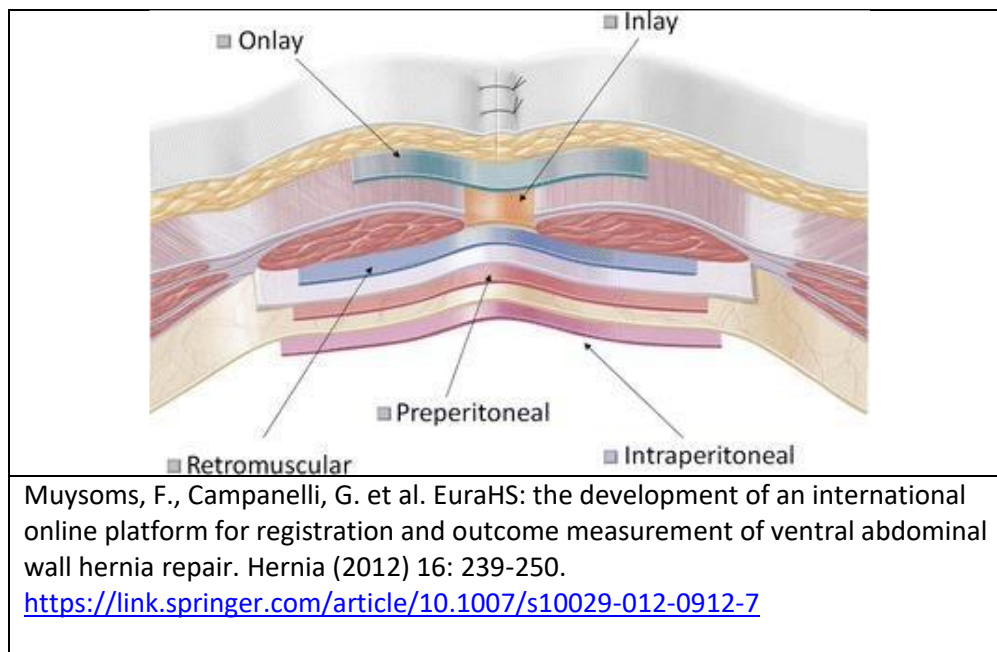
Variable Options:

- a. Retrorectus or Retromuscular
 - i. Midline hernias – behind the rectus abdominis muscle and in front of the posterior rectus fascia
 - ii. No midline hernias – between the lateral abdominal wall muscles
- b. Preperitoneal – above the peritoneum and behind the abdominal wall muscles (posterior rectus sheath muscle)
- c. Intraperitoneal/Underlay – underneath the parietal peritoneum behind all layers of the abdominal wall

Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Note: See figure below for mesh locations.



195) Mesh Length (cm)

Intent: To identify the size of the mesh used for hernia repair.

Definition: The length of mesh used in centimeters (cm). If more than one piece of mesh is used, report only the length of the largest piece placed.

Variable Options: Any number from 0-100 in cm. Can include one digit beyond the decimal point (e.g., 5.3).

Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Notes:

- If the actual mesh size is not available, leave it as 0.
- If the mesh is “trimmed” or cut to fit, use the cut size. If no “trimmed” measurement is provided, report the measurement noted on the mesh packaging.
- Leave as “0” if the patient did not have a ventral/incisional or umbilical hernia repair.

196) Mesh Width (cm)

Intent: To identify the size of the mesh used for hernia repair.

Definition: The width of mesh used in centimeters (cm). If more than one piece of mesh is used, report only the width of the largest piece placed.

Variable Options: Any number from 0-100 in cm. Can include one digit beyond the decimal point (e.g., 5.3).

Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Notes:

- If the actual mesh size is not available, leave it as 0.
- If the mesh is “trimmed” or cut to fit, use the cut size. If no “trimmed” measurement is provided, report the measurement noted on the mesh packaging.
- Leave as “0” if the patient did not have a ventral/incisional or umbilical hernia repair.

197) Mesh Type

Intent: To track mesh use in hernia repair.

Definition: Identify the mesh product(s) used in the hernia repair. To facilitate identification of the mesh type, use the Hernia Resource table in Appendix A.

Variable Options:

- a. Synthetic Non-Absorbable (e.g., Bard Soft Mesh, Composix E/X, Composix L/P, Mersilene, Prolene, Ventralex)
 - i. Yes
 - ii. No

- b. Synthetic Absorbable (e.g., Vicryl, Bio A, Dexon, Parietex Composite, Parietene, Physiomesb)
 - i. Yes
 - ii. No
- c. Biosynthetic (e.g., Phasix, Proceed, Sepramesh)
 - i. Yes
 - ii. No
- d. Biological (e.g. Strattice, Alloderm, FlexHD)
 - i. Yes
 - ii. No
- e. Other – Before typing in name of the mesh, please review the Hernia Resource table (Appendix A) to ensure the product is not included in options a through d above.
 - i. Yes
 - ii. No

Include: All patients who have a hernia repair with mesh.

Exclude: Patients who did not have mesh placement during hernia repair.

Notes:

- More than one type of mesh can be used during a hernia repair.

198) Brand of Mesh Used

Intent: To track mesh use in hernia repair.

Definition: Identify the brand of mesh product(s) used in the hernia repair.

Variable Options:

- a. Bard
 - i. Yes
 - ii. No
- b. Medtronic/Covidien
 - i. Yes
 - ii. No
- c. Ethicon
 - i. Yes
 - ii. No
- d. Gore
 - i. Yes
 - ii. No
- e. Atrium

- i. Yes
 - ii. No
- f. Other
 - i. Yes
 - ii. No

Include: All patients who have a hernia repair with mesh.

Exclude: Patients who did not have mesh placement during hernia repair.

Notes:

- More than one brand of mesh can be used during a hernia repair.

199) Mesh Fixation

Intent: To identify the mesh fixation use during hernia repair.

Definition: The method used to secure the mesh during hernia repair.

Variable Options:

- a. Suture
 - i. Yes
 - ii. No
- b. Adhesive (e.g., Baxter Tisseel or Tissucol, Ethicon Evicel, CryoLife BioGlue, fibrin glue, Vivostat)
 - i. Yes
 - ii. No
- c. Absorbable Tacks (Bard – OptiFix, SorbaFix, PermaSorb; Covidien – AbsorbaTack, ReliaTack Absorbable; Other – Ethicon SecureStrap; THD iMeshTacker)
 - i. Yes
 - ii. No
- d. Non-Absorbable Tacks (Bard – CapSure, PermaFix; Covidien – Endo Hernia Stapler, ProTack, Reliatack Permanent, Stat Tack, Tacker)
 - i. Yes
 - ii. No
- e. Self-Gripping/Self-Fixating (Covidien – ProGrip; Cousin Biotech – Adhesix)
 - i. Yes
 - ii. No
- f. Other
 - i. Yes
 - ii. No

Include: All patients who have a hernia repair with mesh.

Exclude: Patients who did not have mesh placement during hernia repair.

Notes:

- More than one method to fixate the mesh can be used during a hernia repair.

200) Myofascial Release

Intent: To track the use of myofascial release during hernia repair.

Definition: During this hernia repair, a myofascial release (component separation) was performed. Myofascial release is CPT 15734.

Variable Options:

- a. Yes
- b. No

Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Notes:

- For these cases, the "Procedure CPT Code 1" on the Operation 1 tab will be the hernia repair CPT. Answer "Yes" to the "Additional Operations" variable and complete "Operation 2" with the same date, time, surgeon, and operation type as Operation 1 but with the myofascial release CPT as "Procedure CPT Code 2".

201) Type of Myofascial Release

Intent: To track the use of myofascial release during hernia repair.

Definition: The physician documented what type of myofascial release during hernia repair.

Variable Options:

- a. Posterior Component – Exposure and division of the transversus abdominis fascia/muscle allowing placement of a mesh (sublay) in the preperitoneal /retrorectus/ retromuscular space. It may also be documented as a transversus abdominis release (TAR).

- b. Anterior Component – Surgeon creates a skin flap/exposure of external oblique muscle/aponeurosis by incising lateral to rectus (over external oblique to mobilize the muscle. Mesh placement can be onlay, inlay, or underlay.

Include: All patients who have a ventral/incisional or umbilical hernia repair.

Exclude: Patients who did not have a ventral/incisional or umbilical hernia repair.

Notes:

Tab 17 - Occurrences

NOTE: For all variables in this tab (except the Anastomotic Leak Intervention), leave blank unless there is an occurrence. Note the date of the first occurrence if there are multiple.

NOTE: If the patient had one or more readmissions after the index admission, capture any NEW occurrence following index hospital discharge ONLY within the corresponding admission data entry.

For example, a patient has surgery and is readmitted twice within 30 days, once with an anastomotic leak and once with a DVT requiring therapy. You will need to enter three separate cases in Qualtrics, one for the index procedure, readmit with leak complication recorded in occurrences, and readmit with DVT complication recorded in occurrences. In this example, the patient would have two readmits, 1 DVT and one anastomotic leak.

202) RBC Transfusions w/in 72 Hours Postoperatively (# Units Transfused)

Intent: To track the prevalence of post-operative patients who require red blood cells (RBC) transfusion.

Definition: The number of units of packed or whole red blood cells transfused within the 72 hours after the surgery out of room time.

Variable Options: Any number between 0 and 200 units

Include: All surgical patients.

Exclude: Patients who did not have surgery.

Notes:

- Fresh Frozen Plasma (FFP), Cell Saver, platelets, or other blood products which are not RBCs should not be included.
- Milliliters to Units calculation – mL administered/350 = # of units

203) Anastomotic Leak Date (mm/dd/yyyy)

Intent: To track the prevalence of post-operative patients who develop an anastomotic leak.

Definition: The first date an anastomotic leak was documented within 30 days of the operative procedure that created the anastomosis.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

204) Anastomotic Leak Intervention

Intent: To identify the management utilized to treat the anastomotic leak.

Definition: The management utilized to treat the first anastomotic leak.

Variable Options:

- a. Reoperation
- b. Antibiotics Only (no surgery and no percutaneous drainage)
- c. None

Include: All

Exclude: N/A

Notes:

- If percutaneous drainage by Interventional Radiology was utilized to manage the anastomotic leak, complete the Interventional Radiology tab.

205) Cardiac Arrest Requiring CPR Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who have a cardiac arrest requiring CPR.

Definition: The first date the patient has a cardiac arrest requiring CPR (e.g., chest compressions, defibrillation, cardiac massage, or artificial ventilation) within 30 days after the principal operative procedure or during current admission and within 30 days of discharge for medically managed patients.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Do not complete this variable for a patient with an automatic implantable cardioverter-defibrillator (AICD) that “fires,” but the patient had no loss of consciousness.

206) C-Difficile Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop Clostridium difficile (C-diff/C-difficile) infections.

Definition: The first date the patient has a laboratory detected C-difficile toxin in the stool within 30 days following the principal operative procedure or during current admission and within 30 days of discharge for medically managed patients.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Do not complete this variable if the patient has a positive C-difficile result < 72 hours after admission (present on admission).
- A positive stool culture, amplification, PCR assay, or cell cytotoxicity test could be used to meet the criteria for this variable.

207) Common Bile Duct Injury Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who have a common bile duct injury following cholecystectomy.

Definition: The first date the patient has a documented common bile duct injury identified within 30 days after the cholecystectomy.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have a cholecystectomy.

Exclude: Patients who do not have a cholecystectomy.

Notes:

- This complication refers to a transected or injured common bile duct, which potentially requires additional surgery to fix.

208) Cystic Duct Leak Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop a cystic duct leak following cholecystectomy.

Definition: The first date the patient has a documented cystic duct leak identified within 30 days after the cholecystectomy.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have a cholecystectomy.

Exclude: Patients who do not have a cholecystectomy.

Notes:

- Do not include bile leaks from the ducts of Luschka.

209) COVID-19 Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop new signs/symptoms of COVID-19 and a positive test.

Definition: The date the patient developed new signs/symptoms of COVID-19 and a positive test during the inpatient stay.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

210) DVT Requiring Therapy Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop a deep vein thrombosis (DVT) requiring therapy.

Definition: The first date the patient has a test confirmed DVT and treatment in place (e.g., anticoagulation therapy, vena cava filter, or clipping of the vena cava) within 30 days following the principal operative procedure or during current admission and within 30 days of discharge if medically managed.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Deep veins include axillary, brachial, deep femoral, femoral/ “superficial femoral,” fibular, gastrocnemius, iliac, internal jugular, peroneal, popliteal, portal, radial, soleal, subclavian, tibial, ulnar, or vena cava.
- Clots in basilica, cephalic, hepatic, renal, mesenteric vein, greater saphenous, or arteries should **not** be included.
- If DVT is test confirmed and the patient refused therapy, enter the first date the patient refused treatment.
- Enter the appropriate date if there is a clot **in the vein** at the site of an internal jugular(IJ) line or PICC line.
- Examples of tests to confirm include duplex/Doppler/ultrasound, venogram, or CT scan.
- Do not enter a date if the patient had a DVT on admission or developed it before surgery.

211) Enterocutaneous Fistula Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop a **new** enterocutaneous fistula.

Definition: The first date that a new enterocutaneous fistula was documented within 30 days following the principal operative procedure or during current admission and within 30 days of discharge for medically managed patients.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Do not enter a date if the enterocutaneous fistula was present on admission.

212) Ileus Requiring NG Tube or NPO Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop an ileus requiring NG tube placement or NPO (nothing by mouth) for management.

Definition: The first date of documented ileus or suspected ileus **and** management (i.e., NG tube or NPO) within 30 days following the principal operative procedure or during current admission and within 30 days of discharge for medically managed patients.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Do not enter a date for patients with a history of stomach or intestine motility disorders (e.g., dysmotility, gastroparesis).

213) Infected Pancreas Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop an infected pancreas.

Definition: The first date the patient has a documented infected pancreas during the current admission and within 30 days following discharge.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

214) Myocardial Infarction Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop an acute myocardial infarction(MI/AMI).

Definition: The first date the patient has documentation of at least **one** sign/symptom of myocardial ischemia **and** at least **one** cardiac biomarker result indicative of MI within 30 days following the principal operative procedure or during the current admission and within 30 days of discharge for medically managed patients. See "Notes" for examples of signs/symptoms and biomarkers for MI.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Enter the date of death if the patient had symptoms associated with myocardial ischemia but suffered a cardiac arrest before testing.
- Point of Care testing values are acceptable.

Examples of Signs and Symptoms of Myocardial Ischemia

- Symptoms - Angina, chest pain/pressure, neck or jaw pain, shoulder or arm pain, dyspnea, nausea/vomiting, and clammy skin
- New or presumed new ECG Changes – ST-segment elevation MI (STEMI), non-STEMI (NSTEMI) ischemia without ST-segment changes, T-wave inversion, ST-T wave abnormalities, left bundle branch block (LBBB), Pathological Q waves
- Imaging evidence (Doppler, ultrasound, or ECHO) showing new loss of viable myocardium or new regional wall motion abnormality consistent with ischemia
- Angiography, cardiac computed tomography angiography (CCTA), or autopsy showing new coronary thrombus

Examples of Cardiac Biomarkers

- Cardiac Troponin I (cTnI), T (cTnT) or C (cTnC)
- Creatinine Kinase (CK-MB)
- Myoglobin

215) Necrotic Pancreas Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop a necrotic pancreas.

Definition: The first date the patient has a documented necrotic pancreas identified during the current admission and within 30 days following discharge.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

216) Pneumonia Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop pneumonia.

Definition: The first date the patient meets one of the pneumonia criteria in the table below within 30 days following the principal operative procedure or during the current admission and within 30 days of discharge for medically managed patients. All criteria must be met, but the date recorded should be when the first element used to meet the criteria occurred.

Pneumonia Criteria				
Radiology		Signs/Symptoms		Pneumonia S & S
<p>Two or more serial chest imaging (x-ray or CT) results with at least one report of “new and persistent” or “progressive and persistent”</p> <ul style="list-style-type: none"> Consolidation Infiltrate Cavitation <p>Note:</p> <ul style="list-style-type: none"> One definitive imaging test result is acceptable in a patient without underlying pulmonary or cardiac disease (e.g. COPD, CHF ect.) Serial imaging should be no less than 12 hours apart and no more than 7 days apart. 	AND	<p>At least one of the following:</p> <ul style="list-style-type: none"> Leukopenia < 4,000 WBC/mm³ or leukocytosis ≥ 12,000 WBC/mm³ Fever > 38° C For adults > 70 years of age, altered mental status without another identified cause 	AND	<p>At least two of the following pneumonia signs/symptoms</p> <ul style="list-style-type: none"> New onset of purulent sputum, or change in character of sputum (e.g. color, consistency, odor, quantity), or increased respiratory secretions or suctioning New onset dyspnea, tachypnea (RR> 25 breaths per minute) or worsening cough Rales (crackles) or rhonchi (bronchial breath sounds) Worsening gas exchange (e.g. O₂ desaturation, increase oxygen requirements or increase ventilator demand)

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Signs and symptoms used to meet the pneumonia criteria must occur within a window of 3 calendar days before to 3 calendar days after the first positive Radiology test (total 7-day window). The second positive radiology test may be outside this window.

Day 1	Day 2	Day 3	1st Positive Radiology test (Day 4)	Day 5	Day 6	Day 7
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- If the patient has the first criteria for pneumonia on the day of admission or the first day after admission, consider that pneumonia was present on admission and exclude this date for this variable. Documentation of signs & symptoms in the record that occurred within two days before admission can be used to meet the criteria for pneumonia present on admission. If pneumonia is present on admission, must wait 14 days from the first criteria date (admission date or first day after date) to look for a repeat (second) occurrence of pneumonia that could be included.
- Physician diagnosis of pneumonia alone does not meet the pneumonia criteria above and cannot be used in place of the criteria above.
- Aspiration pneumonia should be included if the patient meets the above pneumonia criteria.
- Other non-definitive terms to describe pneumonia by Radiology include air-space disease, opacity, focal opacification, patchy areas of increased density. Documentation that the physician interprets these Radiology results as indicative of pneumonia and antibiotics are administered can be used to meet Radiology criteria.

217) Pulmonary Embolism Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop new pulmonary embolism(PE).

Definition: The first date the patient has a **new** PE confirmed by an appropriate diagnostic study (e.g., CT Pulmonary Angiogram (CTPA), Ventilation-Perfusion (V-Q) scan, CT Spiral/Helical scan, Pulmonary Arteriogram, Trans-esophageal echocardiogram (TEE), 2D Echocardiogram, heart catheterization) within 30 days following the principal operative procedure or during the current admission and within 30 days of discharge for medically managed patients.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

218) Retained Common Bile Duct Stone Date (mm/dd/yyyy)

Intent: To track the prevalence of patients with a retained common bile duct stone following cholecystectomy.

Definition: The first date the patient has a documented retained common bile duct stone within 30 days after the cholecystectomy.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who have a cholecystectomy.

Exclude: Patients who do not have a cholecystectomy.

Notes:

- When a stone is not visualized during secondary ERCP, but the major papilla is inflamed or, labs indicate that the stone passed before ERCP with supporting documentation in the chart, you may count this as a retained CBD stone.

219) Sepsis Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop sepsis.

Definition: The first date the patient has Sepsis meeting the criteria in the table below within 30 days following the principal operative procedure or during the current admission and within 30 days of discharge for medically managed patients.

Sepsis	Infection Source: Documentation of a new confirmed or suspected infection source.	And	At least TWO of the following Systemic Signs/Symptoms : <ul style="list-style-type: none"> • Heart Rate (HR) > 90 beats per minute • Respiratory Rate (RR) > 20 breaths per minute • Temperature > 38° C or < 36° C • White blood cell (WBC) > 12,000/cu mm or < 4,000/cu mm or immature (band) forms > 10% Note: <ul style="list-style-type: none"> • A maximum of one calendar day allowed between new Infection Source documentation and Systemic Signs/Symptoms. • A maximum of 6 hours is allowed between any two of the Systemic Signs/Symptoms.
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			<ul style="list-style-type: none"> • Systemic Signs/Symptoms must be new and not related to a chronic condition
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Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Leave blank if the patient develops severe sepsis/septic shock.
- Acute pancreatitis is NOT an infection source.
- Infection can be bacterial, fungal, viral, or parasitic.
- "Suspected Sepsis" is NOT a documented source of infection.
- "Suspected infection due to ____" is an acceptable infection source (e.g., suspected infection from an anastomotic leak).
- Nursing documentation referencing an infection source or treatment of a new infection is acceptable.
- New infection source (not present pre-op/intra-op), sepsis can be assigned again any time even if it was assigned pre-op.
- The same infection source could upgrade to severe sepsis post-op (occurrences) if the patient only had sepsis assigned pre-op. Time windows listed in the table still apply.
- Same infection source and assigned sepsis or severe sepsis pre-op, can't assign the same again until at least post-op day 7.

220) Severe Sepsis/Septic Shock Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop severe sepsis/septic shock.

Definition: The first date the patient has Severe Sepsis/Septic Shock meeting the criteria in the table below within 30 days following the principal operative procedure or during the current admission and within 30 days of discharge for medically managed patients.

Variable Options: Date in mm/dd/yyyy format

Sepsis	Infection Source: Documentation of a new confirmed or suspected infection source.	And	At least TWO of the following Systemic Signs/Symptoms: <ul style="list-style-type: none"> • Heart Rate (HR) > 90 beats per minute • Respiratory Rate (RR) > 20 breaths per minute • Temperature > 38° C or < 36° C
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			<ul style="list-style-type: none"> White blood cell count > 12,000/cu mm or < 4,000/cu mm or immature (band) forms > 10% <p>Note:</p> <ul style="list-style-type: none"> A maximum of one calendar day allowed between new Infection Source documentation and Systemic Signs/Symptoms. A maximum of 6 hours is allowed between any two of the Systemic Signs/Symptoms. Systemic Signs/Symptoms must be new and not related to a chronic condition
Severe Sepsis/Septic Shock	<p>Must meet the above criteria for Sepsis.</p> <p>Note: A maximum of 6 hours is allowed between System Signs/Symptoms of (Sepsis criteria above) and signs of Organ Dysfunction.</p>	And	<p>At least ONE of the following signs of Organ Dysfunction:</p> <ul style="list-style-type: none"> Systolic Blood Pressure (SBP) < 90 mmHg Mean Arterial Pressure (MAP) < 65 mmHg Systolic Blood Pressure (SBP) decrease > 40 mmHg from baseline Lactate > 2 mmol/L INR > 1.5 or aPTT > 60 seconds Platelet count < 100,000 μL Bilirubin > 2mg/dL Creatinine > 2 mg/dL Urine output < 0.5 mL/kg/hour x 2 Hypotension requiring vasopressor therapy to maintain or elevate MAP > 65 mmHg <p>Note:</p> <ul style="list-style-type: none"> Dysfunction criteria cannot be related to a chronic condition (e.g. low urine output with chronic renal failure). Organ dysfunction criteria must be remote from the infection source. Only documented blood pressures are to be used regardless of vasopressor administration.

Include: All

Exclude: N/A

Notes:

- Acute pancreatitis is NOT an infection source.
- Infection can be bacterial, fungal, viral, or parasitic.
- “Suspected Sepsis” is NOT a documented source of infection.

- “Suspected infection due to ____” is an acceptable infection source (e.g., suspected infection from an anastomotic leak).
- Nursing documentation referencing an infection source or treatment of a new infection is acceptable.
- New infection source (not present pre-op/intra-op), sepsis can be assigned again any time even if it was assigned pre-op.
- The same infection source could upgrade to severe sepsis post-op (occurrences) if the patient only had sepsis assigned pre-op. Time windows listed in the table still apply.
- Same infection source and assigned sepsis or severe sepsis pre-op, can’t assign the same again until at least post-op day 7.

Note: If the patient develops a surgical site infection (SSI), a date should **ONLY be entered in **one** of the three variables below. If no SSI, leave all three blank.**

221) SSI Deep Incisional Date (mm/dd/yyyy)

Intent: To track the prevalence of post-operative patients’ who develop deep incisional surgical site infection (SSI).

Definition: The first date within the 30 days following the principal operative procedure that the patient has an infection involving the deep soft tissue (e.g., facial, muscle) at the incision site **and** at least one of the following:

- Purulent drainage from the deep incision but not from the organ/space.
- Organisms isolated from a culture (aseptically obtained) of the deep incision site fluid or tissue.
- An abscess or evidence of infection found in the deep incision using direct examination, reoperation, histopathologic or radiologic studies.
- A deep incision that dehisces or is deliberately opened by a surgeon **and** the patient has one or more documented signs/symptoms of infection (i.e., fever >38 degrees Celsius, localized pain, tenderness). Do not use this criterion if the incision is culture-negative.
- Surgeon or attending documentation of the diagnosis of deep incisional SSI.

Variable Options: Date in mm/dd/yyyy format

Include: All surgical patients.

Exclude: Patients who did not have surgery.

Notes:

- Leave blank if the patient develops organ/space SSI.
- An organ/space SSI that drains through the deep incision should be reported as an organ/space SSI.

222) SSI Organ/Space Date (mm/dd/yyyy)

Intent: To track the prevalence of post-operative patients' who develop organ/space SSI.

Definition: The first date within the 30 days following the principal operative procedure that the patient has an infection involving any part of the anatomy incisional (e.g., organ, spaces) other than at the incision site **and** at least one of the following:

- Purulent drainage from a drain placed into the organ/space through a stab wound.
- Organisms isolated from a culture (aseptically obtained) of the organ/space fluid or tissue.
- An abscess or evidence of infection found in the organ/space using direct examination, reoperation, histopathologic or radiologic studies.
- Surgeon or attending documentation of the diagnosis of organ/space SSI.

Variable Options: Date in mm/dd/yyyy format

Include: All surgical patients.

Exclude: Patients who did not have surgery.

Notes:

223) SSI Superficial Incisional Date (mm/dd/yyyy)

Intent: To track the prevalence of post-operative patients' who develop superficial incisional SSI.

Definition: The first date within the 30 days following the principal operative procedure that the patient has an infection of only the skin and subcutaneous tissue at the incision site **and** at least one of the following:

- Purulent drainage from the superficial incision (with or without confirming laboratory test).
- Organisms isolated from a culture (aseptically obtained) of the superficial incision site fluid or tissue.
- A superficial incision deliberately opened by a surgeon **and** the patient has one or more documented signs/symptoms of infection (i.e., localized pain, tenderness, redness, localized swelling, heat). Do not use this criterion if the incision is culture-negative.
- Surgeon or attending documentation of the diagnosis of superficial incisional SSI.

Variable Options: Date in mm/dd/yyyy format

Include: All surgical patients.

Exclude: Patients who did not have surgery.

Notes:

- Leave blank if the patient develops a deep incisional or organ/space SSI.
- Do not enter a date if suture abscess only.

SSI Reference:

Ingrahm, A., Shiloach, M. et al. ACS NSQIP BEST PRACTICES GUIDELINE: Prevention of Surgical Site Infections. (2009).

CDC website: National Healthcare Safety Network, Surgical Site Infection Event (SSI). See Table 1. Surgical Site Infection Criteria, <https://www.cdc.gov/nhsn/pdfs/pscmanual/9pscscssicurrent.pdf>

224) Stroke/CVA Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop a stroke/cerebral vascular accident (CVA).

Definition: The first date the patient develops a CVA (embolic, thrombotic, or hemorrhagic) with deficits (e.g., hemiplegia, aphasia, sensory deficits, memory loss) that persist for 24 hours or more within 30 days following the principal operative procedure or during the current admission and within 30 days of discharge for medically managed patients.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

225) Urinary Tract Infection CAUTI Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop a catheter-associated urinary tract infection (CAUTI).

Definition: The date that the first "Urinary Tract Infection Criteria" is identified on a patient with: a current indwelling urinary catheter that has been in place for at least two consecutive days during this admission (day 3 is the first date they qualify)

OR

an indwelling urinary catheter was in place for at least two consecutive days during this admission but had been removed the day before the occurrence date.

Urinary Tract Infection Criteria (both criteria must be met to qualify)		
ONE of the following symptoms: <ul style="list-style-type: none"> Fever ($>38^{\circ}$ C or 100.4° F) Urgency Frequency Dysuria Suprapubic tenderness (e.g. lower abdominal, bladder or pelvic pain) Costovertebral angle pain or tenderness (e.g. left or right lower back or flank pain/tenderness) 	AND	Urine culture with $> 10^5$ (100,000) CFU/mL of not more than 2 species of organisms but at least one of which is a bacterium.

Variable Options: Date in mm/dd/yyyy format

Include: Patients who qualify based on time catheter is in place, symptoms and culture.

Exclude: Patients who never have an indwelling urinary catheter (IUC) **OR** patients who never have an IUC for at least two consecutive days **OR** patients who have an IUC for two consecutive days but it was removed greater than one day before occurrence.

Qualify	No	No	Yes	Yes	Yes	No
Patient A	IUC day 1	IUC day 2	IUC Day 3	IUC removed Day 4		

Notes:

- A catheter in place for any portion of the calendar day qualifies as a day.
- CAUTI occurrence can be included for up to 30 days after discharge if the catheter remains past discharge.
- Symptoms used to meet the UTI criteria must occur within a window of 3 calendar days before to 3 calendar days after the first positive urine culture (total 7-day window).

Day 1	Day 2	Day 3	1st Positive Culture (Day 4)	Day 5	Day 6	Day 7
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- If the patient has the first criteria for UTI on the day of admission or the first day after admission, consider that UTI was present on admission and exclude this date for this variable. Documentation of criteria in the record that occurred within two days before admission can be used to meet criteria for UTI present on admission. If UTI is present on

admission, must wait 14 days from the first criteria date (admission date or first day after date) to look for a repeat (second) occurrence of UTI that could be included.

- Intermittent straight catheterization or condom catheter do not qualify as an indwelling urinary catheter.
- Urostomy, ileal conduit, nephrostomy tubes, and suprapubic catheters do not qualify as an indwelling urinary catheters.
- Urgency, frequency, or dysuria cannot be used if the patient has a catheter in place.
- Suprapubic tenderness should only be used if no other cause for this tenderness
- If a catheter is removed and reinserted after at least one full calendar day, the 2-day count to qualify for a CAUTI is restarted.
- Candida, yeast, mold, dimorphic fungi, or parasites cannot be used to meet the urine culture criteria of a bacterium.

UTI Reference: Centers for Disease Control and Prevention. Urinary Tract Infection (Catheter-Associated Urinary Tract Infection [CAUTI] and Non-Catheter-Associated Urinary Tract Infection [UTI]) Events. (2020). <https://www.cdc.gov/nhsn/pdfs/pscmanual/7psccauticurrent.pdf>

226) Urinary Tract Infection Non-CAUTI Date (mm/dd/yyyy)

Intent: To track the prevalence of patients who develop a Non-CAUTI.

Definition: The date that the first “Urinary Tract Infection Criteria” is identified on a patient who did not have an indwelling urinary catheter that was in place for > 2 consecutive days during this admission **OR** had a catheter in place at least two days this admission but it was removed more than one day ago.

Urinary Tract Infection Criteria (both criteria must be met to qualify)		
ONE of the following symptoms: <ul style="list-style-type: none"> • Fever >38° C in any age patient • Urgency • Frequency • Dysuria • Suprapubic tenderness (e.g. lower abdominal, bladder or pelvic pain) • Costovertebral angle pain or tenderness (e.g. left or right lower back or flank pain/tenderness) 	AND	Urine culture with > 10 ⁵ (100,000) CFU/mL of not more than 2 species of organisms but at least one of which is a bacterium.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- A catheter in place for any portion of the calendar day qualifies as a day.
- Non-CAUTI occurrence can be included for up to 30 days after discharge.
- Symptoms used to meet the UTI criteria must occur within a window of 3 calendar days before to 3 calendar days after the first positive urine culture (total 7-day window).

Day 1	Day 2	Day 3	1st Positive Culture (Day 4)	Day 5	Day 6	Day 7
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- If the patient has the first criteria for UTI on the day of admission or the first day after admission, consider that UTI was present on admission and exclude this date for this variable. Documentation of criteria in the record that occurred within two days before admission can be used to meet criteria for UTI present on admission. If UTI is present on admission, must wait 14 days from the first criteria date (admission date or first day after date) to look for a repeat (second) occurrence of UTI that could be included.
- In a patient > 65 years of age, you cannot use fever as the symptom.
- Urgency, frequency, and dysuria cannot be used if the patient has a catheter in place.
- Candida, yeast, mold, dimorphic fungi, or parasites cannot be used to meet the urine culture criteria of the bacterium.

UTI Reference: Centers for Disease Control and Prevention. Urinary Tract Infection (Catheter-Associated Urinary Tract Infection [CAUTI] and Non-Catheter-Associated Urinary Tract Infection [UTI]) Events. (2020). <https://www.cdc.gov/nhsn/pdfs/psscmanual/7psccauticurrent.pdf>

227) Wound Disruption Date (mm/dd/yyyy)

Intent: To track the prevalence of post-operative patients whom develop wound dehiscence.

Definition: The date a post-operative patient developed wound dehiscence requiring a return to surgery while still admitted to the hospital.

Variable Options: Date in mm/dd/yyyy format

Include: All surgical patients.

Exclude: Patients who did not have surgery.

Notes:

Tab 18 – Opioids**228) Tablet Type 1**

Definition: The primary opioid tablet that the patient was prescribed for pain at hospital discharge.

Variable Options:

- a. None
- b. Buprenorphine
- c. Codeine
- d. Dihydrocodeine
- e. Fentanyl
- f. Hydrocodone
- g. Hydromorphone
- h. Meperidine
- i. Methadone
- j. Morphine
- k. Oxycodone
- l. Pentazocine
- m. Tapentadol
- n. Tramadol
- o. Other

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- Report capsules in the tablet data fields.
- Only report the opioid component of the prescription (e.g., oxycodone/acetaminophen 5 mg/325 mg, report oxycodone 5mg).

229) Tablet Type 2

Definition: Another opioid tablet that the patient was prescribed for pain at hospital discharge.

Variable Options:

- a. None
- b. Buprenorphine
- c. Codeine
- d. Dihydrocodeine
- e. Fentanyl

- f. Hydrocodone
- g. Hydromorphone
- h. Meperidine
- i. Methadone
- j. Morphine
- k. Oxycodone
- l. Pentazocine
- m. Tapentadol
- n. Tramadol
- o. Other

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- Report capsules in the tablet data fields.
- Only report the opioid component of the prescription (e.g., oxycodone/acetaminophen 5 mg/325 mg, report oxycodone 5mg).

230) Solution Type 1

Definition: The type of opioid solution prescribed at discharge.

Variable Options:

- a. None
- b. Buprenorphine
- c. Codeine
- d. Dihydrocodeine
- e. Fentanyl
- f. Hydrocodone
- g. Hydromorphone
- h. Meperidine
- i. Methadone
- j. Morphine
- k. Oxycodone
- l. Pentazocine
- m. Tapentadol
- n. Tramadol
- o. Other

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- Report cartridge, concentrate, elixir, liquid, pen injector, pump reservoir, syringe, and other similar solution forms prescribed units/mL in the solution data fields.
- Only report the opioid component of the prescription (e.g., oxycodone/acetaminophen 5 mg/325 mg per 5 mL, report oxycodone).

231) Other Type 1

Definition: The type of opioid other prescribed at discharge.

Variable Options:

- None
- Buprenorphine
- Codeine
- Dihydrocodeine
- Fentanyl
- Hydrocodone
- Hydromorphone
- Meperidine
- Methadone
- Morphine
- Oxycodone
- Pentazocine
- Tapentadol
- Tramadol
- Other

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- Only report the opioid component of the prescription.

232) Strength

Definition: The strength of opioids prescribed at discharge.

Variable Options: Relevant value for the data element.

Include: All

Exclude: N/A

Notes:

- Only report the opioid component of the prescription (e.g., oxycodone/acetaminophen 5 mg/325 mg, report the number 5).

233) Units

Definition: The drug units of opioids prescribed at discharge.

Variable Options:

- a. Milligrams (mg)
- b. Micrograms (mcg)
- c. Grams (g)
- d. Percent (%)
- e. Other

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- Only report the opioid component of the prescription.

234) Solution 1 Milliliters (mL)

Intent: To determine the opioid solution dose prescribed at discharge.

Definition: The milliliters of solution (mL) of opioid prescribed at discharge.

Variable Options: Relevant value for data element

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- Example 1: acetaminophen/codeine solution 120 mg/12 mg per 5 mL is prescribed.

- Report the numeric value 5.

235) Other 1 Form

Definition: The form of “other” opioids prescribed at discharge.

Variable Options:

- a. None
- b. Film
- c. Lozenge
- d. Nasal spray
- e. Oral spray
- f. Patch
- g. Powder
- h. Suppository
- i. Other

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)

236) Maximum Per Dose

Intent: To determine the maximum allowable dose of opioid that the patient can take for one dose.

Definition: The maximum per dose opioid prescribed at discharge.

Variable Options: Relevant value for the data element.

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- Example 1 (Tablets): oxycodone 5 mg 1-2 tabs PO Q 4-6 h prn pain is prescribed.
 - The patient can take a maximum amount of 2 tabs for each dose.
 - Report the numeric value 2.

- Example 2 (Tablets): oxycodone 10 mg 1 tab PO Q 12 h prn pain is prescribed.
 - The patient can take a maximum amount of 1 tab for each dose.
 - Report the numeric value 1.
- Example 3 (Solution): acetaminophen/codeine solution 120 mg/12 mg per 5 mL take 5-10 mL Q 6 h prn pain.
 - The patient can take a maximum amount of 10 mL for each dose.
 - Report the numeric value 10.
- Example 4 (Other): fentanyl transdermal 50 mcg/h one patch Q 72 h is prescribed.
 - The patient can apply one patch for each dose.
 - Report the numeric value 1.

237) Maximum Frequency Per Day

Intent: To determine how many times per 24-hour period the patient may take the opioid prescribed at discharge.

Definition: The maximum frequency of opioids per day prescribed at discharge.

Variable Options: Relevant value for the data element.

Include: All

Exclude: N/A

Notes:

- Example 1 (Tablets): oxycodone 5 mg 1-2 tabs PO Q 4-6 h prn pain is prescribed.
 - The patient can take a maximum number of doses per day of 6.
 - Report the numeric value 6.
- Example 2 (Tablets): oxycodone 10 mg 1 tab PO Q 12 h prn pain is prescribed.
 - The patient can take a maximum number of doses per day of 2.
 - Report the numeric value 2.
- Example 3 (Solution): acetaminophen/codeine solution 120 mg/12 mg per 5 mL take 5-10 mL Q 6 h prn pain.
 - The patient can take a maximum number of doses per day of 4.
 - Report the numeric value 4.
- Example 4 (Other): fentanyl transdermal 50 mcg/h one patch Q 72 h is prescribed.
 - The patient can wear a maximum number of patches of 1 per day.
 - Report the numeric value 1.

238) Quantity

Intent: To determine the total amount of opioids prescribed at discharge.

Definition: The number of opioids prescribed at discharge.

Variable Options: Relevant value for the data element.

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)
- For tablets, report the total number of tablets prescribed.
- For solution, report the total milliliters (mL) of solution prescribed.
- For other, report the total number of units (e.g., patches, lozenges, etc.) prescribed.
- Patients discharged to acute rehabilitation or facility may have an opioid prescription listed on their discharge summary but no quantity listed because the providers at the facility will continue to dispense. For these scenarios, report the opioid listed with zero for the quantity.

239) Inpatient Opioid Use (24 Hours)

Intent: To determine if the patient has taken an opioid medication within 24 hours before discharge from the hospital.

Definition: The inpatient hospital chart has record of the patient being administered an opioid medication within the 24 hours before discharge.

Variable Options:

- i. Yes
- ii. No

Include: All

Exclude: N/A

Notes:

- [Drug Search](#)

Tab 19 - Discharge

240) Hospital Discharge Date (mm/dd/yyyy)

Intent: To capture the date that the patient leaves the current acute care hospital to track timeframes.

Definition: The date the patient left the current acute care hospital setting.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- Use the ADT discharge date unless the patient expires.
- If the patient expires in the hospital, use the date of death as the discharge date.
- If the patient is discharged to sub-acute care within your hospital (e.g., rehab unit, hospice, psychiatric unit), record the transfer date if a discharge date is not available.

241) Hospital Discharge Time (Military Time 00:00)

Intent: To capture the time that the patient leaves the current acute care hospital to track timeframes.

Definition: The time the patient left the current acute care hospital setting.

Variable Options: military time in hh:mm format

Include: All

Exclude: N/A

Notes:

- Use the ADT discharge time unless the patient expires.
- If the patient expires in the hospital, use the time of death as the discharge time.
- If the patient is discharged to sub-acute care within your hospital (e.g., rehab unit, hospice, psychiatric unit), record the transfer time if a discharge time is not available.

242) Discharge Status

Intent: To capture survival to discharge.

Definition: Indicate if the patient was alive or dead when they left the hospital.

Variable Options:

- a. Alive

b. Dead

Include: All

Exclude: N/A

Notes:

243) Discharge Disposition

Intent: To capture information about disposition at discharge from the current acute care hospital.

Definition: The patient's destination at discharge from the current acute care hospital.

Variable Options:

- a. Expired
- b. Home Care for Skilled Care
- c. Home or Self-Care – e.g., home, group home, foster care, jail/prison
- d. Hospice-Home
- e. Hospice Medical Facility (Certified) – e.g., inpatient hospice care facility, discharged from acute care hospital but remains at the same hospital under hospice care.
- f. Inpatient Rehab (Acute)
- g. Left AMA
- h. Long Term Care Hospital
- i. Other Type of Healthcare Institution – e.g., inpatient drug/alcohol rehab, residential chemical dependency program, inpatient detox facility
- j. Psychiatric Hospital – or distinct psychiatric unit of the hospital
- k. Short-Term Hospital for Inpatient Care
- l. Skilled Nursing Facility (SNF) – includes sub acute rehab at a SNF

Include: All

Exclude: N/A

Notes:

- Use discharge summary and case management notes to determine the most accurate discharge disposition.

244) Return to ED/UC Date (mm/dd/yyyy) 1-3

Intent: To track unscheduled returns for care.

Definition: The date the patient returned to an emergency department or urgent care following discharge.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: None

Notes:

- Leave blank if the patient does not return.
- Leave blank if the patient returns to the ED and is readmitted (complete Readmission Date below).

245) Readmission Date (mm/dd/yyyy)

Intent: To track readmissions following discharge.

Definition: The date the patient was readmitted to a hospital following discharge.

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: None

Notes:

- Leave blank if the patient does not return.
- Readmissions to your facility with a surgery consult/admit AND related to the surgical problem from the prior episode (index admit) should **also** have a new patient entry (new MACS case number) in Qualtrics.

246) Death Date Within 30 days Post Operation (mm/dd/yyyy)

Intent: To identify patients who died intraoperatively or within 30 days after the principal operative procedure.

Definition: Note the date of death if a patient dies intraoperative or within 30 days after the principal operative procedure. Also include non-operative patient deaths within 30 days of first acute care general surgery consultation.

Variable Options: Date in mm/dd/yyyy format

Include: All patients who die within 30 days after the principal operative procedure. Also include non-operative patient deaths within 30 days of first acute care general surgery consultation.

Exclude: Patients who do not die within 30 days.

Notes:

247) Last Date of Follow Up (mm/dd/yyyy)

Intent: To identify the last date of patient follow-up-related information documented in the medical record.

Definition: Note the last date of follow up information documented in the medical record (preferably > or equal to 30 days)

Variable Options: Date in mm/dd/yyyy format

Include: All

Exclude: N/A

Notes:

- If the patient does not have a follow-up, use the discharge date for the last follow-up date.

248) Comments

Intent: Provide a free text space to collect additional information based on the needs of individual centers.

Definition: As determined by the center.

Variable Options: Free text

Include: N/A

Exclude: N/A

Notes:

Appendix A

Hernia Resource – Page 1		
Product Name	Mesh Type	Manufacturer/Brand
AlloDerm	Biological	Allergan (Other)
AlloMax	Biological	Bard
Bard Mesh/Bard Soft Mesh	Synthetic Non-Absorbable	Bard/Davol
Bio-A	Synthetic Absorbable	Gore
Surgisis Biodesign	Biological	Cook (Other)
Cellis	Biological	Mecellis biotech (Other)
CollaMend/CollaMend FM	Biological	Bard
Composix/EX/LP	Synthetic Non-Absorbable	Bard
Cortiva	Biological	RTI Surgical (Other)
C-Qur/C-Our Lite	Biosynthetic	Atrium
DermaMatrix	Biological	Synthes (Other)
Dexon	Synthetic Absorbable	Covidien
Dulex	Synthetic Non-Absorbable	Bard
DualMesh	Synthetic Non-Absorbable	Gore
DynaMesh	Synthetic Non-Absorbable	FEG (Other)
Epiflex	Biological	DIZG (Other)
FlexHD	Biological	MTF/Ethicon
FortaGen	Biological	Organogenesis (Other)
Fortiva	Biological	RTI Surgical (Other)
Goretex DualMesh	Synthetic Non-Absorbable	Gore
Infinitt	Synthetic Non-Absorbable	Gore
Intramesh T1	Synthetic Non-Absorbable	Cousin Biotech (Other)
Marlex	Synthetic Non-Absorbable	Bard
Mersilene	Synthetic Non-Absorbable	Ethicon/J&J
MotifMesh	Synthetic Non-Absorbable	Proxy Biomedical/Maquet (Other)
Optilene	Synthetic Non-Absorbable	Braun (Other)
Parietex Flat 2d Mesh	Synthetic Non-Absorbable	Medtronic/Covidien
Parietex Composite	Synthetic Absorbable	Medtronic/Covidien
Parietene/Parietene Light	Synthetic Absorbable	Medtronic/Covidien
Periguard	Biological	Baxter (Other)
Permacol	Biological	Covidien
Phasix	Biosynthetic	Bard
Physiomesh	Synthetic Absorbable	Ethicon
PolyPRO	Synthetic Non-Absorbable	Soft Tissue Science (Other)
Proceed	Biosynthetic	Ethicon
Prolene	Synthetic Non-Absorbable	Bard/Davol
Prolene Soft	Synthetic Non-Absorbable	Ethicon
SEE Hernia Resource Part 2 on Next Page		

Hernia Resource - Part 2		
Product Name	Mesh Type	Manufacturer/Brand
ProLite	Synthetic Non-Absorbable	Atrium
ProLite Ultra	Synthetic Non-Absorbable	Atrium
Rebound HRD	Synthetic Non-Absorbable	FEG (Other)
Reconix	Synthetic Non-Absorbable	Bard
Safil Mesh	Synthetic Absorbable	Braun (Other)
SepraMesh	Biosynthetic	Bard
Strattice	Biological	LifeCell (Other)
SurgiMend	Biological	Integra (Other)
SurgiPro	Synthetic Non-Absorbable	Covidien
TIGR Matrix	Synthetic Absorbable	Novus Scientific (Other)
TiMartix	Synthetic Non-Absorbable	BioMet Biologics (Other)
Trelex	Synthetic Non-Absorbable	Getinge/Maquet (Other)
TutoMesh	Biological	RTI Surgical
Ultrapro	Synthetic Absorbable	Ethicon
Ventralex	Synthetic Non-Absorbable	Bard
Ventralight ST	Synthetic Absorbable	Bard
Ventrio	Synthetic Absorbable	Bard
Veritas Collagen Matrix	Biological	Baxter (Other)
Vicryl	Synthetic Absorbable	Ethicon
VitaMesh	Synthetic Non-Absorbable	Proxy Biomedical/Maquet (Other)
Vypro	Synthetic Absorbable	Ethicon
Vypro II	Synthetic Absorbable	Ethicon
ZenMatrix	Biological	Bard
XCM Biologic Tissue Matrix	Biological	Ethicon

[Change Log](#)

Date	#	Variable	Change

