



What Physicians Need to Know About Complications and Patient Safety Indicators

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Presented By



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Learning Outcomes

- At the completion of this educational activity, the learner will be able to:
 - List coding conventions, coding guidelines, and Coding Clinic[®] advice on the topic of complications
 - Compare and contrast the provider perspective on complications to that CDI, coding, and quality professionals
 - Discuss strategies to educate providers about how complications are reported
 - Differentiate between complication codes and patient safety indicators





What Is a Medical Complication?



We say "complication," the provider hears medical error





What Are Medical Complications?

- The term "complication" has many meanings
 - CMS uses "complication" to describe a diagnosis that occurs during a hospital admission
 - Complication or comorbidity (CC) or a major complication or comorbidity (MCC)
 - ICD-10-CM has a set of codes that are defined as "complication codes"
 - They may be assigned based on the classification system e.g., alphabetic index, or they
 may require specific provider documentation to assign a complication code
 - Providers often consider a "complication" as an unwanted medical outcome that can imply wrongdoing
 - Not all "complications" are associated with medical misadventure (a nice word for wrongdoing ;-)



What Are Medical Complications: Adverse Events

- The Institute for Healthcare Improvement defines an adverse event as: unintended physical injury resulting from or contributed to by medical care that requires additional monitoring, treatment or hospitalization, or that results in death.
 - Adverse events may be ameliorable, preventable, nonpreventable
 - Preventable adverse events result from care that fell below the standard expected of physicians in their community.
 - Ameliorable adverse events are not preventable, but the severity of the injury "could have been substantially reduced if different actions or procedures had been performed or followed."



What Are Medical Complications: Medical Errors

- Errors are an act of commission (doing something wrong) or omission (failing to do the right thing) leading to an undesirable outcome or significant potential for such an outcome.
- A near miss (i.e., potential adverse event) is defined as "any event that could have had adverse consequences but did not and was indistinguishable from fully fledged adverse events in all but outcome."
 - In a near miss, an error was committed, but the patient did not experience clinical harm, either through early detection or sheer luck.



The Link to Patient Safety Indicators

- Patient Safety Indicators (PSIs) provide information on potentially avoidable safety events focusing on potential in-hospital complications and adverse events following surgeries, procedures, and childbirth.
 - First released in 2003
 - Developed to validate evidence suggesting complexities associated with the U.S. healthcare system potentially causing patient deaths and significant unintended adverse effects
 - Screen for potential problems that patients experience resulting from exposure to the healthcare system
 - Identify opportunities for improvement in the delivery of care



PSIs and Preventable Errors

- PSIs were designed to be a starting point to identify systematic differences
 between hospitals to reduce preventable errors
 - Systematic differences may relate to processes or structures that could change to improve patient care and safety





Clinical Documentation and PSIs

- Preventable errors may be attributed to
 - Human error on the part of physicians or nurses, or system deficiencies
 - Documentation and coding practices
 - Why many CDI departments work with the quality department to help accurately identify and report PSIs
 - Patient characteristics not captured by administrative data
 - Other factors



Getting Providers Onboard



- Discussing quality measures can often be a good way to get providers to understand the impact of their documentation . . .
- It can also be frustrating if . . .
 - We aren't speaking the same language.
 - We can't tell the provider what/how to document to accurately represent patient care.
 - 3. Complications/quality-of-care issues can affect a provider's reputation and livelihood. It is personal to the provider.



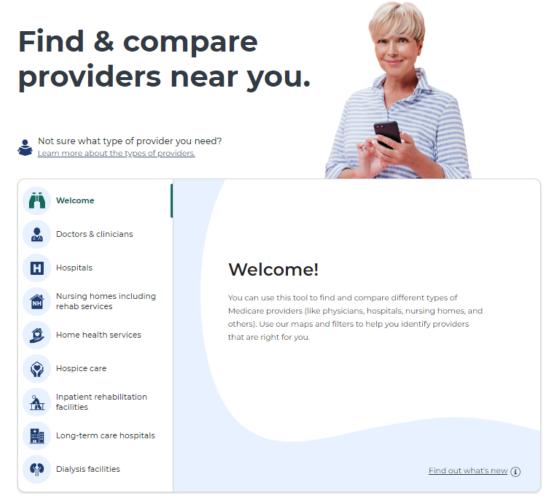


CMS Reportable "Serious Complications"





CMS Publicly Reported Data



Looking for medical supplies and equipment? Visit the Supplier Directory

Reference: https://www.medicare.gov/care-compare/



Serious Complications: Reported by CMS on Care Compare



- Serious complications CMS Patient Safety
 Indicators for *Traditional Medicare* patients
 - Measures of serious complications are drawn from the CMS Patient Safety Indicators (PSIs).
 The overall score for serious complications is based on how often adult patients had certain serious, but potentially preventable, complications related to medical or surgical inpatient hospital care.
 - Patient Safety and Adverse Events Composite (CMS Medicare PSI 90)
 - PSI 04 Death rate among surgical inpatients with serious treatable complications



PSI 90: A Composite Measure

- A composite measure provides a means for monitoring performance over time or across regions and populations using a method that applied at the national, regional, State or provider/area level
- Potential benefits of composite measures are to:
 - Summarize quality across multiple indicators
 - Improve the ability to detect differences
 - Identify important domains and drivers of quality
 - Prioritize action for quality improvement
 - Make current decisions about future (unknown) healthcare needs
 - Avoid cognitive "shortcuts"



PSI 90: A Composite Measure

Table 1. Composite Weights for PSI 90 v2022

INDICATOR	HARM WEIGHT	VOLUME WEIGHT	COMPONENT WEIGHT
PSI 03 Pressure Ulcer Rate	0.3080	0.1068	0.1669
PSI 06 Iatrogenic Pneumothorax Rate	0.1381	0.0435	0.0305
PSI 08 In Hospital Fall With Hip Fracture Rate	0.1440	0.0199	0.0145
PSI 09 Postoperative Hemorrhage or Hematoma Rate	0.0570	0.1499	0.0434
PSI 10 Postoperative Acute Kidney Injury	0.3584	0.0314	0.0572
Requiring Dialysis Rate			
PSI 11 Postoperative Respiratory Failure Rate	0.2219	0.2129	0.2397
PSI 12 Perioperative Pulmonary Embolism or Deep Vein Thrombosis Rate	0.1557	0.2288	0.1808
PSI 13 Postoperative Sepsis Rate	0.3102	0.1367	0.2151
PSI 14 Postoperative Wound Dehiscence Rate	0.1441	0.0238	0.0174
PSI 15 Abdominopelvic Accidental Puncture or Laceration Rate	0.1474	0.0461	0.0345

Source: 2019 State Inpatient Databases, Healthcare Cost and Utilization Program, Agency for Healthcare Research and Quality. 2012-2013 Medicare Fee-for-Service claims data.



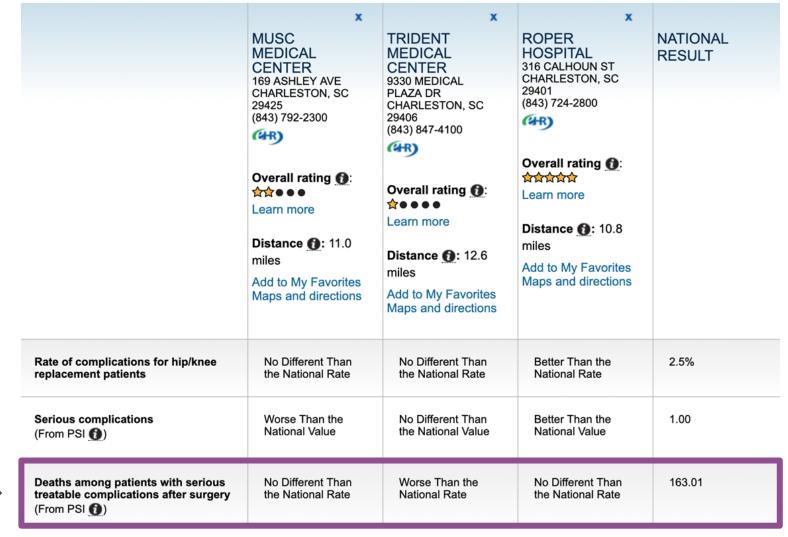
PSI 4 Description

- CMS Death Rate among Surgical Inpatients with Serious Treatable Complications
 - In-hospital deaths per 1,000 surgical discharges
 - Among patients ages 18 through 89 years or obstetric patients
 - Serious treatable complications include:
 - Shock/cardiac arrest
 - Sepsis
 - Pneumonia
 - Deep vein thrombosis/pulmonary embolism
 - Gastrointestinal hemorrhage/acute ulcer



Hospital Care Compare Example for PSI 04

Sample of the data available under the Complications and Deaths tab on Hospital Compare









How Coding Defines Complications





When Will a Complication Code Be Reported: Classification System

- "Code assignment is based on the provider's documentation of the relationship between the condition and the care or procedure, unless otherwise instructed by the classification"
- The classification system is the way a coder looks up a documented condition using the alphabetic index and tabular list to determine
 - If there is sufficient documentation to assign a diagnosis code
 - What diagnosis code should be assigned

Laceration

- accidental, complicating surgery -see Complications, surgical, accidental puncture or laceration

Complication(s) (from) (of)

 accidental puncture or laceration during a procedure (of) -see Complications, intraoperative (intraprocedural), puncture or laceration

What if a provider documents "postoperative"?

Postoperative (postprocedural) -see Complication, postoperative

- pneumothorax, therapeutic Z98.3
- state NEC Z98.890

Reference: ICD-10-CM Alphabetic Index 2023



The Problem With "Postop"

Clinical Language

Postop = Time the Event Occurred "After Surgery"

Coding Language

Postop = Complication of Procedure "Due to Surgery"

Quality Measures

A qualifying procedure occurs

A qualifying diagnosis is not POA



PSI 13: Postoperative Sepsis Example of Quality Measure

Description: Sepsis that develops following elective surgery.

Numerator: Elective surgical discharges with a secondary diagnosis of sepsis that is POA=N

Excludes:

- If sepsis principal or secondary diagnosis POA=Y
- Any principal or secondary diagnosis code for infection POA=Y

If an elective surgical patient develops sepsis any time following surgery, it will trigger PSI 13. For example, a patient has elective surgery and enters the hospital resulting in an extended stay and on the 15th day of the admission the patient develops sepsis even if it is unrelated to the surgery, it may result in a PSI 13.



PSI 11 – Case Study

80-year-old with a complex medical history presented with GI bleed in the setting of Crohn's disease.

H & P: "Patient is immunocompromised with elevated inflammatory markers continued Crohn's flare, clinically dehydrated concerns for secondary infection." Treated with antibiotics on admission.

Underwent exploratory laparotomy at which time sepsis was first documented.

PSI 13: Postoperative Sepsis?

- **✓** Elective surgery
- ✓ Sepsis POA = N
- Query opportunity to confirm no signs/symptoms of infection POA=Y due based on H&P documentation
- Clinically, it is likely that this patient had an infection developing prior to the surgery
- When sepsis is coded as not being "present on admission," in the setting of an elective surgery, it will lead to inclusion in PSI 13



Description:	Postoperative respiratory failure, or prolonged mechanical ventilation or re- intubation following elective surgery
Numerator:	 Acute or acute and chronic postprocedural respiratory failure (J95821, J95822) OR Unplanned reintubation, ≥ 1 day after 1st major surgery OR Mechanical ventilation < 96 hours, 2 or more days after 1st major surgery OR Mechanical ventilation > 96 hours, 0 or more days after 1st major surgery

Excludes:

- Acute respiratory failure or tracheostomy diagnosis POA=Y
- Respiratory MDC-04 (DRGs 163-208)
- Malignant hyperthermia, degenerative neurological or neuromuscular disorders POA=Y
- Surgeries: Laryngeal, pharyngeal, nose, mouth or facial surgery with significant risk of airway compromise; esophageal surgery, lung cancer procedure, lung or heart transplant.



Documenting Postop Respiratory Failure

- Providers should reserve the use of postoperative respiratory failure for those patients who:
 - Require mechanical ventilation beyond what is routine for the procedure or require at least 48 hours of mechanical ventilation following surgery
 - Require reintubation following postoperative extubation regardless of how long additional mechanical ventilation is required
 - Use of BiPAP can support the diagnosis of postoperative respiratory failure



Post-Procedural Respiratory Failure

- A patient who requires a short period of routine ventilator support during surgical recovery does <u>not</u> have acute respiratory failure
- Avoid diagnosing Acute Postoperative Respiratory Failure when part of the weaning process
 - Unless extubated and re-intubated
- The patient must have acute pulmonary dysfunction requiring non-routine management



Post Operative Pulmonary Insufficiency

- Pulmonary insufficiency is <u>not</u> a clinical concept but a distinction in the code set
 - Typically, the term "insufficiency" should not be used
 - When "respiratory insufficiency" is documented "other abnormalities of breathing," which is a symptom in ICD-10, will be reported



Post Operative Pulmonary Insufficiency

- Postoperative pulmonary insufficiency is an ill-defined diagnosis between normal pulmonary function and acute respiratory failure
 - It is <u>not</u> a valid diagnosis for routine post-op management when no significant underlying pulmonary problem can be substantiated
 - The patient requires intervention at a time in the post-operative course when routine patients do not, such as:
 - Supplemental oxygen
 - Bronchodilator therapy
 - It is distinguished from postoperative acute respiratory failure as a condition "that only requires supplemental oxygen or intensified observation."

Reference: Coding Clinic, 2011 4th Quarter



Post-Surgical Respiratory Support Continuum

Acute Postoperative Pulmonary Insufficiency

Normal Postop-Acute

Normal wean and extubation No oxygen requirements Normal blood gas/SO₂ Slow/cautious wean
Low-moderate oxygen needs
PEEP ≤ 5 cm H₂O
Hypercapnia but < 50 mmHg
Excessive secretions
Requires moderate pulmonary
toilet

Acute Postprocedural Respiratory Failure

>48 hours ventilator support Reintubation Meets acute resp failure criteria



- Even if one of the qualifying diagnoses is <u>not</u> reported, the case can still result in the assignment of a PSI 11 if the patient is reintubated or requires postsurgical mechanical ventilation ≥ 1 days after the initial surgery.
- "Under normal circumstances, mechanical ventilation that is being used during a surgical procedure is <u>not</u> coded separately, and neither is the endotracheal intubation."
- "If the patient remains on mechanical ventilation for an extended period (several days) postsurgery, the mechanical ventilation should be reported."



- ... A code should <u>not</u> be assigned for the mechanical ventilation when it is considered a normal part of surgery.
- The advice goes on to state that a code would be assigned if the surgery were followed by an extended period (several days) of ventilation following surgery.
- In this case, the term "extended" has been further defined to mean several days. The *term "several" is defined as more than two*. Therefore, unless the physician has clearly documented an unexpected extended period of mechanical ventilation (several days), do not assign a code for the mechanical ventilation.



- If a patient is maintained on mechanical ventilation for less than two days
 postoperatively, but the physician documents that the patient is maintained on
 the vent longer than expected due to a specific problem, is it acceptable to
 assign the mechanical ventilation as an additional procedure?
- Yes, assigning a code for mechanical ventilation would be appropriate in this instance... a code should <u>not</u> be assigned for the mechanical ventilation when it is considered a *normal part of surgery*.
- In the event that the physician documents that the patient has a specific problem and is maintained on the vent longer than expected, this would not be a routine part of surgery, and therefore the mechanical ventilation may be reported. . .



PSI 11 – Case Study

72-year-old with obstructive sleep apnea who underwent the first stage of a two-stage repair of an aortic dissection.

Postoperative course complicated by acute pulmonary insufficiency *requiring reintubation and mechanical ventilation for 36 hours* after the patient failed to improve following a day of treatment with BiPAP.

PSI 11: Postoperative Respiratory Failure?

- ✓ Elective admission
- Acute postprocedural respiratory failure code reported (J95821, J95821)
- ✓ Not MDC-04 (DRGs 163-208)

--OR--

- Mechanical ventilation > 96 hours after 1st major surgery
- ✓ Unplanned reintubation, ≥ 1 day after 1st major surgery
- Mechanical ventilation < 96 hours, 2 or more days after 1st major surgery



When Will a Complication Code Be Reported: Cause-and-Effect Relationship

"There must be a cause-and-effect relationship between the care provided and the condition, *and* the documentation must support that the condition is *clinically significant*."





Cause-and-Effect Relationship Established

- "A surgeon's documentation of a serosal tear and the subsequent procedure for repairing the tear is sufficient documentation to report a complication code."
- "Some issues or conditions occurring as a result of surgery are classified by ICD-10 as a complication whether stated or not. Even if the surgeon states that the serosal tear was unavoidable, it does not mean that the tear is not a surgical complication."
- "Serosal tears alone do not qualify as reportable diagnoses. If, however, the
 degree of a serosal tear alters the course of the surgery as supported by the
 medical record documentation, then the tear should be reported."



What Is Clinically Significant: Chapter 16

- ... A condition is clinically significant if it requires:
 - Clinical evaluation; or
 - Therapeutic treatment; or
 - Diagnostic procedures; or
 - Extended length of hospital stay; or
 - Increased nursing care and/or monitoring; or
 - Has implications for future health care needs
- Note: The perinatal guidelines listed above are the same as the general coding guidelines for "additional diagnoses," except for the final point regarding implications for future health care needs.



Clinical Significance Is Not a New Concept

- The patient underwent lysis of adhesions for small bowel obstruction. Significant time was spent taking them down from the abdominal wall, pelvis, small bowel and colon. Multiple enterotomies were made dissecting the small intestine. A full thickness injury was identified in a section of small intestine, which could not be repaired primarily; a portion of the small intestine was resected with side-to-side stapled anastomosis. . . the full thickness injury of the small bowel appears to be significant due to the fact that a partial resection of the small intestine was carried out to repair the injury. . .
- This case involved more than a minor serosal tear. In this instance, the surgeon has clearly documented that the multiple enterotomies were clinically significant and a complication of the procedure.



When to Report Lysis of Adhesions: Clinically Significant

- Coders should carefully review the entire operative report to determine the clinical significance of the adhesions and the complexity of the lysis of adhesions.
- Coders should not code adhesions and lysis thereof, based solely on mention of adhesions or lysis in an operative report.
 - It is irrelevant whether the adhesions or lysis of adhesions are included in the title of the operation.
 - Determination as to whether the adhesions and the lysis are significant enough to code and report must be made by the surgeon.



When to Report Lysis of Adhesions: Clinically Significant

- Patient with uterine adenocarcinoma was admitted for surgery. The surgeon noted numerous adhesions between the abdominal wall and uterus were carefully and thoroughly dissected. Following extensive lysis, a total abdominal hysterectomy and bilateral salpingo-oophorectomy were carried out.
- Assign code <u>N73.6</u>, Female pelvic peritoneal adhesions (postinfective), as an additional diagnosis for the pelvic adhesions.
- In this case, extensive lysis of numerous adhesions was required before the definitive surgery, total abdominal hysterectomy, could be carried out.
 Both the diagnosis of pelvic adhesions and the adhesiolysis are appropriately coded.



When Will a Complication Code be Reported?

- "It is <u>not</u> necessary for the provider to explicitly document the term 'complication."
- For example, if the condition alters the course of the surgery as documented in the operative report, then it would be appropriate to report a complication code.





How Is Alters the Course of Surgery Defined?

- It is not currently defined by Coding Guidelines or Coding Clinic
 - As documented in the operative report but what about postoperative complications?
 - It may require comparing the planned procedure and the performed procedure.
- May result in the reporting of a modifier (51) to the CPT code or additional procedure code e.g., repair and/or a return to the operating room
 - Modifier 51 is defined as multiple surgeries/procedures performed on the same day, during the same surgical session



What if the Provider Specifically Documents "No Complication"?

- Please clarify the advice published in Coding Clinic Second Quarter 2021, regarding intraoperative serosal tear that appears to conflict with Official Guidelines for Coding and Reporting for complications of care (1.B.16.) since the provider explicitly documented that no complication occurred...
- The advice does <u>not</u> conflict with the Official Guidelines for Coding and Reporting since a cause-and-effect relationship was documented between the surgery and the serosal tear.
- This guideline was <u>not</u> intended to mean that the surgeon must specifically document the term "complication."
- The surgeon's documentation of the serosal tear AND the subsequent procedure for repairing the tear is sufficient documentation to report a complication code.



AHA Coding Clinic Update on Complications

- The term "complication" does <u>not</u> imply inappropriate/inadequate care, and/or an unplanned outcome. Some issues or conditions occurring as a result of surgery are classified by ICD-10-CM as a complication whether stated or not.
- Although the surgeon stated that the serosal tear was unavoidable, it does
 <u>NOT</u> mean the tear is not a surgical complication. . . A serosal tear can range
 from a small nick requiring no treatment, to a major tear requiring removal of a
 portion of the small intestine.
- Serosal tears alone do <u>not</u> qualify as reportable diagnoses. If, however, the degree of a serosal tear alters the course of the surgery as supported by the medical record documentation, then the tear should be reported.



Postoperative Conditions as Complications

- We are concerned about the inconsistency in hospital coding of postoperative hemorrhage and postoperative hematoma because the coding of these conditions affect data quality . . .
- It is important to note that <u>not</u> all conditions that occur during or following surgery are classified as complications.
 - There <u>must</u> be more than a routinely expected condition or occurrence.
 - There must be a cause-and-effect relationship between the care provided and the condition



What About Documentation of "Expected"



Our surgeons think anemia due to an "expected" blood loss is integral to procedures. When we query regarding patients whose lab values have dropped significantly after surgery suggestive of anemia, physicians are refusing to document anemia due to blood loss even if they monitor and transfuse the patient. They say the patients lost an expected amount of blood ...

If in the physician's clinical judgment, surgery results in an expected amount of blood loss and the physician does <u>not</u> describe the patient as having anemia or a complication of surgery, do <u>not</u> assign a code for the blood loss.



What About Documentation of "Expected"

- We recently heard that Coding Clinic has defined major blood loss as a 20% blood loss...
- That information regarding a definition of major blood loss has not been published in Coding Clinic. In any case, clinical information published in Coding Clinic does not constitute clinical criteria for establishing a diagnosis, substitute for the provider's clinical judgment, or eliminate the need for provider documentation regarding the clinical significance of a patient's medical condition. . . "If in the physician's clinical judgment, surgery results in an expected amount of blood loss and the physician does not describe the patient as having anemia or a complication of surgery, do not assign a code for the blood loss."



What About Documentation of "Expected"

- Coding Clinic, Third Quarter 2020, page 8, advised to assign a complication code for a small type II endoleak, which the surgeon documented as expected, based on preoperative radiological imaging. Coding professionals are questioning this advice since the provider documented the endoleak as expected, not a complication ...
- After re-review ... the Coding Clinic Editorial Advisory Board determined that a postprocedural complication code should not have been assigned. The endoleak is not considered a complication of the surgery, as intraoperative back bleeding was expected due to the anatomy of the vessel, as demonstrated on preoperative imaging. In addition, the endoleak did not require additional treatment or monitoring and is anticipated to seal itself. . .

The reporting of a complication code does NOT automatically result in the reporting of a Complication-of-Care Measure, like a Patient Safety Indicator (PSI)



Accidental Puncture and Laceration Definition

- Clinically significant cut, puncture, tear, or perforation of a blood vessel, nerve, or organ that occurs during a procedure
- An accidental puncture and laceration code would be assigned unless the condition does not meet the definition of an additional diagnosis (requires clinical evaluation, treatment, etc.) for the following examples:
 - Perforation of bladder during sigmoid colon resection
 - Laceration of spleen during lysis of small bowel adhesions
 - Serosal tears of the bowel due to lysis of adhesions
 - Incidental dural tear during spinal surgery
 - Traumatic intubation resulting in soft palate injury involving ETT



PSI 15: Unrecognized Abdominopelvic Accidental Puncture/Laceration

Description	Patients who have undergone an abdominopelvic procedure and experience an accidental puncture/laceration for which a second abdominopelvic procedure occurs one or more days after the first surgery
Numerator	Diagnosis code for accidental puncture or laceration during an abdominopelvic procedure POA=N + 2nd abdominopelvic procedure follows ≥ 1 day after the 1st abdominopelvic procedure

Excludes:

Accidental puncture or laceration during an abdominopelvic procedure diagnosis code POA=Y



PSI 15 Requires Both a Diagnosis and Procedure

- Fourteen different codes can trigger inclusion in PSI 15
- Many of these codes are assigned based on the coding classification system so the surgeon does not need to document a cause-and-effect relationship or classify it as a complication
 - K97.71 Accidental puncture and laceration of a digestive system organ or structure during a digestive system procedure
 - K97.72 Accidental puncture and laceration of a digestive system organ or structure during other procedure
- If the puncture/laceration is repaired during the initial procedure, it will not result in a PSI 15.



PSI 15 – Case Study

During an outpatient colonoscopy it was discovered the patient had an ischemic bowel

The patient had emergency surgery for a colostomy. Severe adhesions requiring more than 4 hours of lysis resulted in multiple serosal tears that required repair.

PSI-15: Abdominopelvic Accidental Puncture/Laceration?

- ✓ Includes non-elective surgeries
- ✓ Diagnosis code for accidental puncture or laceration during an abdominopelvic PX POA=N
- + 2nd abdominopelvic procedure follows
 ≥ 1 day after the 1st abdominopelvic PX.





Thank you. Questions?

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