Code Sequencing

MEDICAL CODING is truly a complex process. Coders have many diagnoses and management options they must consider as they review and analyze patient encounters. Medical coders must accurately sequence the principal diagnosis and procedures, complications, and comorbid conditions on patients' accounts. Coders also evaluate the risk of significant complications, morbidity and/or mortality, diagnostic procedure(s), and all management options and convert that evaluation into accurate medical code by following the ICD-10 rules.

Objective:

Sequence medical codes for complex diagnoses and surgical procedures.

Key Terms:

admission diagnosis
coding sequencing
comorbidity
complication
diagnosis
etiology
medical coding
principal diagnosis
principal procedure
secondary diagnosis
secondary procedure(s)
sequencing diagnoses
severity of illness (SOI)

Code Sequencing for Complex Diagnoses

Medical coding is "the transformation of healthcare diagnosis, procedures, medical services, and equipment into universal medical alphanumeric codes." (Source: AAPC at https://www.aapc.com/medical-coding/medical-coding.aspx) It is a process that accurately assigns codes to the description of a patient's condition and communicates the correct information to insurance companies. Diagnosis codes are retrieved from medical records (e.g., physician's notes, lab and X-ray results, etc.).

Medical coding is an integral part of the healthcare system and requires the use of thousands of codes to ensure providers have the full picture of a patient diagnosis. It is a specialized occupation that requires the coder to be extremely accurate and detailed-oriented. Medical coding is crucial to ensure that health systems, hospitals, and physicians are properly reimbursed for the services they provide.

CODE SEQUENCING

Code sequencing is arranging medical code in a particular order. The latest release of ICD-10 has greatly expanded the code set which allows coders to report the diagnosis to the highest level of specificity and highlights the complexity of care required for that patient.

Many conditions have both an underlying **etiology** (cause) and multiple body system manifestations (indications). For such conditions, ICD-10 has a coding convention (rule) that requires:

- The underlying condition be sequenced first
- Followed by the manifestations

Terms and Definitions

Before coding inpatient cases, an understanding of how to apply each of the following terms and definitions is highly suggested.

A **diagnosis** (or a medical diagnosis abbreviated Dx or D_s) is the determination of the nature of the disease or condition that explains a person's symptoms and signs. A diagnosis describes the cause, nature, or indicators of a condition, situation, or problem. In some clinical situations, it may be impossible for the provider to make a definitive diagnosis at the time of admission; likewise, a patient may not recognize or report a condition immediately.

According to the Centers for Medicare and Medicaid Services, the **admission diagnosis** (admitting diagnosis) is the condition identified by the physician at the time of a patient's hospitalization: it is an initial analysis/judgment. Coders can only assign one admission diagnosis code even if more than one is documented. It should not be changed to conform to the principal diagnosis.

The **principal diagnosis** is the condition that prompted admission to the hospital: the chief reason for an inpatient stay.

FIGURE 1. Medical necessity drives the coding choice for a heart transplant.

Typically, the admission diagnosis and the principal diagnosis are the same, but this is not always the case. When two conditions are interrelated, with each potentially meeting the definition for principal diagnosis, coders may sequence either condition first, unless indicated otherwise. Coders cannot infer a cause-and-effect relationship.

A **secondary diagnosis** (diagnoses) is the conditions that coexist at the time of admission or those that develop following admission that affect patient care. A secondary diagnosis includes comorbidities, complications, and other diagnoses documented by the attending physician on the inpatient face sheet or discharge summary.

Comorbidity is the presence of one or more diseases or disorders that co-exist and affect the treatment provided to the patient during the current relevant episode of care.

A **complication** is a condition(s) that arises during the relevant episode of care and affects treatment provided to the patient.

For the purposes of coding diagnoses on claims, a *complication* is a condition that arises during the hospital stay that prolongs the length of stay. *Comorbidity* is a pre-existing condition that affects the treatment received and/or prolongs the length of stay. It's possible that each condition listed here could be a *complication or comorbidity* depending on the medical event(s).

TABLE 1. Common Complications and Comorbidities

Cardiac	acute myocardial infarction, congestive heart failure, atrial flutter, paroxysmal supraventricular tachycardia, heart block, and second-degree heart block
Gastrointestinal	melena, ascites, hepatitis, hematemesis, peritonitis, perforation, bleeding esophageal varices, ascites, and ileus
Genitourinary	urinary retention, hematuria, urinary tract infection, hydronephrosis, renal failure, acute renal failure, end-stage renal disease, urinary tract infection, and nephritic syndrome
Nutritional	dehydration, malnutrition, cachexia, volume overload, severe malnutrition, body mass index > 40, malnutrition NOS, and cachexia
Pulmonary	respiratory failure, aspiration pneumonia, pneumothorax, atelectasis, and hemoptysis

The **principal procedure** is the process performed for definitive treatment rather than diagnostic or exploratory purposes, or which is necessary to address a complication.

A **secondary procedure(s)** is multiple surgeries or procedures performed by a single physician or physicians in the same group practice on the same patient at the same operative session. This frequently occurs during difficult or extensive procedures or traumas admitted through the emergency room.

Sequencing Diagnoses

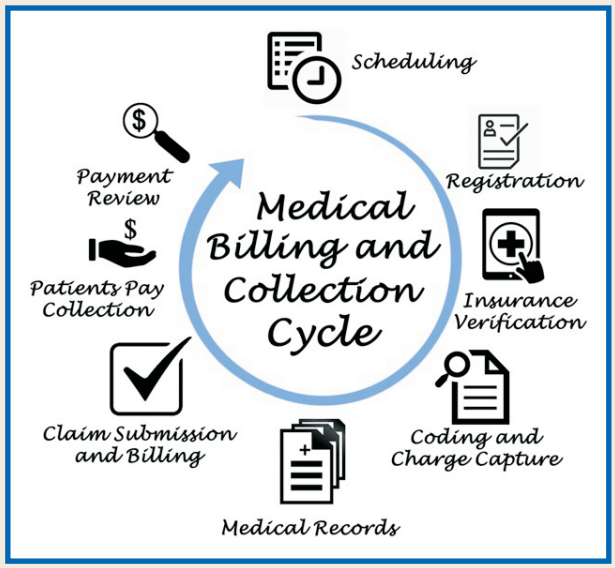
Sequencing diagnoses are a listing of codes in order based on resources utilized and the severity of illness. The **severity of illness (SOI)** is the extent of organ system derangement (disturbance) or physiologic decompensation (failure). For example:

- Should a diagnosis remain uncertain at the time of discharge from the hospital—documented with such terms as 'probable, suspected, likely, questionable, possible, still to be ruled out, etc.'—the patient record includes codes as if a diagnosis existed or was established.
- Once a principal diagnosis is assigned at the highest level of severity, a secondary diagnosis can be chosen. Classified as complications or comorbidities, the presence of a secondary diagnosis changes the reimbursement. When a secondary diagnosis is not accurately captured, the level of reimbursement can be negatively impacted.
- Coding errors do occur. Some errors occur when physicians fail to note the routine tests they order or the many factors considered. [NOTE: Documenting the thought processes used to arrive at a diagnosis or management plan is recommended.]

FURTHER EXPLORATION...

ONLINE CONNECTION: What Does a Medical Coding Specialist Do?

A medical coding specialist works in the medical records billing department of a healthcare organization. Some professionals in this field choose to specialize in a certain type of medical coding, such as cancer treatment. For more information, read the Learn.org article, "What Does A Medical Coding Specialist Do?," at https://learn.org/articles/What_Does_a_Medical_Coding_Specialist_Do.html. Then, read the Study.com article, "Medical Coding Specialist: Job Description and Requirements," to investigate job responsibilities, job outlook, and postsecondary colleges. Develop a bulleted list of important points from the articles. Keep these handy to assist you with your career planning.



A medical biller submits claims to insurance companies and other payers, such as Medicare and Medicaid. Medical biller's also follow-up healthcare provider claims in order to generate revenue by making payment arrangements and by monitoring and collecting delinquent accounts.

CODING SURGICAL PROCEDURES WITH COMPLICATIONS

Complications

Complications are an unfortunate outcome for some patients who receive medical treatment. According to coding guidelines, not all conditions that arise following medical or surgical care are complications. Specifically, there should be a cause-and-effect relationship between the care provided and the complication, and it should not be part of the routine care or the routine outcome of an expected procedure. Specifically:

FIGURE 2. Medical complications do occur during surgery and the coder must document and correctly code any complication.

- DRIVER: The provider documentation is what drives the code assignments. Any documentation that is unclear or incomplete requires a query to the provider for clarification and an update to the documentation. Even if the physician discusses potential outcomes prior to the surgery, it is important for the coder to seek clarification from the doctor before assigning a complication code. The physician must agree and must document that the condition is a complication.
- JUSTIFICATION: To justify coding a complication, that complication must be clinically evaluated, diagnostically tested, and therapeutically treated.
- TREATMENT OF A COMPLICATION: When an admission is for treatment of a complication resulting from surgery or other medical care, the complication code is sequenced as the principal diagnosis. If the complication is classified to the 996 to 999 series, an additional code for the specific complication may be assigned.

ICD-10 Expanded Complication Codes

ICD-10 offers an expanded selection of complication codes. For example:

- Each body system provides intraoperative and postprocedural complications.
- Transplanted organs and tissues have related complication codes.
- Prosthetic devices, implants, and grafts have specific complication codes. The coder must also consider codes for:
  - Postprocedural shock
  - Postprocedural infection
  - Wound dehiscence (a rupture along a surgical incision)

FIGURE 3. A critical responsibility of the medical coder is ensuring an accurate code assignment.

There is no time limit assigned to the development of a complication; patients can experience complications during the hospitalization, immediately afterward, or a long time after the hospitalization.

When using ICD-10 it is important to use all guidance offered related to a diagnosis, which would include the "includes" and "excludes" notes. [See the CDC website document at https://www.cdc.gov/nchs/data/icd/10cmguidelines_2017_final.pdf for more information.]

Summary:

Sequencing drives selection of the principal diagnosis, making it a critical responsibility of the medical coder to ensure an accurate code assignment is made. This key decision directly impacts reimbursement, compliance, and readmission rates based on core measures documented by the physician which must thoroughly back up the final choice. Documentation must clearly indicate that any potential principal diagnosis was in fact present on admission, as opposed to a condition that arose after admission.

Checking Your Knowledge:

1. Summarize how medical codes are generally sequenced.
2. Differentiate between comorbidity and a complication.
3. Describe the characteristics of a principal diagnosis.
4. Describe how codes are prioritized for complex medical diagnoses and surgical procedures.
5. List examples of ICD-10's expanded complication code categories.

Expanding Your Knowledge:

Medical coding may be challenging to learn at first, but is often a fun job in the long run. A great way to improve your coding skills is by solving medical coding challenges. Many coders think of themselves as private investigators trying to crack a case. There are several websites available that present scenarios for your practice. Visit the links provided here and search for your own to learn more about coding and practice what you know. The following practice sites are a good place to begin:

- American Physical Therapy Association Case Studies at http://www.apta.org/ICD10/
- Health Information Technology Notifications Quizzes and Newsletters at:
  - Ambulatory Medical Records, etc. at http://hitnots.com/
  - ICD-10-PCS Root Operations Quiz at http://hitnots.com/icd-10-pcs-root-operations-quiz/
  - HCPCS Coding Quiz at http://hitnots.com/category/quizzes-2/
  - HCPCS Coding Quiz at http://hitnots.com/hcpcs-coding-quiz/

Web Links:

Find-A-Code

https://www.findacode.com/

The Web's Free 2018 ICD-10-CM/PCS Medical Coding Reference

https://www.icd10data.com/