Determining Surgical Complications

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All surgical procedures involve potential risks, which is why patients are asked to sign an informed consent. Conditions that arise after a procedure may be considered complications. Coding professionals must be able to determine if a condition is a complication per ICD-9-CM guidelines.

What Is a Complication?

In ICD-9-CM terms, complications are conditions that develop after a procedure that are not part of an expected outcome. To consider a diagnosis a complication, two conditions must be met.

First, the condition must not have been expected. For example, a patient who has a transurethral resection of the prostate may develop urinary incontinence or impotence. These conditions are not classified as complications in ICD-9-CM unless documented as such by the provider. Impotence is not uncommon in a prostate resection, as there may be nerve damage when the hypertrophic prostate is removed.

Bleeding during a joint replacement surgery is another example. The hemorrhage would need to be excessive or documented as a complication in order to be coded a complication. In a joint replacement surgery, the bone is very vascular and is expected to bleed when replaced. Finally, an expected outcome for a colon resection would be abdominal pain. In order for the abdominal pain to be classified as a complication, the provider must document the condition as a complication of the colon resection.

Coding professionals should have a basic understanding of how procedures are performed to help determine if a condition needs to be queried as a complication. Keep in mind, ICD-9-CM does not limit the time period in which a complication may arise; it could be immediately after the procedure or months later.

The second factor in determining a complication is documentation that the treatment provided caused the condition. Provider documentation that a condition resulted from a procedure can be challenging due to the negative connotation that the term implies. While ICD-9-CM does not suggest that use of the term indicates inadequate care, many providers are reluctant to document the cause-effect relationship due to third-party analysis of coded data for various quality initiatives.

Classifications in ICD-9-CM

ICD-9-CM classifies complications in various locations throughout the system. For example, a complication code may be located in the specific body site of an ICD-9-CM chapter or in the categories 996–999. A postoperative pulmonary embolism is classified in the circulatory system chapter with code 451.11, for example. Complications of pregnancy, labor, or delivery are classified in chapter 11, complications of pregnancy, childbirth, and the puerperium (630–677).

Section 996–999, complications of surgical and medical care not elsewhere classified, contains various types of complications. However, there are general conditions that are excluded from this section, including:

- Adverse effects, reactions, or poisonings from drugs or medicinal agents
- Burns from local applications
- Complications of the condition for which the procedure was performed
- Procedures during abortion, labor, and delivery, as they are classified in chapter 11
- Specified complications that are classified elsewhere as by the alphabetic index, such as electrolyte imbalance
- Specified sequela of a procedure, such as postmastectomy lymphedema syndrome

Codes in category 996 contain complications that are mechanical in nature, inflammatory reactions, and transplant rejections. A complication is considered mechanical if there is a problem with the device, implant, or graft. This may include a dislocation of a hip prosthesis or even a fracture of an implant due to a patient's fall. The "use additional codes" note to identify prosthetic joint included in the codes for a mechanical complication leads coding professionals to category V43.60–V43.69, which should be used to assign additional codes.

Infections due to internal prosthetic device, implant, and graft are classified in category 996, with an additional code to identify specified infections and organism if documented. Codes in category 997 are classified by body site or organ-specific complications. (Most of these codes require an additional code to identify the type of complication.) If a patient develops pneumonia after hip replacement surgery, the provider would document pneumonia due to hip replacement surgery. Codes 997.3 and 486 correctly classify the patient's condition.

Category 998 codes classify other complications such as dehiscence of operating wound, foreign substance accidentally left during a procedure, or other postoperative infections. Complications of medical care, such as transfusion reaction, infection, or vascular complications due to infusions or transfusions may be classified with category 999 codes. Coding professionals should follow the alphabetic index and read all the inclusion and exclusion notes in order to assign the correct complication code. Due to the various quality initiatives for hospitals and providers, correct classification of complication codes is vital to an organization.

AHRQ Quality Initiative

Employers, policy makers, and consumers are increasing the pressure to demonstrate quality healthcare outcomes. The Agency for Healthcare Research and Quality (AHRQ), a division of the Department of Health and Human Services, is focused on measuring the various quality aspects of healthcare. To help meet the demands of quality reporting, AHRQ established meaningful measurements for facilities called quality indicators. Patient safety indicators (PSIs) are one component of this initiative.

PSIs identify potential quality issues that a patient may experience as a result of a healthcare encounter. One of the goals in developing the PSIs was to alleviate additional reporting burdens on facilities; therefore the data are reported based on hospital administrative data routinely reported for other administrative purposes. Examples of the reported data include ICD-9-CM diagnosis and procedure codes, patient age, sex, diagnostic related group, and date of the procedure.

Each PSI is based on a specific set of criteria. For example, postoperative hemorrhage or hematoma (PSI 9) is defined as "cases of hematoma or hemorrhage requiring a procedure per 1,000 surgical discharges with an operating room procedure."[1]

How are these cases identified? Using coded data from facility discharges, the codes for postoperative hemorrhage or hematoma in the secondary diagnosis field and a code for postoperative control of hemorrhage or drainage of hematoma are scanned. If both codes are present, the case is included in the reported figures. PSI postoperative pulmonary embolism or deep vein thrombosis (PSI 12) is defined as "discharges with ICD-9-CM codes for deep vein thrombosis or pulmonary embolism in any secondary diagnosis field."[2] Coding professionals must be able to appropriately identify complication codes, as the uses of the coded data go beyond accurate reimbursement.

PSIs are broken down into two levels: hospital level and area level. The hospital level references a specific hospital or facility where a patient received care, while the area level references data from a specified geographic area. Hospital level indicators look at patients who received their initial care and complication of care during the same hospitalization, while an area level indicator looks at initial and subsequent hospitalizations for patients in a defined area. Currently there are 27 PSIs, 20 at the hospital level and 7 at the area level. Hospital level PSIs look for ICD-9-CM codes in the secondary diagnosis field, whereas the area level looks for codes in either the principal or secondary diagnosis field.

Notes

1. Agency for Healthcare Research and Quality. "Patient Safety Indicators Overview." Available online at www.qualityindicators.ahrq.gov/psi_overview.htm.

2. Ibid.

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Article citation:
Bronnert, June. "Determining Surgical Complications" *Journal of AHIMA* 77, no.7 (July 2006): 76-77.