Surgical Site Infection Coding Update

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According to the Agency for Healthcare Research and Quality (AHRQ), more than 10 million patients undergo surgical procedures as inpatients each year, accounting for over 25 percent of all hospital stays. The most common types of inpatient surgical procedures include cesarean section, hip and knee replacement, hip fracture repair, spinal fusion, laminectomy, cholecystectomy, and colorectal resections.

Surgical site infection (SSI) is defined by the Centers for Disease Control and Prevention (CDC) as infection related to an operative procedure that occurs at or near the surgical incision within 30 days of the procedure, or within 90 days if prosthetic material is implanted at surgery. This is among the most common preventable complications after surgery. SSIs occur in two to four percent of all patients undergoing inpatient surgical procedures. Although most infections are treatable, SSIs remain a significant cause of morbidity and mortality after surgery. They are the leading cause of readmissions to the hospital following surgery, and approximately three percent of patients who contract an SSI will die.

Risk factors for SSI include patient attributions (such as age, tobacco use, diabetes, and malnutrition) and procedure-specific risk factors (including emergency surgery and the degree of bacterial contamination of the surgical wound at the time of the procedure). While many of these risk factors are not modifiable, the majority of SSIs are considered preventable, and recent advances have improved insights as to how hospitals can systematically prevent these infections.

International Classification and Official Guideline Update

For Federal Fiscal Year (FFY) 2019 the International Classification of Diseases 10th Edition, Clinical Modification (ICD-10-CM) expanded code subcategories T81.4, Infection following a procedure, and O86.0, Infection of obstetrical surgical wound, to identify the depth of the post-procedural infection and a separate code to identify post-procedural sepsis. This was done at the request of the Patient Assessment and Outcome Committee of the American Association for Surgery and Trauma to better align the ICD-10-CM classification with categories for SSI as defined by the CDC.

Codes T81.41- and O86.01 classify those post-procedural infections that have a superficial SSI at the incision site. This includes subcutaneous abscess following a procedure and stitch abscess following a procedure. Codes T81.42- and O86.02 classify those post-procedural infections that are designated as deep in the surgical incision site, including intra-muscular abscesses. Codes T81.43- and O86.03 classify post-procedural infections that go into organ and space surgical sites, including but not limited to intra-abdominal abscess and sub-phrenic abscess. Codes T81.44 and O86.04 are used to identify sepsis following a procedure.

With the expansion of these code subcategories, a code sequencing issue arose; if a patient has sepsis due to an intra-muscular abscess at a prior procedural incision, which code should be sequenced first: T81.42- for the post-operative wound infection or code T81.44 for the sepsis from the post-procedural wound infection?

Prior to the FFY 2019 expansion of subcategory T81.4-, a post-procedural wound infection and post-procedural sepsis were assigned to the same ICD-10-CM code T81.4-, Infection following a procedure with a code for the infection (sepsis, cellulitis, etc.) assigned as secondary diagnoses, if specified, so there was no sequencing issue. In order to address this sequencing issue, the FFY 2019 Official Guidelines for Coding and Reporting were also updated to delineate how codes from subcategory T81.4- should be sequenced. Per the 2019 Official Coding Guidelines I.C.1.d.(5).(b):

> For infections following a procedure, a code from T81.40 to T81.43, Infection following a procedure, or a code from O86.00 to O86.03, Infection of obstetric surgical wound, that identifies the site of the infection should be coded first, if known. Assign an additional code for sepsis following a procedure (T81.44) or sepsis following an obstetrical procedure (O86.04). Use an additional code to identify the infectious agent. If the patient has severe

sepsis, the appropriate code from subcategory R65.2 should also be assigned with the additional code(s) for any acute organ dysfunction.

When comparing the FFY 2018 Official Coding Guidelines to the FFY 2019 Official Coding Guidelines on this topic, it can get confusing with all of the additions, deletions, and modifications. Simplified, the new rule states that when a patient has sepsis due to a post-procedural wound infection, a code for the wound infection is sequenced first followed by a code for the post-procedural sepsis. This may seem counterintuitive to some coding professionals who are used to sequencing sepsis first when it is associated with a localized infection (the wound infection in this case).

For comparison, see Table 1 below for the 2018 and 2019 diagnosis-related group (DRG), relative weight, and code sequencing for sepsis from a post-procedural wound infection that includes intramuscular abscess.

Table 1

2018		
MS-DRG 862	Postoperative & Post-Traumatic Infections with MCC	RW 1.8327
Principal Diagnosis	T81.4XXA	Infection Following Procedure, initial encounter
Secondary Diagnoses	A41.9	Sepsis, unspecified organism
	M60.08	Infective Myositis, other site
2019		
MS-DRG 863	Postoperative & Post-Traumatic Infections w/o MCC	RW .9848
Principal Diagnosis	T81.42XA	Infection Following a Procedure, deep incisional surgical site, initial encounter
Secondary Diagnoses	T81.44XA	Sepsis Following a Procedure, intial encounter
	M60.08	Infective Myositis, other site

Under code T81.44- there is an instructional note that states “use additional code to identify the sepsis.” Per the coding guidelines, this instructional note is found in the Tabular List with codes that are not part of an etiology/manifestation pair where a secondary code is useful to fully describe a condition. In this example, assigning code A41.9, Sepsis, unspecified

organism, does not provide any additional information that is not already included in code T81.44-. Therefore, no additional code is assigned for an unspecified sepsis. This is noted on page 25 of the first quarter 2017 issue of the American Hospital Association's Coding Clinic, which states that an unspecified code should not be assigned as an additional code when it does not provide any additional information. In order to maintain the major comorbid condition (MCC) status in this case, the provider must specify the organism associated with the sepsis so that a code from categories A40-A41 can be assigned that specifies the organism.

Addressing Public Health Issues with Coding

SSIs are persistent and preventable healthcare-associated infections. There is increasing demand for evidence-based interventions for the prevention of SSI. Prior to the 2017 update, the last version of the CDC Guideline for Prevention of Surgical Site Infection was published in 1999. While the guideline was informed by evidence, most recommendations were based on expert opinion, in the era before evidence-based guideline methods. CDC updated that version of the guideline with an evidence-based method. Most of these data points, recommendations, guidelines, and definitions are born of coded data that is abstracted from healthcare claims. Without codes that are specific and descriptive and in alignment with clinical language it can be near impossible to monitor such public health issues.

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Article citation:
Minski, Melissa. "Surgical Site Infection Coding Update." *Journal of AHIMA* 90, no. 3 (March 2019): 44–45; 50.