

EIGHTH EDITION

MEDICAL CODING WORKBOOK

for Physician Practices and Facilities

CYNTHIA NEWBY CPC | CPC-P

**Mc
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Education

2018–2019 Edition

Medical
Coding Workbook
for Physician Practices and Facilities

2018–2019 Edition

Cynthia Newby, CPC, CPC-P

Principal, Chestnut Hill Enterprises, Inc.



MEDICAL CODING WORKBOOK FOR PHYSICIAN PRACTICES AND FACILITIES 2018–2019 Edition,
EIGHTH EDITION

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This book is printed on acid-free paper.

1 2 3 4 5 6 7 8 9 LMN 21 20 19 18 17

ISBN 978-1-259-63002-6

MHID 1-259-63002-1

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ICD-10-CM codes are based on ICD-10-CM 2017.

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Expertise in working with the HIPAA-mandated code sets found in ICD-10-CM, CPT®, and HCPCS is the baseline for correct coding. The diagnosis and procedure codes that physician practices and hospitals report to payers must be properly assigned based on current classifications. Equally important is knowing how to assign and report codes in compliance with government and other regulations such as HIPAA. To avoid potential billing fraud, the diagnoses on each medical insurance claim must support the medical necessity of the procedures. In addition to this code linkage, the reported services and procedures must be correctly documented in the patient medical record.

With many thousands of diagnosis and procedure codes to select from, however, developing coding expertise cannot be based on memorization or on trial and error! Rather, coders must understand the structure and conventions used in ICD-10-CM, CPT, and HCPCS, and know the guidelines for applying the codes. Coders also need to know the principles that underlie rules and regulations for compliant claims.

Medical Coding Workbook for Physician Practices and Facilities builds coding expertise by providing extensive practice in code selection. It is designed to be used in conjunction with ICD-10-CM, CPT, and HCPCS. ICD-10-PCS is required for Section 8 of Part 3. A medical dictionary and other medical references will also be helpful as you work through the coding exercises.

The workbook has three sections: Part 1, ICD-10-CM; Part 2, CPT and HCPCS, and Part 3, Auditing Linkage and Compliance. The exercises in the parts follow the structure of the coding references. Each set of exercises also presents Coding Tips to extend your knowledge of coding principles.

Because of the importance of correct coding, many medical coders seek certification as professional coders from organizations such as the American Academy of Professional Coders and the American Health Information Management Association. Certification examinations are taken after the coder has had both coding education and work experience. The Coding Quizzes in *Medical Coding Workbook for Physician Practices and Facilities* introduce you to the format of these exams and are useful in helping you build coding skill.

Medical Coding Workbook for Physician Practices and Facilities is designed for use by students who have a basic understanding of medical coding from introductory instruction. For example, the McGraw-Hill text *Medical Insurance* (by Valerius et al.) is designed for medical insurance courses and devotes three chapters to physician practice coding. In the text, students learn the structure and conventions of ICD-10-CM and CPT and HCPCS and the correct process for selecting codes, as well as types of coding errors to be avoided.

New for the 2018–2019 Edition

Key changes for the new edition include updates to all codes for the 2017 code sets and new exercises covering major new codes.

Answers to the exercises in this workbook with coding rationales that show the pathways to correct codes are available for instructors using *Medical Coding Workbook for Physician Practices and Facilities* at the book's Online Learning Center, www.mhhe.com/codingwkbk8e. The Answer Key is also posted to the Online Learning Center for Valerius, *Medical Insurance*. Your McGraw-Hill sales representative can provide you with access.

The technical reviewers over many editions have offered invaluable assistance in reviewing the exercises, answers, and coding tips for accuracy. The reviewers and I hope that we have been correct in our work. Any errors, however, are the author's responsibility. You are encouraged to report these to the publisher so that corrections can be made.

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Suggestions have been received from faculty and students throughout the country. This is vital feedback that is relied upon with each edition. Each of those who have offered comments and suggestions has our thanks.

The efforts of many people are needed to develop and improve a product. Among these people are the reviewers and consultants who point out areas of concern, cite areas of strength, and make recommendations for change. In this regard, the following people provided feedback that was enormously helpful in preparing the new edition.

- Ellen Anderson, M.Ad.Ed, RHIA, CCS, College of Lake County
- Nikita Carr, CPC, ICD-10 Corporate Trainer
- Deborah S. Gilbert, RHIA, MBA, CMA, Dalton State College
- April Green, CPC, San Joaquin Valley College
- Susan D. Hernandez, San Joaquin Valley College
- Jennifer Lame, MPH, RHIT, Southwest Wisconsin Technical College
- Deborah Montgomery, MBA, New River Community and Technical College
- Rolando Russell, MBA, RHIA, CPC, CPAR, Ultimate Medical Academy
- Karen S. Saba, CPC, CPC-I, Spokane Community College
- Barbara Temple, RHIT, CCS, CPC, CDIP, University of Arkansas Medical Sciences
- Kathy Ware, MCLS, RHIT, CPC, CPB, CPC-I, Lord Fairfax Community College

ACKNOWLEDGMENTS FROM THE AUTHOR

To the students and instructors who use this book, your feedback and suggestions have made the *Coding Workbook* a better learning tool for all.

I especially want to thank the editorial team at McGraw-Hill—Thomas Timp, Bill Mulford, and Michelle Gaseor—for their enthusiastic support. This book's continued success also owes much to the tireless efforts of Roxan Kinsey, Executive Marketing Manager.

The CPTS staff—content project manager Mary Jane Lampe and buyer Laura Fuller—was also outstanding in their efforts.

Thanks to this enthusiastic and dedicated team for making the revision process a seamless one!

Cynthia Newby, CPC, CPC-P

Part 1 ICD-10-CM

Part 1 of the *Medical Coding Workbook for Physician Practices and Facilities* begins with a brief review of ICD-10-CM coding basics as an overview/refresher to the coding exercises and quiz that follow. Study these points and be familiar with the coding terminology before completing the exercises and the quiz.

Note that the exercises begin by providing practice using external cause codes and nonillness factors (Z codes). This approach provides the training needed to then assign these codes as appropriate along with codes from Chapters 1–19 for diseases, illnesses, and injuries.

The exercises, which cover every chapter of ICD-10-CM, are designed to build your skill in applying the coding guidelines. Each chapter first overviews the purpose of the codes and then provides a coding tip or tips that explain important diagnostic coding rules, processes, or information. Some of these tips apply to a particular ICD-10-CM chapter and others apply globally.

After completion of all the exercises in this part, you will know how to apply guidelines concerning

- Z codes—primary or supplementary
- External cause codes—a supplementary classification
- Seventh-character extensions
- “Includes” notes
- The Neoplasm Table
- Multiple lymph node sites
- “Excludes” notes
- Coding for diabetes mellitus
- Coding for overweight and obesity
- The abbreviations NEC and NOS
- “Code first underlying disease” instruction
- Ischemic heart disease
- Hypertension
- Chronic versus acute conditions
- Digestive system combination codes
- Pressure ulcers
- Site and laterality
- Pathological versus traumatic fractures
- Chronic kidney disease (CKD)
- Mothers’ conditions
- Normal pregnancy
- Infants’ conditions
- Congenital anomalies and patients’ ages
- Combination codes for typical symptoms
- HIV codes
- Laterality, healing stage, and episode of care for injuries
- Defaults for fracture coding
- Burns
- Poisoning, adverse effects, and underdosing

Review of ICD-10-CM

Learning Outcomes

After reviewing the basic instructions for coding with ICD-10-CM, you should be able to:

- 1-1** Discuss the purpose of ICD-10-CM.
- 1-2** Describe the organization of ICD-10-CM.
- 1-3** Summarize the structure, content, and key conventions of the Alphabetic Index.
- 1-4** Summarize the structure, content, and key conventions of the Tabular List.
- 1-5** Discuss the types of rules that are provided in the *ICD-10-CM Official Guidelines for Coding and Reporting*.
- 1-6** Briefly describe the content of Chapters 1 through 21 of the Tabular List.
- 1-7** List the steps in the process of assigning correct ICD-10-CM diagnosis codes.

Key Terms

acute	excludes 2	Neoplasm Table
Alphabetic Index	exclusion note	nonessential modifier
category	external cause code	NOS (not otherwise specified)
chief complaint (CC)	first-listed code	placeholder character (X)
chronic	GEM	primary diagnosis
code	ICD-10-CM	principal diagnosis
coexisting condition (comorbidity)	<i>ICD-10-CM Official Guidelines for Coding and Reporting</i>	sequelae
combination code	inclusion note	seventh-character extension
convention	Index to External Causes	subcategory
default code	laterality	subterm
diagnostic statement	main term	Table of Drugs and Chemicals
eponym	manifestation	Tabular List
etiology	NEC (not elsewhere classified)	Z code
excludes 1		

Introduction to ICD-10-CM

Scientists and medical researchers have long gathered information from hospital records about patients' illnesses and causes of death. In place of written descriptions of the many different symptoms and conditions people have, standardized diagnosis codes have been developed for recording them. A coding system provides an accurate way to collect statistics to keep people healthy and to plan for needed health care resources, as well as to record morbidity (disease) and mortality (death) data.

Diagnosis codes are used to report patients' conditions on claims. Physicians determine the diagnosis. The physicians, medical coders, insurance/billing specialists, or medical assistants may be responsible for assigning the codes for those diagnoses. Expertise in diagnostic coding requires knowledge of medical terminology, pathophysiology, and anatomy, as well as experience in correctly applying the guidelines for assigning codes.

Under HIPAA, the diagnosis codes that must be used in the United States as of October 1, 2015, are based on the *International Classification of Diseases (ICD)*, Tenth Revision. ICD-10 lists diseases and codes according to a system copyrighted by the World Health Organization of the United Nations. ICD has been revised a number of times since the coding system was first developed more than a hundred years ago.

ICD-10 has been the classification used by the federal government to categorize mortality data from death certificates since 1999. An expanded version of this tenth revision was published prior to the mandated compliance date for

review by the healthcare community. A committee of healthcare professionals from various organizations and specialties prepared this version, which is called the ICD-10's *Clinical Modification*, or **ICD-10-CM**. It is used to code and classify morbidity data from patient medical records, physician offices, and surveys conducted by the National Center for Health Statistics (NCHS). Codes in ICD-10-CM describe conditions and illnesses more precisely than does the World Health Organization's ICD-10 because the codes are intended to provide a more complete picture of patients' conditions.

Code Makeup

An ICD-10-CM diagnosis code has between three and seven alphanumeric characters. The system is built on categories for diseases, injuries, and symptoms. A category has three characters. Most categories have subcategories of either four- or five-character codes. Valid codes themselves are either three, four, five, six, or seven characters in length, depending on the number of subcategories provided. For example, the code for the first visit for a closed and displaced fracture of the right tibial spine requires seven characters:

Category S82 **Fracture of lower leg, including ankle**
Subcategory S82.1 **Fracture of upper end of tibia**
Subcategory S82.11 **Fracture of tibial spine**
Code S82.111 **Displaced fracture of right tibial spine**
Code S82.111A **Displaced fracture of tibial spine, initial encounter for closed fracture**

This variable structure enables coders to assign the most specific diagnosis that is documented in the patient medical record. A sixth character is more specific than the fourth or fifth characters, and the seventh-character extension can provide additional specific information about the health-related condition. When they are available for assignment in the ICD-10-CM code set, sixth and seventh characters are not optional; they must be used. For example, Centers for Medicare and Medicaid Services (CMS) rules state that a Medicare claim will be rejected when the most specific code available is not used.

Updates

The National Center for Health Statistics and CMS release ICD-10-CM updates called *addenda*. Since ICD-10-CM is still fairly new, it can be anticipated that more changes will be made over the next few years. The major new, invalid, and revised codes are posted on the appropriate websites, such as the NCHS and CMS websites.

New codes must be used as of the date they go into effect, and invalid (deleted) codes must not be used. The U.S. Government Printing Office (GPO) publishes the official ICD-10-CM on the Internet and in CD-ROM format every year. Various commercial publishers include the updated codes in annual coding books that are printed soon after the updates are released. The current reference must always be in use for the date of service of the encounter being coded.

ICD-10-CM Updates:

www.cdc.gov/nchs/icd/icd10cm.htm
www.cms.gov/ICD10

Conversion from Previous Diagnosis Code Set

ICD-10-CM, as the name implies, is the tenth version of the diagnostic code set. The previous version is called ICD-9-CM. In rare situations, coders will be called upon to research an ICD-9-CM code. Perhaps an old claim has resurfaced, or an audit forces a review of pre-2015 codes that were reported. Workers' compensation (WC) claims may also specify a non-ICD-10-CM code set, because WC is not regulated by HIPAA law and therefore is not required to use ICD-10-CM.

The federal government has prepared **GEMs**, an acronym that stands for general equivalence mappings. Although imperfect, GEMs may be helpful in these situations. Both files of equivalent codes and a conversion tool may be located via an Internet search. Particularly useful is the translator tool located on the American Association of Professional Coders (AAPC) website.

ICD-10-CM to ICD-9-CM Conversion Tool:
www.aapc.com/icd-10/codes/index.aspx

Note that confusion may result if the coder mixes up the ICD-9-CM codes that start with the capital letter E with those in ICD-10-CM that also start with E. There are a number of codes that are the same in both systems but have different meaning. Being clear on which system is in use will help the coder avoid these problems.

Organization of ICD-10-CM

ICD-10-CM has two major parts:

ICD-10-CM Index to Diseases and Injuries: The major section of this part, known as the **Alphabetic Index**, provides an index of the disease descriptions in the second major part, the Tabular List. Many descriptions are listed in more than one manner.

ICD-10-CM Tabular List of Diseases and Injuries: The **Tabular List** is made up of 21 chapters of disease descriptions and their codes.

ICD-10-CM's first part also has three additional sections that provide resources for researching correct codes:

ICD-10-CM Neoplasm Table: The **Neoplasm Table** provides code numbers for neoplasms by anatomical site and is divided by the description of the neoplasm.

ICD-10-CM Table of Drugs and Chemicals: The **Table of Drugs and Chemicals** provides an index in table format of drugs and chemicals that are listed in the Tabular List.

ICD-10-CM Index to External Causes: The **Index to External Causes** provides an index of all the external causes of diseases and injuries that are listed in the related chapter of the Tabular List.

The process of assigning ICD-10-CM codes begins with the physician's **diagnostic statement**, which contains the medical term describing the condition for which a patient is receiving care. For each encounter, this medical documentation includes the main reason for the patient encounter. It may also provide descriptions of additional conditions or symptoms that have been treated or that are related to the patient's current illness.

In each part of ICD-10-CM, **conventions**, which are typographic techniques that provide visual guidance for understanding information, help coders understand the rules and select the right code. The primary rule is that both the Alphabetic Index and the Tabular List are used sequentially to pick a code. The coder first locates the description/code in the Alphabetic Index and then verifies the proposed code selection by turning to the Tabular List and studying its entries.

This process must be followed when assigning all codes. A code followed by a hyphen in the Alphabetic Index is a clear reminder of this rule. The hyphen means that the coder will need to drill down to select the right code. For example, the index entry for otitis media is H66.9-. The coder turns to the Tabular List and reviews these entries:

H66.90 Otitis media, unspecified, unspecified ear

H66.91 Otitis media, unspecified, right ear

H66.92 Otitis media, unspecified, left ear

H66.93 Otitis media, unspecified, bilateral

Based on the documentation, one of these must be selected for compliant coding; just H66.9 is not sufficient.

The Alphabetic Index

The Alphabetic Index contains all the medical terms in the Tabular List classifications. For some conditions, it also lists common terms that are not found in the Tabular List. The index is organized by the *condition*, not by the body part (anatomical site) in which it occurs.

The term *wrist fracture* is located by looking under *fracture, traumatic* (the condition) and then, below it, *wrist* (the location), rather than under *wrist* to find *fracture*.

Main Terms, Subterms, and Nonessential Modifiers

The assignment of the correct code begins with looking up the medical term that describes the patient's condition based on the diagnostic statement. Figure 1-1 illustrates the format of the Alphabetic Index. Each **main term** appears in boldface type and is followed by its **default code**, the one most frequently associated with it. For example, if the diagnostic statement is “the patient presents with blindness,” the main term *blindness* is located in the Alphabetic Index (see Figure 1-1); the default code shown is H54.0.

Below the main term, any **subterms** with their codes appear. Subterms are essential in the selection of correct codes. They may show the **etiology** of the disease—its cause or origin—or describe a particular type or body site for the main term. For example, the main term *blindness* in Figure 1-1 includes 21 subterms, each indicating a different etiology or type—such as color blindness—for that condition.

Any **nonessential modifiers** for main terms or subterms are shown in parentheses on the same line. Nonessential modifiers are supplementary terms that are not essential to the selection of the correct code. They help point to the correct term, but they do not have to appear in the physician's diagnostic statement for the coder to correctly select the code. In Figure 1-1, for example, any of the

Blind (see <i>also</i> Blindness)	mind R48.8
bronchus (congenital) Q32.4	night H53.60
loop syndrome K90.2	abnormal dark adaptation curve H53.61
congenital Q43.8	acquired H53.62
sac, fallopian tube (congenital) Q50.6	congenital H53.63
spot, enlarged—see Defect, visual field, localized,	specified type NEC H53.69
scotoma, blind spot area	vitamin A deficiency E50.5
tract or tube, congenital NEC—see Artresia, by site	one eye (other eye normal) H54.40
Blindness (acquired) (congenital) (both eyes) H54.0	left (normal vision on right) H54.42
blast S05.8x-	low vision on right H54.12
color—see Deficiency, color vision	low vision, other eye H54.10
concussion S05.8x-	right (normal vision on left) H54.41
cortical H47.619	low vision on left H54.11
left brain H47.612	psychic R48.8
right brain H47.611	river B73.01
day H53.11	snow—see Photokeratitis
due to injury (current episode) S05.9-	sun, solar—see Retinopathy, solar
sequelae—code to injury with seventh	transient—see Disturbance, vision, subjective,
character S	loss, transient
eclipse (total)—see Retinopathy, solar	traumatic (current episode) S05.9-
emotional (hysterical) F44.6	word (developmental) F81.0
face H53.16	acquired R48.0
hysterical F44.6	secondary to organic lesion R48.0
legal (both eyes) (USA definition) H54.8	

Figure 1-1 Format of the Alphabetic Index

supplementary terms *acquired*, *congenital*, and *both eyes* may modify the main term in the diagnostic statement, such as “the patient presents with blindness acquired in childhood,” or none of these terms may appear.

Common Terms

Many terms appear more than once in the Alphabetic Index. Often, the term in common use is listed, as well as the accepted medical terminology. For example, there is an entry for *flu*, with a cross-reference to *influenza*.

Eponyms

An **eponym** (pronounced ĕp'-ŏ-nim) is a condition (or a procedure) named for a person, such as the physician who discovered or invented it; some are named for patients. An eponym is usually listed both under that name and under the main term *disease* or *syndrome*. For example, Hodgson’s disease appears as a subterm under *disease* and as a key term. The Alphabetic Index is the guide for coding other syndromes, such as battered child syndrome or HIV infection; if the syndrome is not identified, its manifestations are assigned codes.

Indentation: Turnover Lines

If the main term or subterm is too long to fit on one line, as is often the case when many nonessential modifiers appear, turnover (or carryover) lines are used. Turnover lines are always indented farther to the right than are subterms. It is important to read carefully to distinguish a turnover line from a subterm line. For example, under the main term *blindness* (Figure 1-1) and the subterm

transient, the information under “*see*” is long enough to require a turnover line. Without close attention, it is possible to confuse a turnover entry with a subterm.

Cross-References

Some entries use cross-references. If the cross-reference *see* appears after a main term, the coder *must* look up the term that follows the word *see* in the index. The *see* reference means that the main term where the coder first looked is not correct; another category must be used. In Figure 1-1, for example, to code the subterm *snow* under *blind*, the term *Photokeratitis* must be found.

See also, another type of cross-reference, points the coder to additional, related index entries. *See also category* indicates that the coder should review the additional categories that are mentioned. For example, in Figure 1-1, the *see also* note at *Blind* directs the coder to check subterm *snow* under *blindness* as well.

The Abbreviations NEC and NOS

Not elsewhere classified, or **NEC**, appears with a term when there is no code that is specific for the condition. This abbreviation means that no code matches the exact situation. For example:

Hemorrhage, eye NEC H57.8

Another abbreviation, **NOS**, or **not otherwise specified**, means *unspecified*. This term or abbreviation indicates that the code to be located in the Tabular List should be used when a condition is not completely described in the medical record. For example:

Enteritis, bacillary NOS A03.9

Multiple Codes, Connecting Words, and Combination Codes

Some conditions may require two codes, one for the etiology and a second for the **manifestation**, the disease’s typical signs, symptoms, or secondary processes. This requirement is indicated when two codes, the second in brackets, appear after a term:

Pneumonia in rheumatic fever I00 [J17]

This entry indicates that the diagnostic statement “pneumonia in rheumatic fever” requires two codes, one for the etiology (rheumatic fever, I00) and one for the manifestation (pneumonia, J17). The use of brackets in the Alphabetic Index around a code means that it cannot be the **first-listed code** in coding this diagnostic statement; these codes are listed after the codes for the etiology.

The use of connecting words, such as *due to*, *during*, *following*, and *with*, may also indicate the need for two codes or for a single code that covers both conditions. For example, the main term below is followed by a *due to* subterm:

Cramp(s), muscle, R25.2
due to immersion T75.1

When the Alphabetic Index indicates the possible need for two codes, the Tabular List entry is used to determine whether in fact they are needed. In some cases, a **combination code** describing both the etiology and the manifestation is available instead of two codes. For example:

Influenza due to identified novel influenza A virus with gastrointestinal manifestations J09.X3

Combination codes may also exist that classify two diagnoses or a diagnosis with an associated complication.

The Tabular List

The Tabular List received its name from the language of statistics; the word *tabulate* means to count, record, or list systematically. The diseases and injuries in the Tabular List are organized into chapters according to etiology, body system, or purpose. The organization of the Tabular List and the ranges of codes each part covers are shown in Table 1.1.

Table 1.1 ICD-10-CM Chapter Structure

Chapter	Code Range	Title
1	A00–B99	Certain infectious and parasitic diseases
2	C00–D49	Neoplasms
3	D50–D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
4	E00–E89	Endocrine, nutritional and metabolic diseases
5	F01–F99	Mental, behavioral and neurodevelopmental disorders
6	G00–G99	Diseases of the nervous system
7	H00–H59	Diseases of the eye and adnexa
8	H60–H95	Diseases of the ear and mastoid process
9	I00–I99	Diseases of the circulatory system
10	J00–J99	Diseases of the respiratory system
11	K00–K95	Diseases of the digestive system
12	L00–L99	Diseases of the skin and subcutaneous tissue
13	M00–M99	Diseases of the musculoskeletal system and connective tissue
14	N00–N99	Diseases of the genitourinary system
15	O00–O9A	Pregnancy, childbirth and the puerperium
16	P00–P96	Certain conditions originating in the perinatal period
17	Q00–Q99	Congenital malformations, deformations and chromosomal abnormalities
18	R00–R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
19	S00–T88	Injury, poisoning and certain other consequences of external causes
20	V00–Y99	External causes of morbidity
21	Z00–Z99	Factors influencing health status and contact with health services

Categories, Subcategories, and Codes

Each Tabular List chapter is divided into categories, subcategories, and codes.

1. A **category** is a three-character alphanumeric code that covers a single disease or related condition. For example, the category L03 in Figure 1-2 covers cellulitis and acute lymphangitis.
2. A **subcategory** is a four- or five-character alphanumeric subdivision of a category. It provides a further breakdown of the disease to show its etiology, site, or manifestation. For example, the L03 category has six subcategories:

L03.0 Cellulitis and acute lymphangitis of finger and toe
L03.1 Cellulitis and acute lymphangitis of other parts of limb
L03.2 Cellulitis and acute lymphangitis of face and neck
L03.3 Cellulitis and acute lymphangitis of trunk
L03.8 Cellulitis and acute lymphangitis of other sites
L03.9 Cellulitis and acute lymphangitis, unspecified
3. A **code**, the smallest division, has either 3, 4, 5, 6, or 7 alphanumeric characters. For example, locate five- and six-character codes in Figure 1-2.

L03.0	Cellulitis and acute lymphangitis of finger and toe
	Infection of nail
	Onychia
	Paronychia
	Perionychia
L03.01	Cellulitis of finger
	Felon
	Whitlow
	<i>Excludes 1 herpetic whitlow (B00.89)</i>
L03.011	Cellulitis of right finger
L03.012	Cellulitis of left finger
L03.019	Cellulitis of unspecified finger
L03.02	Acute lymphangitis of finger
	Hangnail with lymphangitis of finger
L03.021	Acute lymphangitis of right finger
L03.022	Acute lymphangitis of left finger
L03.029	Acute lymphangitis of unspecified finger
L03.03	Cellulitis of toe
L03.031	Cellulitis of right toe
L03.032	Cellulitis of left toe
L03.039	Cellulitis of unspecified toe
L03.04	Acute lymphangitis of toe
	Hangnail with lymphangitis of toe
L03.041	Acute lymphangitis of right toe
L03.042	Acute lymphangitis of left toe
L03.049	Acute lymphangitis of unspecified toe

Figure 1-2 Format of Tabular List

Note that the first character in a code is always a letter. The complete alphabet, except for the letter U, is used. The second and third characters may be either numbers or letters, although currently the second character is usually (but not always) a number. A valid code has to have at least three characters. If it has more than that, a period is placed following the third character:

L03.112 Cellulitis of left axilla

Each character beyond the category level provides greater specificity to the code's meaning.

Placeholder Character Requirement

ICD-10-CM uses a **placeholder character** (also known as the “dummy placeholder”) designated as “X” in some codes when a fifth-, sixth-, or seventh-digit character is required but the digit space to the left of that character is empty.

For example, the subcategory T46.1 Poisoning by, adverse effect of and underdosing of calcium-channel blockers, uses the *sixth* digit to describe whether the poisoning was accidental (unintentional), intentional self-harm, caused by assault, undetermined, or related to an adverse effect or underdosing. Since there is no fifth digit assigned, an X is used to hold that fifth space.

T46.1X2 Poisoning by calcium-channel blockers, intentional self-harm

Seventh-Character Extension

ICD-10-CM requires assigning a seventh character in some categories, usually to specify the sequence of the visit (for example, the initial encounter for the problem, the subsequent encounter for the problem, or sequela—the problem results from a previous disease or injury; the plural is *sequelae*). The **seventh-character extension** requirement is contained in a note at the start of the codes it covers. The seventh character must always be in position 7 of the alphanumeric code, so if the code is not at least six characters long, the placeholder character “X” must be used to fill that empty space.

For example, category S64, Injury of nerves at wrist and hand level, leads off with this note:

The appropriate 7th character is to be added to each code from category S64.

- A initial encounter
- D subsequent encounter
- S sequela

Subcategory S64.22, Injury of radial nerve at wrist and hand level of left arm, has no sixth digit but requires the seventh, so the correct code for an initial encounter would be:

S64.22XA Injury of radial nerve at wrist and hand level of left arm,
initial encounter

Depending on the publisher of ICD-10-CM, a section mark (§) or other symbol (such as a number enclosed in a circle) appears next to a chapter, a category, a subcategory, or a code that requires a fifth, sixth, or seventh digit to be assigned. These are important reminders to assign the appropriate characters.

Inclusion Notes

Inclusion notes are headed by the word *includes* and refine the content of the category appearing above them. For example, after the three-digit category, L04, Acute lymphadenitis, the *inclusion* note states that the category includes abscess (acute) of the lymph nodes, except mesenteric, and acute lymphadenitis, except mesenteric.

Exclusion Notes

Exclusion notes are headed by the word *excludes* and indicate conditions that are not classifiable to the code above. Two types of exclusion notes are used. **Excludes 1** is used when two conditions could not exist together, such as an acquired and a congenital condition; it means “not coded here.” **Excludes 2** means “not included here,” but a patient could have both conditions at the same time. An example occurs in the category L04, again. This *excludes* note states that the category does not include enlarged lymph nodes, among other conditions. The note may also give the code(s) of the excluded condition(s).

Punctuation

Colons

A colon (:) indicates an incomplete term. One or more of the entries following the colon is required to make a complete term. Unlike terms in parentheses or brackets, when the colon is used, the diagnostic statement must include one of the terms after the colon to be assigned a code from the particular category. For example, the *excludes* note after the information for chorioretinal disorders is as follows:

H32 Chorioretinal disorders in diseases classified elsewhere

Excludes 1: chorioretinitis (in):

toxoplasmosis (acquired) (B58.01)

tuberculosis (A18.53)

For the *excludes* note to apply to *chorioretinitis*, “acquired toxoplasmosis” or “tuberculosis” must appear in the diagnostic statement.

Parentheses

Parentheses () are used around descriptions that do not affect the code—that is, nonessential, supplementary terms. For example, the subcategory G24.1, Genetic torsion dystonia, is followed by the entry “Idiopathic (torsion) dystonia NOS.”

Brackets

Brackets [] are used around synonyms, alternative wordings, or explanations. They have the same meaning as parentheses. For example, category E52 is described as “Niacin deficiency [pellagra].”

Abbreviations: NEC versus NOS

NEC and NOS are used in the Tabular List with the same meanings as in the Alphabetic Index.

Etiology/Manifestation Coding

The convention that addresses multiple codes for conditions that have both an underlying etiology and manifestations is indicated in the Tabular List by some phrases that contain instructions about the need for additional codes. The phrases point to situations in which more than one code is required. For example, a statement that a condition is “due to” or “associated with” may require an additional code.

Use Additional Code

The etiology code may be followed by the instruction *use an additional code* or a note saying the same thing. The order of the codes must be the same as shown in the Alphabetic Index: the etiology comes first, followed by the manifestation code.

Code First Underlying Disease

The instruction *code first underlying disease* (or similar wording) appears below a manifestation code that must not be used as a first-listed code. These codes are for symptoms only, never for causes. At times, a specific instruction is given, such as in this example:

F07 Personality and behavioral disorders due to known physiological condition

Code first the underlying physiological condition

Other “Use Additional Code” Requirements

The “use additional code” note also appears when ICD-10-CM requires assignment of codes for health factors such as tobacco use and alcohol use.

Laterality

The Tabular List provides a coding structure based on the concept of **laterality**. In ICD-10-CM, this is the idea that the classification system should capture the side of the body that is documented for a particular condition. The fourth, fifth, or sixth characters specify the affected side, such as right arm, left wrist, both eyes. (In general usage, laterality means a preference for one side of the body, like lefthandedness.) When the affected side of the condition is not known, an unspecified code is assigned. If the condition is documented as bilateral but there is no appropriate code for bilaterality (that is, both), two codes for the left and right sides are assigned.

ICD-10-CM Official Guidelines for Coding and Reporting

Assigning HIPAA-mandated diagnosis codes follows both the conventions that are incorporated in the Alphabetic Index/Tabular List as well as a separate set of rules called **ICD-10-CM Official Guidelines for Coding and Reporting**. Known as the *Official Guidelines*, these rules are developed by a group known as the four cooperating parties made up of CMS advisers and participants from the American Hospital Association (AHA), the American Health Information Management Association (AHIMA), and the National Center for Health Statistics (NCHS).

ICD-10-CM Official Guidelines
www.cdc.gov/nchs/icd/icd10cm.htm

The *Official Guidelines* have sections for general rules, inpatient (hospital) coding, and outpatient (physician office/clinic) coding:

- Section I, *Conventions, general coding guidelines, and chapter-specific guidelines*, first reviews the Alphabetic Index and Tabular List conventions and broad coding rules, and then discusses key topics affecting the use of codes in each of the 21 chapters.
- Section II, *Selection of Principal Diagnosis*, and Section III, *Reporting Additional Diagnoses*, explain the guidelines for establishing the diagnosis or diagnoses for inpatient cases.
- Section IV, *Diagnostic Coding and Reporting Guidelines for Outpatient Services*, explains the guidelines for establishing the diagnosis or diagnoses for all outpatient encounters.

Appendix A of this *Medical Coding Workbook* presents Section IV. The key points from this section can be summarized as follows:

1. Code the primary diagnosis first, followed by current coexisting conditions.
2. Code to the highest level of certainty.
3. Code to the highest level of specificity.

Code the Primary Diagnosis First, Followed by Current Coexisting Conditions

ICD-10-CM code for the **primary diagnosis** is listed first.

• EXAMPLE

Diagnostic Statement: Patient is an elderly female complaining of back pain. For the past five days, she has had signs of pyelonephritis, including urinary urgency, urinary incontinence, and back pain. Has had a little hematuria, but no past history of urinary difficulties.

Primary Diagnosis: N12 Pyelonephritis •

After the first-listed diagnosis, additional codes may be used to describe all current documented coexisting conditions that must be actively managed because they affect patient treatment or that require treatment during the encounter. **Coexisting conditions (comorbidities)** may be related to the primary diagnosis, or they may involve a separate illness that the physician diagnoses and treats during the encounter.

• EXAMPLE

Diagnostic Statement: Patient, a forty-five-year-old male, presents for complete physical examination for an insurance certification. During the examination, patient complains of occasional difficulty hearing; wax is removed from the left ear canal.

Primary Diagnosis: Z02.6 Routine physical examination for insurance certification

Coexisting Condition: H61.22 Impacted cerumen, left ear •

It is important to note that patients may have diseases or conditions that do not affect the encounter being coded. Some physicians add notes about previous conditions

to provide an easy reference to a patient's history. Unless these conditions are directly involved with the patient's treatment, they are not considered in selecting codes. Also, conditions that were previously treated and no longer exist are not coded.

● EXAMPLE

Chart Note: Mrs. Mackenzie, whose previous encounter was for her regularly scheduled blood pressure check to monitor her hypertension, presents today with a new onset of psoriasis.

Primary Diagnosis: L40.9 Psoriasis, unspecified ●

Coding Acute versus Chronic Conditions

The reasons for patient encounters are often **acute** symptoms—generally, relatively sudden or severe problems. Acute conditions are coded with the specific code that is designated acute, if listed. Many patients, however, receive ongoing treatment for **chronic** conditions—those that continue over a long period of time or recur frequently. For example, a patient may need a regular injection for the management of rheumatoid arthritis. In such cases, the disease is coded and reported for as many times as the patient receives care for the condition.

In some cases, an encounter covers both an acute and a chronic condition. Some conditions do not have separate entries for both manifestations, so a single code applies. If both the acute and the chronic illnesses have codes, the acute code is listed first.

● EXAMPLE

Acute renal failure, unspecified N17.9

Chronic renal failure, unspecified N18.9 ●

Coding Sequelae

A **sequela** is a condition that remains after a patient's acute illness or injury has ended. Often called residual effects or late effects, some happen soon after the disease is over, and others occur later. The diagnostic statement may say:

- Due to an old . . . (for example, swelling due to old contusion of knee)
- Late . . . (for example, nausea as a late effect of radiation sickness)
- Due to a previous . . . (for example, abdominal mass due to a previous spleen injury)
- Traumatic (if not a current injury); including scarring or nonunion of a fracture (for example, malunion of fracture, left humerus)

In general, the main term *sequela* is followed by subterms that list the causes. Two codes are usually required. First reported is the code for the specific effect (such as muscle soreness), followed by the code for the cause (such as the late effect of rickets). The code for the acute illness that led to the sequela is never used with a code for the late effect itself.

Code to the Highest Level of Certainty

Diagnoses are not always established at a first encounter. Follow-up visits over time may be required before the physician determines a primary diagnosis. During this process, although possible diagnoses may appear in the physician's documentation as diagnostic work is progressing, these inconclusive diagnoses are not used to determine the first-listed codes reported for reimbursement of service fees.

Signs and Symptoms

Instead of inconclusive diagnoses, the specific signs and symptoms are coded and reported. A *sign* is an objective indication that can be evaluated by the physician, such as weight loss. A *symptom* is a subjective statement by the patient that cannot be confirmed during an examination, such as pain.

The following case provides an example of how symptoms and signs are coded:

● EXAMPLE

Diagnostic Statement: Middle-aged male presents with abdominal pain and weight loss. He had to return home from vacation due to acute illness. He has not been eating well because of a vague upper-abdominal pain. He denies nausea, vomiting. He denies changes in bowel habit or blood in stool. Physical examination revealed no abdominal tenderness.

Primary Diagnosis: R10.13 Abdominal pain, epigastric region

Coexisting Condition: R63.4 Abnormal weight loss ●

Suspected Conditions

Similarly, possible but not confirmed diagnoses, such as those preceded by “rule out,” “suspected,” “probable,” or “likely,” are not coded in the outpatient (physician practice) setting.

Note that in the inpatient setting, however, the guidance is different. For hospital coding, the first-listed diagnosis is referred to as the **principal diagnosis** and is defined as the condition established after study to be chiefly responsible for the admission. “After study” means at the patient’s discharge from the facility. If a definitive condition has not been established, then, at discharge, the inpatient coder codes the condition that matches the planned course of treatment most closely as if it were established.

Coding the Reason for Surgery

Surgery is coded according to the diagnosis that is listed as the reason for the procedure. In some cases, the postoperative diagnosis is available and is different from the physician’s primary diagnosis before the surgery. If so, the postoperative diagnosis is coded because it is the highest level of certainty available. For example, if an excisional biopsy is performed to evaluate mammographic breast lesions or a lump of unknown nature, and the pathology results show a malignant neoplasm, the diagnosis code describing the site and nature of the neoplasm is used.

Code to the Highest Level of Specificity

The more characters a code has, the more specific it becomes; the additional characters add to the clinical picture of the patient. Using the most specific code possible is referred to as coding to the highest level of specificity. In the following example, the most specific code has six characters.

Category L03 **Cellulitis and acute lymphangitis** (three characters)

Subcategory L03.0 **Cellulitis and acute lymphangitis of finger and toe**
(four characters)

Subcategory L03.01 **Cellulitis of finger** (five characters)

Code L03.011 **Cellulitis of right finger** (six characters)

Code L03.012 **Cellulitis of left finger** (six characters)

Code L03.019 **Cellulitis of unspecified finger** (six characters)

However, note that the last code, L03.019, is considered less specific than the other six-character codes, because it indicates that the affected finger is not known. Appropriate documentation should provide this level of detail.

Other (or Other Specified) versus Unspecified

In the Tabular List, the coder may need to choose between a code described as the core condition, *other* (or *other specified*) versus *unspecified*. For example:

L70.8 Other acne

L70.9 Acne, unspecified

If the documentation mentions a type or form of the condition that is not listed, the coder chooses “other,” because a type is indicated but not found. If no type is mentioned, the documentation is not complete enough to assign a more specific code, and so the least-specific choice, “unspecified,” is assigned. If there is no other versus unspecified coding option, select the “other specified” which in this situation represents both “other” and “unspecified.”

Overview of ICD-10-CM Chapters

A00–B99 Certain Infectious and Parasitic Diseases

Codes in Chapter 1 of ICD-10-CM’s Tabular List classify communicable infectious and parasitic diseases. Most categories describe a condition and the type of organism that causes it.

C00–D49 Neoplasms

Neoplasms are coded from Chapter 2 of ICD-10-CM. Neoplasms (tumors) are growths that arise from normal tissue. Note that this category does not include a diagnosis statement with the word *mass*, which is a separate main term. The Alphabetic Index also contains a Neoplasm Table that points to codes for neoplasms. The table lists the anatomical location in the first column. The next six columns relate to the behavior of the neoplasm.

D50–D89 Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism

Codes in this brief ICD-10-CM chapter classify diseases of the blood and blood-forming organs, such as anemias and coagulation defects, as well as some immune mechanism deficiencies.

E00–E89 Endocrine, Nutritional and Metabolic Diseases

Codes in Chapter 4 of ICD-10-CM classify a variety of conditions. The most common disease in this chapter is diabetes mellitus, which is a progressive disease of either type 1 or type 2, the predominant disease.

F01–F99 Mental, Behavioral and Neurodevelopmental Disorders

Codes in Chapter 5 of ICD-10-CM classify the various types of mental disorders, including conditions of drug and alcohol dependency, Alzheimer’s disease, schizophrenic disorders, and mood disturbances. Most psychiatrists use the terminology found in the *Diagnostic and Statistical Manual of Mental Disorders (DSM)* for diagnoses, but the coding follows ICD-10-CM.

G00–G99 Diseases of the Nervous System

Codes in Chapter 6 classify diseases of the central nervous system and the peripheral nervous system.

H00–H59 Diseases of the Eye and Adnexa

Codes in Chapter 7 classify diseases of the eye and adnexa.

H60–H95 Diseases of the Ear and Mastoid Process

Codes in Chapter 8 classify diseases of the ear and mastoid process.

I00–I99 Diseases of the Circulatory System

Because Chapter 9 addresses the circulatory system, which involves so many interrelated components, the disease process can create interrelated, complex conditions. The notes and *code also* instructions must be carefully observed to code circulatory diseases accurately.

J00–J99 Diseases of the Respiratory System

Codes in Chapter 10 of ICD-10-CM classify respiratory illnesses such as influenza, pneumonia, chronic obstructive pulmonary disease (COPD), and asthma. Pneumonia, a common respiratory infection, may be caused by one of a number of organisms. Many codes for pneumonia include the condition and the cause in a combination code, such as J15.21, pneumonia due to *Staphylococcus aureus*.

K00–K95 Diseases of the Digestive System

Codes in Chapter 11 of ICD-10-CM classify diseases of the digestive system. Codes are listed according to anatomical location, beginning with the oral cavity and continuing through the intestines, liver, and related organs.

L00–L99 Diseases of the Skin and Subcutaneous Tissue

Codes in ICD-10-CM’s Chapter 12 classify skin infections, inflammations, and other diseases.

M00–M99 Diseases of the Musculoskeletal System and Connective Tissue

Codes in Chapter 13 of ICD-10-CM classify conditions of the bones and joints—arthropathies (joint disorders), dorsopathies (back disorders), rheumatism, pathological fractures, and other diseases. In this huge chapter, codes are provided for both site and laterality. The site represents the bone, joint, or muscle that is affected. Many codes cover conditions affecting multiple sites, such as osteoarthritis.

N00–N99 Diseases of the Genitourinary System

Codes in Chapter 14 of ICD-10-CM classify diseases of the male and female genitourinary (GU) systems, such as infections of the genital tract, renal disease, conditions of the prostate, and problems with the cervix, vulva, and breast.

(O00–O9A) Pregnancy, Childbirth and the Puerperium

Codes in Chapter 15 of ICD-10-CM classify conditions that are involved with pregnancy, childbirth, and the puerperium (the six-week period following delivery).

P00–P96 Certain Conditions Originating in the Perinatal Period

Codes in Chapter 16 of ICD-10-CM classify conditions of the fetus or the newborn infant, the neonate, up to 28 days after birth. These codes are assigned only to conditions of the infant, not of the mother.

Q00–Q99 Congenital Malformations, Deformations and Chromosomal Abnormalities

Codes in ICD-10-CM Chapter 17 classify anomalies, malformations, and diseases that exist at birth. Unlike acquired disorders, congenital conditions are either hereditary or due to influencing factors during gestation.

R00–R99 Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified

Codes in this 18th chapter of ICD-10-CM classify patients' symptoms, signs, and ill-defined conditions for which a definitive diagnosis cannot be made. In physician practice (outpatient) coding, these codes are always used instead of coding "rule out," "probable," or "suspected" conditions.

S00–T88 Injury, Poisoning and Certain Other Consequences of External Causes

Codes in Chapter 19 of ICD-10-CM classify injuries and wounds (fractures, dislocations, sprains, strains, internal injuries, and traumatic injuries), burns, poisoning, and various consequences of external causes. Often, additional codes from Chapter 20 are used to identify the cause of the injury or poisoning.

The Table of Drugs and Chemicals in the Alphabetic Index lists, for each drug, codes for accidental poisoning, intentional poisoning, poisoning from assault or undetermined cause, adverse effects, and underdosing. *Adverse effects*, which are unintentional, harmful reactions to a proper dosage of a drug properly taken, are different from *poisoning*, which refers to the medical result of the incorrect use of a substance, or *underdosing*, taking less of a medication than is prescribed by a provider or the manufacturer.

Most categories in Chapter 19 need the seventh-character extension to capture one of these three episodes of care:

A for an initial encounter

D for a subsequent encounter

S for sequela

For example, ICD-10-CM code S31.623A, Laceration with foreign body of abdominal wall, right lower quadrant with penetration into peritoneal cavity, initial encounter, shows a seventh character used with a laceration code.

V00–Y99 External Causes of Morbidity

Codes in Chapter 20 of ICD-10-CM classify **external cause codes**, which report the cause of injuries from various environmental events, such as transportation accidents, falls, and fires. External cause codes are not used alone or as first-listed codes. They always supplement a code that identifies the injury or condition itself.

Many blocks of accident and injury codes in this chapter require additional external cause codes for

- The encounter (A = initial, D = subsequent, or S = sequela)
- The place of occurrence (category Y92)
- The activity (category Y93)
- The status (category Y99)

External cause codes are located by first using the third section of the Alphabetic Index, Index to External Causes. This index is organized by main terms describing the accident, circumstance, or event that caused the injury. Codes are verified in Chapter 20 of the Tabular List.

External cause codes are often used in collecting public health information. They capture cause, intent, place, and activity. As many external cause codes as are needed to describe these factors should be reported. Note, however, that these codes are not needed if the external cause and intent are already included in a code from another chapter.

Z00–Z99 Factors Influencing Health Status and Contact with Health Services

Chapter 21 contains **Z codes** that are used to report encounters for circumstances other than a disease or injury, such as factors influencing health status, and to describe the nature of a patient's contact with health services. There are two chief types:

- Reporting visits with healthy (or ill) patients who receive services other than treatments, such as annual checkups, immunizations, and normal childbirth. This use is coded by a Z code that identifies the service, such as:

Z00.01 Encounter for general adult medical examination with abnormal findings

- Reporting encounters in which a problem not currently affecting the patient's health status needs to be noted, such as personal and family history. For example, a person with a family history of breast cancer is at higher risk for the disease, and a Z code is assigned as an additional code for screening codes to explain the need for a test or procedure, as is shown here:

Z80.3 Family history of malignant neoplasm of breast

A Z code can be used as either a primary code for an encounter or as an additional code. It is researched in the same way as other codes, using the Alphabetic Index to point to the term's code and the Tabular List to verify it. The terms that indicate the need for Z codes, however, are not the same as other medical terms. They usually have to do with a reason for an encounter other than a disease or its

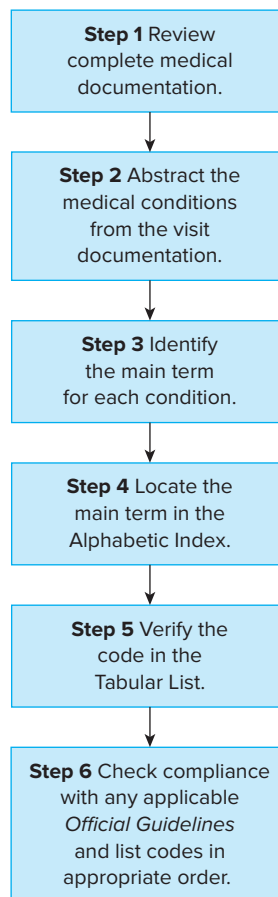
Table 1.2 Terminology Associated with Z Codes

Term	Example
Contact/exposure	Z20.1 Contact with and (suspected) exposure to tuberculosis
Contraception	Z30.01 Encounter for initial prescription of contraceptives
Counseling	Z31.5 Encounter for genetic counseling
Examination	Z00.110 Health examination for newborn under 8 days old
Fitting of	Z46.51 Encounter for fitting and adjustment of gastric lap band
Follow-up	Z08 Encounter for follow-up examination after completed treatment for malignant neoplasm
History (of)	Z92.23 Personal history of estrogen therapy
Screening/test	Z11.51 Encounter for screening for human papillomavirus (HPV)
Status	Z67.10 Type A blood, Rh positive
Supervision (of)	Z34.01 Encounter for supervision of normal first pregnancy, first trimester
Vaccination/inoculation	Z23 Encounter for immunization

complications. When found in diagnostic statements, the words listed in Table 1.2 often point to Z codes.

Coding Steps

The correct procedure for assigning accurate diagnosis codes has six steps, as shown in Figure 1-3.

**Figure 1-3** Diagnosis Code Assignment Flowchart

Step 1:

Review Complete Medical Documentation

In outpatient settings, diagnosis coding begins with the patient's **chief complaint (CC)**. The chief complaint is the medical reason that the patient presents for the particular visit. This is documented in the patient's medical record. The physician then examines the patient and evaluates the condition or complaint, documenting the diagnosis, condition, problem, or other reason that the documentation shows as being chiefly responsible for the services that are provided. This primary diagnosis provides the main term to be coded first. Documentation will also mention any coexisting complaints that should be coded.

If a patient has cancer, the disease is probably the patient's major health problem. However, if that patient sees the physician for an ear infection that is not related to the cancer, the primary diagnosis for that particular claim is the ear infection.

A patient's examination might be documented as follows:

CC: Diarrhea X 5 days with strong odor and mucus, abdominal pain and tenderness, no meds.

Dx: Ulcerative colitis.

The notes mean that the patient has had symptoms for five days and has taken no medication. The chief complaint is noted after the abbreviation *CC*. The diagnosis, listed after the abbreviation *Dx*, is ulcerative colitis.

Assume that another patient's record indicates a history of heavy smoking and includes an x-ray report and notes such as these:

CC: Hoarseness, pain during swallowing, dyspnea during exertion.

Dx: Emphysema and laryngitis.

The physician listed emphysema, the major health problem, first; it is the primary diagnosis. Laryngitis is a coexisting condition that is being treated.

Step 2:

Abstract the Medical Conditions from the Visit Documentation

The code will be assigned based on the physician's diagnosis or diagnoses. This information may be located on the encounter form or elsewhere in the patient's medical record, such as in a progress note. For example, a medical record reads:

CC: Chest and epigastric pain; feels like a burning inside. Occasional reflux. Abdomen soft, flat without tenderness. No bowel masses or organomegaly.

Dx: Peptic ulcer.

The diagnosis is peptic ulcer.

Step 3:

Identify the Main Term for Each Condition

If needed, decide which is the main term or condition of the diagnosis. For example, in the diagnosis above, the main term or condition is *ulcer*. The word *peptic* describes what type of ulcer it is. Here are other examples:

Dx: Complete paralysis.

The main term is *paralysis*, and the supplementary term is *complete*.

Dx: Heart palpitation.

The main term is *palpitation*, and the supplementary term is *heart*.

Dx: Panner's disease.

This condition can be found in either of two ways: by looking up the main term *disease*, followed by *Panner's*, or by looking up *Panner's disease*.

Step 4:

Locate the Main Term in the Alphabetic Index

The main term for the patient's primary diagnosis is located in the Alphabetic Index. These guidelines should be observed in choosing the correct term:

- Use any supplementary terms in the diagnostic statement to help locate the main term.
- Read and follow any notes below the main term.
- Review the subterms to find the most specific match to the diagnosis.
- Read and follow any cross-references.
- Make note of a two-code (etiology and/or manifestation) indication.

Step 5:

Verify the Code in the Tabular List

The code for the main term is then located in the Tabular List. These guidelines are observed to verify the selection of the correct code:

- Read *includes* or *excludes* notes, checking back to see if any apply to the code's category, section, or chapter.
- Be alert for and follow instructions for fifth-digit requirements.
- Follow any instructions requiring the selection of additional codes (such as "code also" or "code first underlying disease"). This may require further research elsewhere in the Tabular List.
- List multiple codes in the correct order.

Step 6:

Check Compliance with Any Applicable Official Guidelines and List Codes in Appropriate Order

The final step is to review ICD-10-CM *Official Guidelines for Coding and Reporting* to check for applicable points. Coders should be sure not to include suspected conditions (for outpatient settings) and to report the primary diagnosis as the first-listed code, followed by any coexisting conditions and external source codes.

ICD-10-CM Terminology

Before working through the exercises that follow, be sure that you are familiar with the following key terms and their definitions.

acute illness or condition with severe symptoms and a short duration

Alphabetic Index part of ICD-CM-10 listing disease and injuries alphabetically with corresponding diagnosis codes

category three-character code for classifying a disease or condition

chief complaint (CC) patient's description of the symptoms or other reasons for seeking medical care

chronic illness or condition with a long duration

code three- to seven-character alphanumeric representation of a disease or condition

coexisting condition (comorbidity) additional illness that either has an effect on the patient's primary illness or is also treated during the encounter

combination code single code describing both the etiology and the manifestation(s) of a particular condition

convention typographic technique that provides visual guidance for understanding information

default code ICD-10-CM code listed next to the main term in the Alphabetic Index that is most often associated with a particular disease or condition

diagnostic statement physician's description of the main reason for a patient's encounter

eponym name or phrase formed from or based on a person's name

etiology cause or origin of a disease or condition

excludes 1 exclusion note used when two conditions could not exist together, such as an acquired and a congenital condition; means "not coded here"

excludes 2 exclusion note meaning that a particular condition is not included here, but a patient could have both conditions at the same time

exclusion note Tabular List entry limiting applicability of particular codes to specified conditions

external cause code ICD-10-CM code for an external cause of a disease or injury

first-listed code code for diagnosis that is the patient's main condition; in cases involving an underlying condition and a manifestation, the underlying condition is the first-listed code

GEM acronym for general equivalence mappings, reference tables of related ICD-10-CM and ICD-9-CM codes

ICD-10-CM HIPAA-mandated diagnosis code set as of October 1, 2015

ICD-10-CM Official Guidelines for Coding and Reporting general rules, inpatient (hospital) coding guidance, and outpatient (physician office/clinic) coding guidance from the four cooperating parties (CMS advisers and participants from the AHA, AHIMA, and NCHS)

inclusion note Tabular List entry addressing the applicability of certain codes to specified conditions

Index to External Causes index of all the external causes of diseases and injuries classified in the Tabular List

laterality use of ICD-10-CM classification system to capture the side of the body that is documented; the fourth, fifth, or sixth characters of a code specify the affected side(s)

main term word that identifies a disease or condition in the Alphabetic Index

manifestation a disease's typical signs, symptoms, or secondary processes

NEC (not elsewhere classified) abbreviation indicating the code to use when a disease or condition cannot be placed in any other category

Neoplasm Table summary table of code numbers for neoplasms by anatomical site and divided by the description of the neoplasm

nonessential modifier supplementary word or phrase that helps define a code in ICD-10-CM

NOS (not otherwise specified) indicates the code to use when no information is available for assigning the disease or condition a more specific code; unspecified

placeholder character (X) character "X" inserted in a code to fill a blank space

primary diagnosis first-listed diagnosis

principal diagnosis in inpatient coding, the condition established after study to be chiefly responsible for the admission of the patient

sequelae conditions that remain after an acute illness or injury has been treated and resolved

seventh-character extension necessary assignment of a seventh character to a code; often for the sequence of an encounter

subcategory four- or five-character code number

subterm word or phrase that describes a main term in the Alphabetic Index

Table of Drugs and Chemicals index in table format of drugs and chemicals that are listed in the Tabular List

Tabular List part of ICD-10-CM listing diagnosis codes in chapters alphanumerically

Z code abbreviation for codes from the twentieth chapter of ICD-10-CM that identify factors that influence health status and encounters that are not due to illness or injury

NAME _____

Medical Terminology: Reviewing Word Elements

Knowledge of medical terminology is required for coding diagnoses. Medical terms are made up of root words, prefixes, suffixes, and combining vowels and forms. The exercises here provide review of and practice with some key elements needed to correctly interpret medical documentation and then use the Alphabetic Index of ICD-10-CM to locate the main term(s).

Define the following word elements.

1. uter/o _____
2. cyst/o _____
3. phleb/o _____
4. gastro/ _____
5. hepat/o _____
6. encephal/o _____
7. osteo/o _____
8. hem/o, hemat/o _____
9. nephro/o _____
10. my/o _____
11. neuro _____
12. dermat/o _____
13. myel/o _____
14. enter/o _____
15. col/o _____
16. cardi/o _____
17. arteri/o _____
18. arthr/o _____
19. cutane/o _____
20. esophag/o _____

Define the following prefixes and suffixes.

21. adeno— _____
22. —megaly _____

- 23. -esis _____
- 24. arterio- _____
- 25. chole- _____
- 26. melan- _____
- 27. -pathy _____
- 28. -itis _____
- 29. -phagia _____
- 30. dys- _____
- 31. brady- _____
- 32. ante- _____
- 33. hemi- _____
- 34. -cele _____
- 35. -algia _____
- 36. tachy- _____
- 37. -ectomy _____
- 38. -lysis _____
- 39. -plegia _____
- 40. -scopy _____

Factors Influencing Health Status and Contact with Health Services

Chapter 21: Codes Z00–Z99

Z codes, which make up Chapter 21 of ICD-10-CM, identify encounters for reasons other than illness or injury. Z codes are used for four main types of encounters: (1) healthy patients who receive services other than treatments, such as annual checkups, immunizations, and normal childbirth; (2) patients with known conditions for which they are receiving chemotherapy, radiation therapy, and rehabilitation aftercare; (3) patients with a problem that is not currently affecting their health status but that should be noted, such as a family history of a disease; and (4) patients being evaluated before an operation.

Z Codes—Primary or Supplementary

Z codes are used as the primary code—that is, listed first—when healthy patients receive services, patients receive treatment for a current or resolving condition, and patients are evaluated preoperatively. Some Z codes, however, are never primary. Rather, these codes are always supplementary—they are additional codes that are listed after a primary code for the encounter. A problem influencing a patient's health status that is not currently an illness or injury—such as a family history of a chronic disease—is an example of a supplementary Z code. In this case, the patient's reason for the encounter is listed first, followed by a Z code for the influencing factor.

Provide the Z code.

1. routine adult medical examination with no abnormal findings _____
2. exposure to tuberculosis _____
3. glaucoma screening _____
4. patient is a genetic carrier of cystic fibrosis _____
5. measles vaccination _____
6. admission for prophylactic removal of ovary _____
7. BMI of 46.9 in an adult patient _____
8. heart transplant (status post) _____
9. reinsertion of implantable subdermal contraceptive _____
10. contact with *E. coli* _____

Provide the Z code, and indicate whether it is a primary or a supplemental code.

11. preoperative cardiovascular examination _____
12. encounter for prophylactic rabies immune globin _____
13. observation of newborn for suspected infectious condition ruled out _____
14. counseling for tobacco abuse _____
15. supervision of normal first pregnancy _____
16. patient's parents are both deaf _____
17. history of allergy to latex _____
18. patient with hormone sensitive malignancy status _____
19. infection with penicillin-resistant microorganism _____
20. encounter for suture removal _____

Select the Z code for the following case studies.

21. A 55-year-old patient is new to the internist and presents today for his annual physical. During the discussion regarding the patient's medical history, he mentions that his father and grandfather had polycystic kidney disease, and he has some concerns regarding his potential for developing the same problem. In addition to the diagnosis code for the annual physical, what other diagnosis code would be needed? _____
22. A 35-year-old pregnant patient has asked her obstetrician to perform an amniocentesis. She has no specific anomalies or genetic predispositions, but is concerned for the well-being of her baby. No specific condition was found during the amniocentesis. What diagnosis code is used for the amniocentesis? _____
23. After a serious accident 2 months ago, a patient's left eye was removed. The patient now returns for fitting of the artificial eye that will replace the eye that was removed. _____
24. After testing of his patient's sister, the nephrologist determines that the sister is an appropriate candidate to donate a kidney for her brother's kidney transplant. Today, she is admitted to the hospital as a kidney donor. What diagnosis code is used for her hospital admission? _____
25. The patient has been seen by her gynecologist for close to 20 years, for her 3 pregnancies and a one-time abnormal pap smear. Today she is being seen for her annual routine pelvic exam. Which Z code is appropriate? _____

External Causes of Morbidity

Chapter 20: Codes V00–Y99

External cause codes classify injuries resulting from environmental events such as falls, fires, and transportation accidents. The Alphabetic Index to External Causes that follows the Table of Drugs and Chemicals lists main terms for external causes—the accident, circumstance, or event that caused the injury.

External Cause Codes—A Supplementary Classification

External causes are not the primary diagnoses of patients' conditions, so these codes are never used alone. Instead, they always supplement a code that identifies the injury or condition itself. The primary diagnosis code is listed first, followed by the additional external cause code. Codes may be added to the first external cause code for the place of occurrence, activity, or status.

Seventh-Character Extensions

Many external cause codes for accidents and injuries require an extension as the seventh character for the visit sequence, if it is documented. The character A stands for the initial encounter; D for a subsequent encounter for this cause; and S for an encounter due to the sequela for this cause. Placeholder characters (X) may be needed to fill the spaces between a three-, four-, or five-character code and the seventh-character extension.

Provide the external cause codes for the following descriptions.

1. initial visit for fall from snowboard _____
2. motorcycle passenger injured in collision with bus in traffic accident, subsequent visit _____
3. patient suffered overexposure to radiation during therapy _____
4. hernia repair operation performed on the wrong patient _____
5. blood alcohol level of 60–79 mg/100 ml _____
6. accidental drowning in a lake _____
7. overexertion from repetitive movements, initial encounter _____
8. visit for treatment of residual effects of sunstroke _____
9. emergency room visit, jogger slipped on icy sidewalk _____
10. injury to driver in automobile collision with a cow _____

- 11. deep paper cut caused by an envelope _____
- 12. burn caused by flames from a fireplace _____
- 13. railway passenger injured while boarding the train _____
- 14. volunteer activity _____
- 15. accident due to text messaging while driving _____

Provide both the primary code for the patient's diagnosis and the external cause code in the correct order.

- 16. follow-up visit for fractured right elbow from fall when in-line roller skating _____
- 17. fractured thumb on right hand resulting from a fall from a ladder _____
- 18. contusions on left hand due to contact with a thorny cactus plant _____
- 19. patient tackled and knocked down during football game, suffers concussion with loss of consciousness for 20 minutes _____
- 20. driver's car was rear-ended by another car; patient has a spiral fracture of the left radius shaft _____

Select the external cause code(s) for the following case studies.

- 21. A patient was brought to the emergency department by ambulance after suffering a fractured left arm and left leg, with multiple soft tissue injuries. It was determined that the patient was the pilot of a commercial, fixed-wing, airplane flight that had crashed during a forced landing.

- 22. A patient was found unconscious at home after falling on the stairs to the second floor of her home. _____
- 23. A college student is brought to the emergency department after reportedly playing a blackout game with his friends. _____
- 24. An active-duty Army first sergeant was injured in Afghanistan when a gas bomb exploded during a night search of suspected enemy housing.

- 25. A patient was seen in the emergency department for pain in his right arm after accidentally falling off his bicycle. The emergency department physician determined the patient had injured the arm as a result of the bicycle fall. _____

Certain Infectious and Parasitic Diseases

Chapter 1: Codes A00–B99

Codes in this chapter classify communicable infectious and parasitic diseases. Most categories describe a condition and the type of organism that causes it. For example, category A03, shigellosis, describes acute infectious dysentery caused by *Shigella* bacteria. This category's codes classify four groups of bacteria plus a code for other *specified Shigella* infections, which occur infrequently, and a code for *unspecified* shigellosis for use when the condition is insufficiently described in the medical documentation for specific code assignment.

“Includes” Notes

In the Tabular List, the word *includes* followed by descriptions of conditions helps the coder confirm the correct classification. These notes apply to the chapter, section, or category under which they appear. For example, the note “Includes infection or foodborne intoxication due to any *Salmonella* species other than *S. typhi* and *S. paratyphi*” appears beneath category A02, Other salmonella infections, and applies to infection or food poisoning caused by any organism in the category—that is, all the codes that begin with A02.

Provide the codes for the following diagnoses.

1. trichinosis _____
2. fever from Zika virus _____
3. Lyme disease _____
4. tabes dorsalis _____
5. ECHO virus _____
6. ovale malaria _____
7. Behçet's syndrome _____
8. primary genital syphilis _____
9. viral hepatitis A without mention of hepatic coma _____
10. rabies _____
11. tuberculous laryngitis, bacteriological examination not done _____

For the following descriptions, check the “Include” note when assigning the code.

- 12. acute hepatitis E without mention of hepatic coma _____
- 13. Malta fever _____
- 14. amebic skin ulceration due to *Entamoeba histolytica* _____
- 15. chronic gonococcal cystitis _____
- 16. recurrent tick-borne fever _____
- 17. pertussis due to *Bordetella bronchiseptica* _____
- 18. gonococcal endometritis, three months' duration _____
- 19. intestinal infection due to *Campylobacter* _____
- 20. shingles _____

Provide the codes for the following case studies.

- 21. A patient who had been exposed to AIDS (acquired immune deficiency syndrome) in the past developed symptoms of the disease, was tested, and learned that the results were positive for AIDS.

- 22. For weeks a patient was ill with diarrhea and abdominal pain. After examination and blood tests were completed, it was determined the patient suffered from enteritis caused by the astrovirus.

- 23. A patient was suffering from a yeast infection of the skin and finger-nails. She made an appointment with her physician, and after examination and blood work, he determined that she suffered from candidal onychia.

- 24. After 3 weeks of fever and chest pain, a patient was seen by his physician who determined that something was wrong with the patient's pericardium, the outer lining of the heart. After laboratory workup and testing, it was determined the patient had Cocksackie pericarditis.

- 25. A young patient with strep throat went untreated for over 3 weeks and developed scarlatina anginosa.

Neoplasms

Chapter 2: Codes C00–D49

Codes in this chapter of ICD-10-CM classify neoplasms, or tumors, which are growths that arise from normal tissue. Tumors are described according to their behavior as being one of four types: malignant (fast growing), benign (not spreading), of uncertain behavior (requiring further study), and of unspecified nature (insufficiently described for specific code assignment). Malignant tumors include primary, a tumor at the original site; secondary, a tumor that has spread, or *metastasized*, to another location from its primary site; and in situ, a noninvasive malignant tumor. Carcinoma in situ may also be referred to as *preinvasive cancer*.

In coding physicians' encounters with patients (outpatient coding), reporting suspected or possible conditions is avoided. Before pathology work identifies the behavior of a tumor, the condition can be classified with a code in the range R00–R99 (Symptoms, Signs and Abnormal Clinical and Laboratory Findings, Not Elsewhere Classified), if applicable, or from category Z12 (encounter for screening for malignant neoplasms).

The Neoplasm Table

The Alphabetic Index contains a Neoplasm Table that points to codes for neoplasms. The table lists the anatomical location in the first column. The next six columns classify the behavior of the neoplasm.

Multiple Lymph Node Sites

When coding lymph node neoplasms, if lymph nodes in more than one region of the body are involved, assign a code for multiple sites rather than codes for each site.

Using the Neoplasm Table in the Alphabetic Index, assign codes to the following diagnoses.

1. malignant primary neoplasm of the lower jawbone _____
2. benign neoplasm of the pharynx _____
3. neoplasm in situ, Wirsung's duct _____
4. neoplastic growth on the skin of the hip, uncertain behavior _____

5. secondary neoplasm on the posterior wall of the stomach _____
6. unspecified neoplasm of the pericardium _____
7. neoplasm of the mesopharynx, primary _____

8. cancer in situ, distal esophagus _____
9. benign tumor of the midbrain _____
10. spinal column neoplasm, primary _____

Using the Alphabetic Index and the Tabular List, provide codes for the following diagnoses.

11. unspecified, malignant carcinoid tumor of the hindgut _____
12. Hodgkin's granuloma, multiple lymph nodes _____
13. uterine fibromyoma _____
14. gastrointestinal stromal tumor of the jejunum _____
15. suspected primary carcinoma of the skin, screening test _____
16. ascites; possible carcinoma of the pancreas _____
17. cancer that has metastasized to the nose _____
18. Hodgkin's nodular sclerosis of the spleen _____
19. personal history of malignant neoplasm of the stomach _____
20. screening mammogram, patient has family history of breast cancer and is considered high risk (*two codes*) _____

Provide the codes for the following case studies.

21. After noticing a smallish dark irregular spot on her lip, the patient was seen by her internist who biopsied the site. The pathology report came back as malignant melanoma of the external lower lip. _____
22. While examining her patient during an annual physical, a physician noticed a nodule on the left shoulder. It was approximately 1 cm, and the physician was almost certain it was benign. She excised the nodule, and it was sent for pathology. The report indicated a dermatofibroma of the skin on the shoulder. _____
23. A patient with a history of abnormal pap smears is tested again. This time the result indicates a CINIII finding, or an in situ neoplasm of the cervix uteri. _____
24. This patient has a long history of respiratory infections, productive cough, and asthma. The physician has done recent testing to determine the cause of this extensive respiratory difficulty. The CT scan shows an anomaly, and the physician asks the patient to come in for another examination. His findings in the documentation indicate a neoplasm of the respiratory system. _____
25. Patient was in pain for several weeks in the sinus area. After ruling out sinusitis, the patient was referred to an otolaryngologist who examined the patient endoscopically and determined there was a lesion in the accessory sinuses. The lesion was biopsied, and the pathology report stated that the lesion was a carcinoma in situ of the accessory sinuses.

Diseases of the Blood and Blood-Forming Organs and Certain Disorders Involving the Immune Mechanism

Chapter 3: Codes D50–D89

Codes in this chapter of ICD-10-CM classify diseases of the blood and blood-forming organs, such as anemia and coagulation defects. The chapter also covers disorders of the immune mechanism, such as graft-versus-host disease.

“Excludes” Notes

In the Tabular List, the word *excludes* followed by descriptions of conditions helps the coder confirm a correct choice. Like *includes* notes, these guidelines can apply to the chapter, section, or category under which they appear. For example, in Chapter 3, a number of conditions are excluded from the entire chapter classification. Review the *Excludes 2* note to see the list of conditions that are not included in this chapter, such as autoimmune disease and HIV.

Provide the codes for the following diagnoses.

1. chlorotic anemia _____
2. vegan anemia due to dietary deficiency of vitamin B₁₂ _____
3. sickle-cell anemia _____
4. hemophilia _____
5. hereditary hemolytic anemia _____
6. hereditary hemolytic anemia due to enzyme deficiency _____
7. monoclonal mast cell activation syndrome _____
8. specified hereditary hemolytic anemia not elsewhere classified _____
9. congenital elliptocytosis _____
10. iron deficiency anemia _____
11. Henoch’s purpura _____
12. transient acquired pure red cell aplasia _____

- 13. hereditary sideroblastic anemia _____
- 14. congenital dyserythropoietic anemia _____
- 15. postprocedural hemorrhage of the spleen following a splenorrhaphy _____

Provide the codes for the following case studies.

16. After the birth of her first child, the patient bled profusely to the point of endangering her life. She mentioned to the obstetrician that her mother had had a similar problem when she was born. The lab results showed a deficiency in blood factor VII, indicative of von Willebrand's disease, which is congenital.

17. On several occasions, this patient noticed increased bleeding from even minor cuts or abrasions. Finally deciding to see her physician, the patient had lab work done, and the result indicated a low platelet count, with a diagnosis of thrombocytopenia.

18. After open heart surgery for blocked coronary arteries, the patient developed purplish spots on the leg that was used to harvest his vein for the graft material to be used in the heart bypass procedure. He had not injured the leg, but after years of smoking, his vascular system was compromised. After blood work was done, a diagnosis of secondary thrombocytopenia was given.

19. After years of untreated hypertension and development of end stage renal disease (ESRD), a patient also develops anemia. The physician explains that this is not an uncommon result of ESRD and gives an additional diagnosis of anemia in end stage renal disease.

20. A patient with fatigue, shortness of breath, and weakness is seen. Lab work indicates a deficiency in the red blood cell membrane, and a diagnosis of congenital nonspherocytic anemia, type II, is made.

Endocrine, Nutritional and Metabolic Diseases

Chapter 4: Codes E00–E89

Codes in this chapter of ICD-10-CM classify a variety of conditions. The most common disease is diabetes mellitus, which may be either type 1 or type 2. Another common condition is obesity, in which body weight is beyond skeletal and physical requirements because of excessive accumulation of body fat.

Coding for Diabetes Mellitus

Codes for diabetes mellitus combine (1) the type of diabetes mellitus, (2) what body system is affected, and (3) what complications also affect that body system. Most conditions can be described with a single code. For example, category code E11 indicates a diagnosis of type 2 diabetes mellitus. Under this category, the subcategories provide information about the related conditions, such as:

- E11.0 Type 2 diabetes mellitus with hyperosmolarity
- E11.2 Type 2 diabetes mellitus with kidney complications
- E11.3 Type 2 diabetes mellitus with ophthalmic complications
- E11.4 Type 2 diabetes mellitus with neurological complications
- E11.5 Type 2 diabetes mellitus with circulatory complications
- E11.6 Type 2 diabetes mellitus with other specified complications

Either a fifth, sixth, or seventh character, depending on the medical record, is required, such as:

E11.610 Type 2 diabetes mellitus with diabetic neuropathic arthropathy

More than one of these combination codes should be used to report all the conditions the patient has. If the type of diabetes (1 or 2) is not documented, the coder selects the appropriate choice from category E11, type 2 diabetes mellitus. The five diabetes mellitus categories are:

- E08 diabetes mellitus due to underlying condition
- E09 drug or chemical induced diabetes mellitus
- E10 type 1 diabetes mellitus
- E11 type 2 diabetes mellitus
- E13 other specified diabetes mellitus

Codes under category E08, diabetes mellitus due to underlying condition, and category E09, drug or chemical induced diabetes mellitus, indicate complications or manifestations that are associated with secondary diabetes mellitus. *Secondary* diabetes is always caused by some other condition or

event, such as a malignant neoplasm of the pancreas or adverse effect from a drug. Whether to list secondary diabetes codes first or second is covered in the Tabular List instructions.

If the patient is insulin dependent, that is, routinely uses insulin, assign code Z79.4 as well.

Coding for Overweight and Obesity

Codes under category E66 are used to report the conditions of overweight and obese patients when documented. Fifth digits are assigned based on the cause of the condition, such as excess calories or drug-induced obesity.

For codes in category E66, an additional code should be assigned to identify body mass index (BMI), if known. These codes are located in the Z code chapter. Codes are available for adults (age 21 years or older) and for pediatric patients (age 2–20 years). These are the options for adults:

Z68.1 Body mass index (BMI) 19 or less, adult

Z68.2 Body mass index (BMI) 20–29, adult

Z68.20 BMI 20.0–20.9, adult

Z68.21 BMI 21.0–21.9, adult

Z68.22 BMI 22.0–22.9, adult

Z68.23 BMI 23.0–23.9, adult

Z68.24 BMI 24.0–24.9, adult

Z68.25 BMI 25.0–25.9, adult

Z68.26 BMI 26.0–26.9, adult

Z68.27 BMI 27.0–27.9, adult

Z68.28 BMI 28.0–28.9, adult

Z68.29 BMI 29.0–29.9, adult

Z68.3 Body mass index (BMI) 30–39, adult

Z68.30 BMI 30.0–30.9, adult

Z68.31 BMI 31.0–31.9, adult

Z68.32 BMI 32.0–32.9, adult

Z68.33 BMI 33.0–33.9, adult

Z68.34 BMI 34.0–34.9, adult

Z68.35 BMI 35.0–35.9, adult

Z68.36 BMI 36.0–36.9, adult

Z68.37 BMI 37.0–37.9, adult

Z68.38 BMI 38.0–38.9, adult

Z68.39 BMI 39.0–39.9, adult

Z68.4 Body mass index (BMI) 40 or greater, adult

Z68.41 BMI 40.0–44.9, adult

Z68.42 BMI 45.0–49.9, adult

Z68.43 BMI 50.0–59.9, adult

Z68.44 BMI 60.0–69.9, adult

Z68.45 BMI 70.0 or greater, adult

Provide the codes for the following diagnoses.

1. congenital hypothyroidism _____
2. mucopolysaccharidosis _____

3. Zellweger syndrome _____
4. postsurgical hematoma of the thyroid following neck surgery _____
5. deficiency of vitamin K _____
6. medulloadrenal hyperfunction _____
7. kwashiorkor _____
8. familial hypercholesterolemia _____
9. Werner's syndrome _____
10. Lorain-Levi dwarfism _____

Note the fifth-, sixth-, or seventh-digit subclassification requirement when assigning codes for the following diagnoses.

11. Grave's disease _____
12. diabetes mellitus, type 1, with hyperglycemia _____
13. diabetes mellitus, type 2, without complications _____
14. diabetes with hypoglycemia, no coma _____
15. type 1 diabetes mellitus with Kimmelstiel-Wilson disease _____
16. type 2 diabetes mellitus with nonproliferative retinopathy with macular edema _____
17. goiter _____
18. morbid obesity in adult with BMI of 41 (*two codes*) _____
19. diabetes mellitus due to underlying condition with diabetic neuralgia

20. obese patient encounter for dietary counseling (*two codes*) _____

Provide the codes for the following case studies.

21. An adolescent boy has been seen annually by his internist who noticed a disturbing weight gain, some behavioral problems, and high blood sugar. Realizing the implication of this combination of problems could be based in the pituitary gland, the physician ordered tests and confirmed the diagnosis of Frohlich's syndrome. _____
22. Due to evidence of other metabolic disorders, a patient was asked to come in for urinalysis. The test results confirmed the physician's suspicion that amino acids were being excreted via the urine in abnormal amounts. The patient was diagnosed with cystinuria. _____
23. Patient presents with a 5-day history of excessive diarrhea and vomiting which has now resolved, but the patient is still unable to drink water or eat. _____

The physician suspects gastroenteritis and schedules the patient for testing. At this point, however, the physician indicates a diagnosis of dehydration. _____

24. Treating a 60-year-old patient, the physician notices a swelling in the neck area and determines that the patient's thyroid is enlarged on one side. After blood work, which indicates increased levels of the thyroid hormone, the physician diagnosed an acquired iodine-deficiency hypothyroidism. _____
25. A physician has been following a patient who recently arrived from a foreign country. As a result of his patient's depression, diarrhea, and unusual dermatitis, the physician orders lab work to determine what is the cause of his patient's symptoms. The result shows a niacin deficiency. On the basis of this finding, and the fact that the dermatitis is located only in body areas exposed to light, a diagnosis of pellagra is made. _____