Learning Objectives

- At the completion of this educational activity, the learner will be able to:
  - Discuss concepts and reasons for assignment of “complication” codes
  - Explore the impact of reporting “complication” codes
  - Analyze the difference between assigning complication codes for money and for accuracy of patient data
  - Describe the importance of utilizing clinical understanding of diseases that may exist contemporaneously with surgery
  - List tips and hints for evaluating your processes and disseminating information to clinicians

Historical Perspective

- CC is defined as “complications and comorbidities”
- Grading companies used to lump them all together as “complications” (Solucient, AHRQ, Healthgrades, UHC, etc.) – The Delta Group listened first!
- 2005 history at Indiana University
- Institution of POA 2008
- Goal of coding professionals was to maximize reimbursement from Medicare under DRG system
- They LOVED to assign “complication” codes
- Doctors hated it when they learned
What We’re Talking About

• Every day CDI specialists and coding professionals struggle with the question: Is this a complication or an expected outcome of surgery?
• With an increase in publicly reported physician and hospital data, accurately reporting complications is vital to the reputations of your surgeons and your facility.
• Hear from a former surgeon about common stumbling blocks, such as postoperative ileus and accidental punctures and lacerations, with suggestions for resolution.

Complications That May or May Not Be

• Ileus
• Atelectasis
• Anemia of acute blood loss (ABLA)
• CAUTI
• Acute renal failure (ATN or not??)
• Encephalopathy
• Cardiogenic shock
• Wound infection
• Retained surgical item
• Iatrogenic pneumothorax
• Perioperative hemorrhage/hematoma (hematoma/seroma conundrum in ICD-10)
• Respiratory failure
• Postoperative sepsis
• Wound dehiscence
• Accidental laceration

Who’s Measuring?

• Hospital Compare https://www.cms.gov/Medicare/Quality‐Initiatives‐Patient‐Assessment‐Instruments/HospitalQualityInits/HospitalCompare.html
• AHRQ (PSIs) http://qualityindicators.ahrq.gov/Modules/psi_overview.aspx
• Joint Commission http://www.jointcommission.org/performance_measurement.aspx
• UHC (University Health System Consortium) http://www.uhc.edu/solutions‐for/quality‐performance
• Private companies
  – Healthgrades
  – Comparison analytics
  – Crimson/The Advisory Board
  – Leapfrog
  – Consumer Reports
  – US News/Parents magazine
Potential Effects

1. Financial
   a) CC or MCC capture may lead to increased reimbursement for hospital billing purposes for PSIs and other complications or results of care
   b) At start of DRG system, coders encouraged to identify all "CC's" so as to maximize Medicare reimbursement
   c) With conversion to HACs, hospital will have reduced payments with identification of “complications of care”

2. Honest, ethical profiles
   a) Hospital reputation depends on determination of value-based services
   b) Hospital and physician reputations will suffer – lose market share

Long-Term Effects for Inadequate Homework

- How doctors and hospitals have collected billions in questionable Medicare fees
- Center investigation suggests costs from upcoding and other abuses likely top $11 billion
- Medical billing a target of fraud investigations
- “Upcoding” problem contributes to Medicare fraud
- Kitchen sink coding. Though technically only confirmed diagnoses can be coded, physicians often throw in other codes, called kitchen sink coding. Providers may have a poor understanding of coding guidelines or may be justifying various treatments or exaggerating injuries. This practice can hurt patients in the long run by creating preexisting conditions they may never actually have had.
- Upcoding can cost you money and your health
- Learn about this fraudulent practice and help put a stop to it

Considerations When an Event Is Noted

- Look for conditions (diseases) that were present on admission, even if inadequately documented
- Look for conditions caused by the disease itself and not by the surgery
- Look for conditions caused by some other issue and totally unrelated to the surgery
- Distinguish events caused by the surgery versus events caused by medications or anesthesia
- Look for incidental findings when doc states "complications" or “complicated by”
- Use your clinical acumen and NOT coding desires, whether you are a coder or nurse! Clinical truth!!!
- Be sure it meets UHDDS criteria as a valid code!
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Ileus

- Ileus has two models: Obstructive and paralytic
- Ileus occurs after almost all abdominal surgeries – physiologic response – all patients treated NPO and then advanced in diet when bowel activity returns
- Ileus occurs with all patients with abdominal trauma and perforation caused by the trauma or any perforation or infected process – that’s what causes them to vomit
- Admission with ileus caused by inflammatory process will have ileus after surgery caused by the same process (pancreatitis, appy, acute GB, Crohn’s disease, perforated tic, etc.) – not the surgery
- Obstructive ileus caused by surgery is due to inadequate surgery or a major vascular event – patient returns to OR for surgery
- Paralytic ileus may be associated with perforation, infection, dead bowel, abscess that was not POA – they return to OR or have interventional procedure
- Paralytic ileus may be due to patient’s autonomic neuropathy and not due to the surgery, but delay caused by diabetes or other neuropathy
Atelectasis

- Atelectasis may exist preop in morbidly obese patients (obesity hypoventilation syndrome) or patients with obstructive airway disease (bronchiectasis, cystic fibrosis) or other obstruction (malignancy, foreign body, stricture)
- All patients after major chest surgery may have atelectasis seen on postop chest film
- All patients after major chest surgery have incentive spirometry and ambulation or turning or chest PT ordered — this is preventative or treatment for incidental finding of atelectasis and does not meet UHDDS criteria as a valid diagnosis
- When patient requires additional intervention (nasotracheal suctioning, bronchoscopy, drainage of air or fluid collection in chest causing collapse of lung), then it’s codable
- Pneumonia after surgery stated in area of atelectasis is NOT hypostatic pneumonia — it’s bacterial — all Rx with abx

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ABLA-BLA-BLA

- First of all, make sure it’s anemia and not lower Hb that does not represent “anemia”
- “Significant drop in hemoglobin” is an outpatient term, a bogus code in the hospital — code the cause!!!
- Patients may come in for elective or emergency surgery with preexisting anemia of various causes
  - Anemia of CKD, sickle cell anemia, iron deficiency anemia
- Often you will see low hemoglobin to begin with and minimal blood loss leading to low postop hemoglobin — was the anemia or transfusions caused by the surgery when 50 cc EBL?
- Too many times patient receives 3,000 cc crystalloid and has minimal blood loss, but HB after surgery is significantly lower due to hemodilution
Difference Between Complication PSI-9 and Event

- Hemorrhagic complication of a procedure implies that there was unexpected bleeding during or after the invasive procedure.
- Significant bleed may have led to the need for the procedure:
  - Ruptured aortic aneurysm.
  - Bleeding esophageal varices or diverticulum or angiodysplasia.
  - Multiple trauma with fractures, ruptured spleen, liver, laceration of omentum.
  - These patients may not be seen to have anemia until resuscitation or after the operative procedure. **WHY??**
- Entering belly or chest involves cutting and controlling bleeding on the way in.

Half Full or Half Empty?

![Diluted to Concentrated](https://en.wikipedia.org/wiki/Concentration)

 PSI-9 Is Postoperative Hemorrhage or Hematoma vs. Intraoperative

- PSI-9 reporting limited to return to procedure room for control of bleed or for drainage of a hematoma.
- Exclude cases:
  - With principal diagnosis of postoperative hemorrhage or postoperative hematoma or secondary diagnosis present on admission.
  - Where the only operating room procedure is postoperative control of hemorrhage or drainage of hematoma.
  - Where a procedure for postoperative control of hemorrhage or drainage of hematoma occurs before the first operating room procedure.
- Note: If day of procedure is not available in the input data file, the rate may be slightly lower than if the information was available.
  - MDC 14 (pregnancy, childbirth, and puerperium).
Examples

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D78.21</td>
<td>Postprocedural hemorrhage and hematoma of the spleen following a procedure</td>
</tr>
<tr>
<td>D78.22</td>
<td>Postprocedural hemorrhage and hematoma of the spleen following another procedure</td>
</tr>
<tr>
<td>E89.810</td>
<td>Postprocedural hemorrhage and hematoma of an endocrine system organ or structure following an endocrine system procedure</td>
</tr>
<tr>
<td>E89.811</td>
<td>Postprocedural hemorrhage and hematoma of an endocrine system organ or structure following another procedure</td>
</tr>
<tr>
<td>G97.51</td>
<td>Postprocedural hemorrhage and hematoma of a nervous system organ or structure following a nervous system procedure</td>
</tr>
<tr>
<td>G97.52</td>
<td>Postprocedural hemorrhage and hematoma of a nervous system organ or structure following another procedure</td>
</tr>
<tr>
<td>H59.311</td>
<td>Postprocedural hemorrhage and hematoma of right eye and adnexa following an ophthalmic procedure</td>
</tr>
<tr>
<td>H59.312</td>
<td>Postprocedural hemorrhage and hematoma of left eye and adnexa following an ophthalmic procedure</td>
</tr>
<tr>
<td>H59.313</td>
<td>Postprocedural hemorrhage and hematoma of eye and adnexa following an ophthalmic procedure, bilateral</td>
</tr>
</tbody>
</table>

ICD-10 Error to Be Dealt With

- A seroma is a clear fluid collection usually due to the process operated on or due to accumulation of serous fluid – a traumatic seroma is caused by tissue damage from the injury
- A hematoma is a blood collection usually related to excessive bleeding at the site, either from the original process or due to excessive bleeding – a traumatic hematoma is caused by tissue damage from the injury
- A hemorrhage is significant bleeding – it may or may not lead to hematoma
- THESE ARE NOT THE SAME NOR DO THEY HAVE THE SAME ORIGINS AND SHOULD NOT BE THE SAME CODE

Bad Coding Advice

Postoperative Seroma

Coding Clin. First Quarter 2014 Page 7

Q: How would a diagnosis of “postoperative seroma” be coded in ICD-10-CM?

A: Currently, ICD-10-CM’s Index to diseases, directs the coder to SEE “hematoma” when the term “seroma” is referenced. The specific code assignment for postoperative seroma would depend on the body system involved in the surgery. For example, codes in subcategory I97.6—Postprocedural hemorrhage and hematoma of a circulatory system organ or structure following a procedure, are assigned based on whether the seroma occurred following a cardiac, bypass, cardiac catheterization or other circulatory system procedure.

“See” does NOT always mean “code.” This must be fixed.

The most common complication after abdominoplasty is seroma formation. The incidence of seroma formation in abdominal procedures as a whole, including abdominoplasty, panniculectomy, and transverse rectus abdominis myocutaneous flap abdominal donor sites, ranges from 1% to 38%. 

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### CAUTI – Catheter-Associated UTI

- Was the patient admitted with a urinary catheter?
- What kinds of urinary catheters are there?
  - Foley catheter – continuous or intermittent?
  - Suprapubic tube?
  - Nephrostomy tube?
  - Indwelling ureteral stent?
  - Continent ileostomy for bladder substitute?
- Was the urine contaminated or is it infected?
**Commonalities**

- Determination at which inpatient location the patient was assigned when the specimen that met the infection criteria was collected, or when the first clinical evidence of CLABSI, VAP, or CAUTI appeared.
- At which inpatient location was the patient assigned when the specimen that met the infection criteria was collected, or when the first clinical evidence of CLABSI, VAP, or CAUTI appeared? If the infection developed within 48 hours of transfer from one location to one or more other locations within this facility, select the patient’s first such inpatient location within the 48-hour period where the central line, urinary catheter, or ventilator was used.

**Commonalities**

- Present on admission (POA): Infections that are POA, as defined in Chapter 2, are not considered HAIs and therefore are never reported to NHSN.
- Healthcare-associated infections (HAI): All NHSN site-specific infections must first meet the HAI definition as defined in Chapter 2 before a site-specific infection (e.g., CAUTI) can be reported to NHSN.
- Organisms belonging to the following genera are typically causes of community-associated infections and are rarely or are not known to be causes of healthcare-associated infections; they are excluded and cannot be used to meet any NHSN definition: Blastomyces, Histoplasma, Coccidioides, Paracoccidioides, Cryptococcus, and Pneumocystis.

**Commonalities**

- If the date of culture collection is on or after the date the patient is declared brain dead AND the patient is being supported for organ donation purposes, the event should not be reported as an HAI. For VAE surveillance, if the date of event (date of onset of worsening oxygenation) is on or after the date the patient is declared brain dead AND the patient is being supported for organ donation purposes, the event should not be reported as a VAE.
- An infection is considered present on admission (POA) if the date of event of the NHSN site-specific infection criterion occurs during the POA time period, which is defined as the day of admission to an inpatient location (calendar day 1), the 2 days before admission, and the calendar day after admission. For purposes of NHSN surveillance and determination of the Repeat Infection Timeframe (as defined below) if the date of event is determined to be either of the two days prior to inpatient admission, then the date of event will be hospital day 1.
- An infection is considered a healthcare-associated infection (HAI) if the date of event of the NHSN site-specific infection criterion occurs on or after the 3rd calendar day of admission to an inpatient location where day of admission is calendar day 1.
When It IS and Isn’t

<table>
<thead>
<tr>
<th>Hospital day</th>
<th>Date of event</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignment for RIT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 days before admit</td>
<td>Hospital Day 1</td>
<td>POA</td>
</tr>
<tr>
<td>1 day before admit</td>
<td>Hospital Day 1</td>
<td>POA</td>
</tr>
<tr>
<td>1</td>
<td>Hospital Day 1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Hospital Day 2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Hospital Day 3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Hospital Day 4</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Hospital Day 5</td>
<td></td>
</tr>
</tbody>
</table>

Examples – CAUTI or Not

<table>
<thead>
<tr>
<th>Hospital Day</th>
<th>Infection Window Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Fever &gt; 100.6°C</td>
</tr>
<tr>
<td>3</td>
<td>Fever 100.6-102.6°C</td>
</tr>
<tr>
<td>4</td>
<td>Fever &gt; 102.6°C</td>
</tr>
<tr>
<td>5</td>
<td>CAUTI/VAP/CLABSI</td>
</tr>
<tr>
<td>6</td>
<td>Acute renal failure (ATN)</td>
</tr>
<tr>
<td>7</td>
<td>Encephalopathy</td>
</tr>
<tr>
<td>8</td>
<td>Cardiogenic shock</td>
</tr>
<tr>
<td>9</td>
<td>Wound infection</td>
</tr>
<tr>
<td>10</td>
<td>Retained surgical item</td>
</tr>
<tr>
<td>11</td>
<td>Iatrogenic pneumothorax</td>
</tr>
<tr>
<td>12</td>
<td>Perioperative hemorrhage/hematoma (hematoma/seroma conundrum in ICD-10)</td>
</tr>
<tr>
<td>13</td>
<td>Respiratory failure</td>
</tr>
<tr>
<td>14</td>
<td>Postoperative sepsis</td>
</tr>
<tr>
<td>15</td>
<td>Wound dehiscence</td>
</tr>
<tr>
<td>16</td>
<td>Accidental laceration</td>
</tr>
</tbody>
</table>

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AKI After IV Contrast (Dye-Related/Contrast-Induced Nephropathy)

• Definition: Acute kidney injury must meet criteria for acute kidney injury from AKIN
• Persistent creatinine over 0.3 from benchmark after adequate fluid hydration lasting 24 hours and NOT rise in creatinine with patient going home in an hour
• Must meet UHDDS criteria as valid diagnosis:
  – Clinical evaluation; or
  – Therapeutic treatment; or
  – Diagnostic procedures; or
  – Extended length of hospital stay; or
  – Increased nursing care and/or monitoring

Incidental Lab Variance or True Injury?

• CIN is normally a transient process, with renal functions reverting to normal within 7–14 days of contrast administration. Less than one-third of patients develop some degree of residual renal impairment.
• Dialysis is required in less than 1% of patients, with a slightly higher incidence in patients with underlying renal impairment (3.1%) and in those undergoing primary PCI for myocardial infarction (MI) (3%). However, in patients with diabetes and severe renal failure, the rate of dialysis can be as high as 12%.
  http://emedicine.medscape.com/article/246751-overview#t

Patients going into study dehydrated and are at higher risk – prevention is key

Is It Proper to Ask for ATN?

• Contrast media induce various factors that may increase vasoconstriction and decrease vasodilatation in the renal medulla, leading to hypoxia and acute tubular necrosis known as contrast-induced nephropathy (CIN) that tends to occur in diabetics and patients with preexisting renal insufficiency.
• ATN follows a well-defined three-part sequence of initiation, maintenance, and recovery (see Pathophysiology). The initiation phase is characterized by an acute decrease in glomerular filtration rate (GFR) to very low levels, with a sudden increase in serum creatinine and blood urea nitrogen (BUN) concentrations.
• The maintenance phase is characterized by a sustained severe reduction in GFR that persists for a variable length of time, most commonly 1–2 weeks. Because the filtration rate is so low during the maintenance phase, the creatinine and BUN levels continue to rise.
• The recovery phase, in which tubular function is restored, is characterized by an increase in urine volume (if oliguria was present during the maintenance phase) and by a gradual decrease in BUN and serum creatinine to their preinjury levels.

If the patient’s kidneys don’t meet these criteria, it’s unethical and really LEADING to ask for ATN
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### Intent of the Codes for Encephalopathy

A condition of nontraumatic damage to brain function, involving chemical interference with cells or neurons that, if not treated, will lead to death of brain tissue and function

- NOT something that will resolve by itself with no interference
- NOT normal, expected effects or medications taken in proper dosage or anesthetic agents
- NOT short-term effects of getting drunk or high on illegal drugs
- NOT effects of stroke, NOT post-ictal state, NOT syncope, NOT standard AMS
- NOT psychologic effects of mental illness

### Error in Advice

- Metabolic encephalopathy is always due to an underlying cause. There are many causes of metabolic encephalopathy, such as brain tumors, brain metastasis, cerebral infarction or hemorrhage, cerebral ischemia, uremia, poisoning, systemic infection, etc. Metabolic encephalopathy is also a common finding in 12-33% of patients suffering from multiple organ failure. The development of metabolic encephalopathy may be the first manifestation of a critical systemic illness and may be caused by various reasons—one of the most important being sepsis.

  — Coding Clinic, Fourth Quarter 2003
Common Errors

- There is no such thing as toxic metabolic encephalopathy
- Patient not responding well from anesthesia – yet
- Patient overmedicated from various sources – sedatives, hypnotics, tranquilizers, pain meds
- Syncopal episode – obvious vasovagal response
- Confusion or “AMS” in face of minor UTI
- Drunk kid, not responsive at risk of vomiting and not protecting airway (also improperly called “acute respiratory failure”)

Distinguish Encephalopathy From Coma

- Hepatic encephalopathy can get bad enough to become hepatic coma, but not all hepatic encephalopathies are comatose. (Hepatic encephalopathy (HE) represents a broad continuum of neuropsychological dysfunction in patients with acute or chronic liver disease and/or porto-systemic shunting of blood flow, and it manifests with progressive deterioration of the superior neurological functions.)
- Diabetic (hyperglycemic or hypoglycemic) encephalopathy can get bad enough to become diabetic coma, but not all diabetic encephalopathy patients are comatose. (Mild variations in blood sugar levels will cause changes in mental acuity or dizziness or sleepiness in patients that responds to time or a Tootsie Roll – this is NOT metabolic encephalopathy.)
- Patients on lactulose may or may not have codable hepatic encephalopathy DESPITE what coding guidelines imply!!

If Stage 0, Does Not Have Encephalopathy (Now)

<table>
<thead>
<tr>
<th>Stage</th>
<th>Consciousness</th>
<th>Intellect and behaviour</th>
<th>Neurological findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal examination</td>
</tr>
<tr>
<td>1</td>
<td>Trivial lack of awareness</td>
<td>Impaired attention span; altered sleep; euphoria</td>
<td>Mild asterixis</td>
</tr>
<tr>
<td>2</td>
<td>Lethargic</td>
<td>Disoriented; inappropriate behaviour depression</td>
<td>Asterixis; slurred speech</td>
</tr>
<tr>
<td>3</td>
<td>Somnolent but arousable</td>
<td>Gross disorientation; bizarre behaviour</td>
<td>Muscular rigidity/clonus hyper-reflexia</td>
</tr>
<tr>
<td>4</td>
<td>Coma</td>
<td>Coma</td>
<td>Decerebrate posturing</td>
</tr>
</tbody>
</table>
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Cardiac Function After Heart Surgery

- Many adult patients require temporary inotropic support after cardiac surgery. The available evidence, while limited in quality and scope, supports the following observations: although all β-agents can increase cardiac output, the best studied β-agent and the one with the most favourable side-effect profile appears to be dobutamine. Dobutamine and phosphodiesterase inhibitors (PDIs) are efficacious inotropic drugs for management of the low cardiac output syndrome. Dobutamine is associated with a greater incidence of tachycardia and tachyarrhythmias, whereas PDIs often require the administration of vasoconstrictors. Other catecholamines have no clear advantages over dobutamine.
- Pump perfusion with arterial return of the blood causes hypertension by endothelial NO (nitric oxide) release, which in turn is triggered by serotonin from activated platelets.
- Because ventricular dysfunction is common following cardiac surgery, inotropic drugs are often necessary to improve hemodynamic status.
- Cardiopulmonary bypass can be associated with vasodilatory hypotension requiring pressor support.
- Off-pump coronary artery bypass surgery (OPCAB) is widely performed for its benefit in reducing complications from cardiopulmonary bypass. However, since the surgical method moves the pumping heart and limits movement of the surgery site with a tissue stabilizer, it can cause serious hemodynamic changes. For example, the function of both ventricles declines due to pressure on the heart during OPCAB via diastolic dysfunction of the right ventricle due to pressure.

Cardiogenic Shock

- The medical term “shock” refers to a state in which not enough blood and oxygen reach important organs in the body, such as the brain and kidneys. Shock causes very low blood pressures and may be life threatening.
- Shock can have many causes. Cardiogenic shock is only one type of shock. Other types of shock include hypovolemic shock and vasodilatory shock.
- In vasodilatory shock, the blood vessels suddenly relax. When the blood vessels are too relaxed, blood pressure drops and blood flow becomes very low. Without enough blood pressure, blood and oxygen don’t reach the body’s organs.
- Sepsis or a severe allergic reaction or damage to the nervous system (brain and nerves) may cause vasodilatory shock.
- Vasodilatory shock was defined as a mean arterial pressure lower than 70 mm Hg, a cardiac index greater than 2.5 L/min/m², and norepinephrine dependence.
- Vasoplegic syndrome is characterized by a severe and persistent form of hypotension, tachycardia, normal or increased cardiac output, and decreased systemic vascular resistance (SVR) and low filling pressures, and is poorly responsive or unresponsive to volume increase with fluid infusion.
What It Ain’t

• Use of low dose pressors during and immediate postcardiac surgery to maintain perfusion to the kidneys, brain, lungs, liver, and heart is preventative – it does NOT represent cardiogenic shock.
• Cardiogenic shock means persistent drop in blood pressure that does not respond to fluids and routine pressor usage.
• Postoperative cardiogenic shock (T81.11XA) and postoperative shock (T81.10XA) are complications of surgery and will lead to poor reports for your heart surgery team – they won’t like you!!

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Terms You Might See – What It Could Be

• Collection
• Purulence
• Cloudy, thick fluid
• Exudate
• Subcutaneous seroma
• Subcutaneous wound infection
• Deep wound infection (muscle, fascia, bone)

T81.4+ Intra-abdominal abscess following a procedure
Postprocedural infection, not elsewhere classified
Sepsis following a procedure
Stitch abscess following a procedure
Subphrenic abscess following a procedure
Wound abscess following a procedure
Use additional code to identify infection
Use additional code (R65.2) to identify severe sepsis, if applicable
### Expansion of T81.4 in the Future

AHIMA supports the proposed expansion of code T81.4, Infection following a procedure, to capture specific types of surgical site infections. We also recommend a similar expansion of code O86.0, Infection of obstetric surgical wound.

**T81.4** Infection following a procedure
- **Delete**: Intra-abdominal abscess following a procedure
- **Delete**: Postprocedural infection, not elsewhere classified
- **Delete**: Sepsis following a procedure
- **Delete**: Stitch abscess following a procedure
- **Delete**: Subphrenic abscess following a procedure
- **Includes**: Wound abscess following a procedure
  - Use additional code to identify infection
  - Use additional code (R65.2) to identify severe sepsis, if applicable
- **Excludes1**: Obstetric surgical wound infection (O86.0)
  - Postprocedural fever NOS (R50.82)
  - Postprocedural retroperitoneal abscess (K68.11)

**T81.40** Infection following a procedure, unspecified
**T81.41** Infection following a procedure, superficial incisional surgical site (eg, subcutaneous abscess)
**T81.42** Infection following a procedure, deep incisional surgical site (eg, intramuscular abscess)
**T81.43** Infection following a procedure, organ and space surgical site (eg, intra-abdominal, subphrenic abscess following a procedure)
**T81.48** Infection following a procedure, other surgical site infection (includes: stitch abscess following a procedure)
**T81.49** Infection following a procedure, not elsewhere classified (includes sepsis following a procedure) – here you add the sepsis and severe sepsis codes

### Complications That May or May Not Be

- Ileus
- Atelectasis
- Anemia of acute blood loss (ABLA)
- CAUTI/VAP/CLABSI
- Acute renal failure (ATN or not??)
- Encephalopathy
- Cardiogenic shock
- Wound infection

- **Retained surgical item**
- Iatrogenic pneumothorax
- Perioperative hemorrhage/hematoma (hematoma/seroma conundrum in ICD-10)
- Respiratory failure
- Postoperative sepsis
- Wound dehiscence
- Accidental laceration
### A Long and Gory Story – Chapter 1

#### Foreign Body Left During Surgery

**Question:**
A patient underwent a vaginal hysterectomy, right ovarian cystectomy and an anterior and posterior vaginal repair. After the incision was closed, an x-ray was performed, which revealed that the sponge was in the posterior cul de sac. The vaginal cuff was reopened and the sponge was retrieved. Should code 998.4, Foreign body accidentally left during a procedure, be reported?

**Answer:**
Yes, report code 998.4, Foreign body accidentally left during a procedure. This advice is supported by National Quality Forum (NQF) directives which state that unintended retention of a foreign object in a patient after surgery or other procedure should be reported. The occurrence of unintended retention of objects at any point after the surgery ends should be captured regardless of setting or whether the object is removed. Refer to the NQF website for additional information about “Serious Reportable Events in Healthcare”: [http://www.qualityforum.org/pdf/reports/sre/txsrepublic.pdf](http://www.qualityforum.org/pdf/reports/sre/txsrepublic.pdf)

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### A Long and Gory Story – Chapter 2

- Original definition of “end of surgery” — wound is closed OR anesthesia is reversed OR patient leaves suite
- Sponge, instrument, and needle counts are performed to avoid leaving objects inside patients
- First count started with closure of deep tissue
- If incorrect, second count is done while closure continues
- If incorrect, all stops and reexploration or x-ray is taken
- If located, object is retrieved and closure resumes
- Discussion with ACS, AHRQ, NQF, etc. – all agree definition is WRONG

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### Revision

The Steering Committee recommended that the following definition be utilized:
Surgery ends after all incisions have been closed in their entirety; if conducted, the final surgical count(s) have concluded and the patient has been taken from the operating/procedure room (the out of room time). All procedural material (e.g., supplies, devices, equipment) have been removed from the patient or area regardless of setting (e.g., labor and delivery room, surgical suite, endoscopy unit).

**NATIONAL QUALITY FORUM**
DA: February 17, 2011
D. Unintended retention of a foreign object in a patient after surgery or other invasive procedure. The definition of “end of surgery” has been modified to ensure that it does not create a circumstance in which carrying out standard procedures for discovery of a foreign object would create a reporting requirement.
A Long and Gory Story – Chapter 3

Dissolved Needle During Surgery
Coding Clinic, Fourth Quarter 2014 Page: 50

Question:
A patient with symptomatic full thickness rectal prolapse, as well as chronic constipation presents for elective laparoscopic/robotic sigmoid colectomy and rectopexy. During the recovery portion of the procedure, the needle driver while attempting to pull it out. Unsuccessful attempts were made to locate the needle. An intraoperative plain film of the abdomen was performed but not helpful in locating the needle. The incision was extended to use hand assistant laparoscopic approach to help locate the needle, which was unsuccessful. The surgeon elected to convert to open laparotomy and was successful in retrieving the needle. The surgeon lists dissolved needle during laparoscopic suturing as a complication. Is it appropriate to assign code 998.4, Foreign body accidentally left during a procedure, for the dissolved needle? If not, what is the appropriate code(s) for the dissolved needle?

Answer:
Assign code 998.85. Other specified complications of procedures, not elsewhere classified, since the provider listed the dissolved needle as a complication of the procedure. Do not assign code 998.4, because the needle was retrieved before surgery ended. In this case, code 996.59. Mechanical complication of other specified prosthesis, device, implant, and graft. Due to other implant and internal device NEC is not appropriate since the needle is not a prosthesis, device, implant, or graft.

OMG!!!

Retained Laparotomy Sponge during Cesarean Delivery
Coding Clinic, First Quarter 2014 Page: 14

Question:
The patient underwent emergent low transverse cesarean section due to non-measuring fetal heart rate and persistent tachycardia. At delivery, the infant was pronounced dead after 21 minutes of attempted resuscitation. Sponge counts during surgery were deferred as there was no initial count, with plans for post-operative x-ray. The postoperative x-ray was notable for findings suggestive of retained laparotomy sponge. The patient was revisited in the operating room and a retained laparotomy sponge was found. The operation was not classified as an abdominal or obstetric procedure, and medical care NEC (096-995) categories. Is there an instructional note excluding complications of surgical procedures during abortion, labor, and delivery (650-676)? Therefore, in code 998.4, Foreign body accidentally left during a procedure, reported, or would it be code from Chapter 11 Complications of pregnancy, childbirth, and the puerperium (650-676)? Is more appropriate? How should this case be coded?

Answer:
Assign code 659.71 Abnormality in fetal heart rate or rhythm, delivered with or without mention of antepartum condition, as the principal diagnosis. Codes 659.42. Other complications of obstetrical surgery and procedures, delivered with mention of postpartum condition, 998.4, Foreign body accidentally left during a procedure, and 927.3, Single livetors, should be assigned as additional complications. Code 659.42 does not provide specific information as to the nature of the complication. Code 998.4 is assigned when a foreign body is left in the body during a surgical procedure. The “excludes note” does not preclude ever assigning codes from the Complication section when an obstetric procedure is involved.

Apology From Ms. Chisen

Dear Dr. Gold,

I have obtained consensus from the Cooperating Parties that a correction to the advice published in the First Quarter 2014 issue of Coding Clinic regarding the coding of a retained laparotomy sponge during Cesarean delivery is in order. Once we publish it in the next Coding Clinic issue, we’ll post it on our website as well—that way we can reference Coding Clinic as the responsible authority.

Thanks for bringing this issue to our attention, and your patience as we worked through the process.
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- Wound dehiscence
- Accidental laceration

Iatrogenic Pneumothorax

- Identify surgical complication that leads to drop of lung that requires intervention (meets UHDDS criteria as valid diagnosis).
- Insertion of subclavian or jugular line may nick pleura and lung, causing pneumothorax.
- Open thoracotomy always includes presence of pneumothorax and use of chest tube to resolve it – these usually remain 2–4 days post-op. If they do NOT resolve pneumothorax, another intervention may be required (needle, closed tube thoracostomy, thoracotomy and closure of bronchopleural fistula) – these are excluded from PSI measures!!!!

When Do You Code a Pneumo?

- If an x-ray finding that leads to insertion of a chest tube (tube thoracostomy), it’s valid
- If an x-ray finding that leads to insertion of a catheter to aspirate the air, it’s valid
- If it’s an x-ray finding that is not treated, it’s NOT valid – it will not meet UHDDS criteria as a valid secondary diagnosis
- If it was put in at another hospital or on the ambulance or during an outpatient encounter, it was POA
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Respiratory Failure

- Document acute or chronic or both
- Specify if hypoxemic or hypercapnic respiratory failure for either acute or chronic
- Code sets “due to disease” and for “complications of care"

*Both are currently counted as complications after surgery*

Not Acute Respiratory Failure

- Patients being purposely maintained on the ventilator after heart surgery or any surgery because of weakness, chronic lung disease, massive trauma are NOT in acute respiratory failure
- All children after congenital heart surgery remain in vent at least 24 hours to permit stabilization of new circulatory pattern
- Prevention of acute respiratory failure from angioedema, stroke, trauma when patient does NOT HAVE acute respiratory failure when intubated for airway protection
Not Acute Respiratory Failure

- Abdominal compartment syndrome is a well-known complication after abdominal trauma and is increasingly recognized as a potential risk factor for renal failure and mortality after adult orthotopic liver transplantation (OLT) or for observation after initial exploration for mesenteric vascular insufficiency of bowel
- Morbidly obese patients with obesity-related comorbidities carry a dramatically greater risk of perioperative complications – should be nursed in an appropriate level 2 or level 3 facility

Where It Came From?

- Anesthesiologists bill for anesthesia services.
- Global fees include the preoperative workup, care during the procedure, and postoperative recovery from anesthesia.
- Anybody else who bills for that postoperative recovery from anesthesia without the anesthesiologist transferring care to that other professional and taking a reduction in anesthesia services payment is double billing, and that’s not ethical or legal.
- Billing managers tell their internal medicine docs/critical care docs who are monitoring these patients during recovery from anesthesia, “Call it acute respiratory failure. Otherwise we can’t bill for your services.”
- The patients don’t have acute respiratory failure. The hospital bills for acute respiratory failure in the postoperative patient and gets additional dollars, and the surgical team gets dinged for putting their patients at peril for sloppy surgical care.

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What Is a Wound Dehiscence?

- Separation, after closure, of tissue of the surgical wound which may be superficial (skin and subcutaneous T81.31+), deep (separation of muscle and fascia layer T81.32+), or full thickness with evisceration (T81.32+)
  - Inadequate attention to tying knots
  - Excessive pressure inside abdomen or chest causing burst (ascites, intestinal distension, excessive coughing, retching/vomiting)
  - Wound infection or other collection (hematoma, seroma) causing excessive pressure against skin closure
- Requires either return to OR for repeat primary closure, return to OR for cleaning and application of dressing to permit secondary closure, return to OR for placement of sutures to delayed primary closure, no return to OR but use of dressings at bedside

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PSI-15 Concern: Integral/Inherent to or Complication of

- AHRQ working with UHC to define terms
- Arguments ongoing with ACS
- High-risk procedures with considerable adhesions or invasion or tumor at high risk of accidental laceration

**PSI 15 documentation by surgeons**

Surgeons should review this section for information about clinical documentation that is consistent with PSI 15 specifications and coding guidelines.

**Surgeons: What should you do?**

If a puncture, tear, capsular laceration, enterotomy, colotomy, serosal laceration, "injury," or other such event occurs due to patient-specific factors (e.g., the nature of the adhesions, the inflammation, the abscess, the tumor, or other conditions present during the operation) that you believe are routinely expected and inherent to the procedure performed, your documentation must clearly state that the event was inherent to the surgical procedure to avoid the incorrect reporting of a complication.
Examples

<table>
<thead>
<tr>
<th>ICD-10-CM</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>D78.11</td>
<td>Accidental puncture and laceration of the spleen during a procedure on the spleen</td>
</tr>
<tr>
<td>D78.12</td>
<td>Accidental puncture and laceration of the spleen during other procedure</td>
</tr>
<tr>
<td>E36.11</td>
<td>... of an endocrine system procedure</td>
</tr>
<tr>
<td>E36.12</td>
<td>... other nervous system organ or structure during other procedure</td>
</tr>
<tr>
<td>G97.48</td>
<td>... other nervous system organ or structure during a nervous system procedure</td>
</tr>
<tr>
<td>G97.49</td>
<td>... of right eye and adnexa during an ophthalmic procedure</td>
</tr>
<tr>
<td>H59.211</td>
<td>... of left eye and adnexa during an ophthalmic procedure</td>
</tr>
<tr>
<td>H59.212</td>
<td>... of eye</td>
</tr>
</tbody>
</table>

Documentation Issues

Surgeons: What should you do in cases with a truly unintended event or complication?

If you believe that an event is not routinely expected or is not inherent to the difficulty or nature of the procedure, thus qualifying as a complication of the procedure, explicitly document this in your operative note so that the complication can be properly coded, reported, and evaluated for future improvement opportunities.

Document your surgical finding under the heading “Complications” or reference it as a complication in the postoperative note. Make sure that the documentation is clear and consistent within the record.

Be wary of other terminology:

- The appendectomy was complicated by presence of a large lymph node at the mesentry of the ileocecal valve which required removal of it.
- The TAH-BSO was complicated by massive adhesions around the right ovary from a previous TGA.
- The nephrectomy was complicated by finding a horseshoe left kidney, the superior segment of which had to be removed piecemeal from the adrenal.

Comparative Terminology...

<table>
<thead>
<tr>
<th>Accidental puncture or laceration</th>
<th>Nonaccidental puncture or laceration</th>
</tr>
</thead>
<tbody>
<tr>
<td>The left internal iliac vein was inadvertently lacerated in an attempt to mobilize the sigmoid overlying the left ureter. After successful removal of the tumor, the iliac vein was sutured.</td>
<td>The left internal iliac vein had to be sacrificed to facilitate removal of the large adherent tumor.</td>
</tr>
<tr>
<td>During the resection of the large bowel, it was noted that the small bowel had several accidental tears that needed to be sewn.</td>
<td>During the resection of the large bowel, it was seen that inflammatory reaction of the tumor was adherent to segments of the ileum and a full-thickness tear was noted. It was necessary to perform a sleeve resection of that segment with a 2-layer, end-to-end anastomosis.</td>
</tr>
<tr>
<td>Patient underwent a total abdominal hysterectomy with lysis of adhesions complicated by repair of the retroperitoneum.</td>
<td>Patient underwent a total abdominal hysterectomy with extensive lysis of dense adhesions from prior episodes of pelvic inflammatory disease. During the takedown of the adhesions, 3 inherent seminal tears of the ileum were closed with 4-0 silk suture.</td>
</tr>
<tr>
<td>The laparoscopic cholecystectomy had to be converted when leading bile was unexpectedly noted, and the common duct had to be repaired.</td>
<td><a href="https://www.ncl.edu/docs/49018566_PSI15">Link</a></td>
</tr>
</tbody>
</table>
Should You Report It Anyhow?

If something happens that could kill the patient, it should be reported.

Thank you. Questions?
rgold@dcbainc.com

In order to receive your continuing education certificate(s) for this program, you must complete the online evaluation. The link can be found in the continuing education section at the front of the program guide.