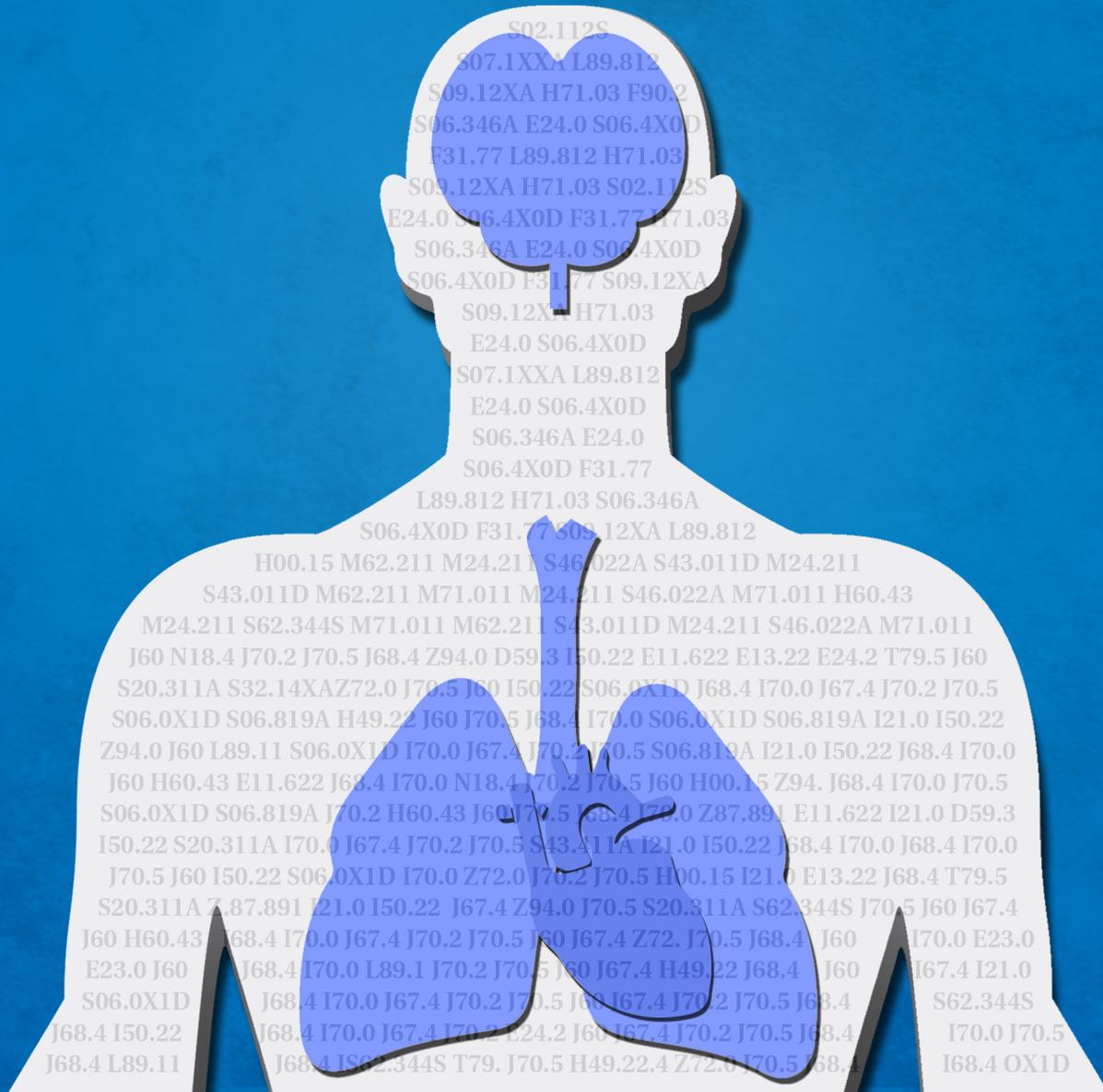


# Guide to Anatomy and Physiology for ICD-10-CM



**just  
Jcoding**

**Guide to  
Anatomy and  
Physiology for  
ICD-10-CM**

**+HCPPro**  
a division of BLR

JustCoding's Guide to Anatomy and Physiology for ICD-10-CM is published by HCPro, a division of BLR

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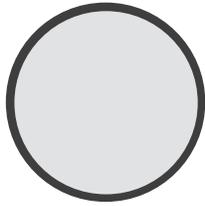
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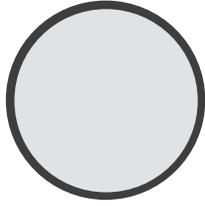
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# About the Reviewer

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Shelley C. Safian, PhD, RHIA, CCS-P, CPC-H, CPC-I, AHIMA-approved ICD-10-CM/PCS trainer, has been teaching healthcare administration, health information management, and medical billing and coding, both onsite and online, for more than a decade.

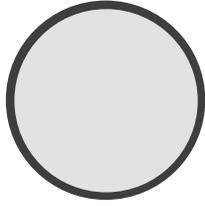
Safian writes a monthly Q&A column for JustCoding.com; is the presenter for a webinar series, Anatomy for ICD-10 Coders; and writes several articles each year on various aspects of coding now and into the ICD-10 transition.

In addition, she is the author of textbooks including Insurance Coding & Electronic Claims for the Medical Office, The Complete Procedure Coding Book, The Complete Diagnosis Coding Book, You Code It! A Case Studies Workbook, Essentials of Health Care Compliance, and Foundations of Health Care Administration.

Safian completed her PhD in healthcare administration in June 2011. In addition, she holds a graduate certificate in healthcare management as well as a master's degree in organizational management.

Safian is in her third year as the Chair of the Continuing Education committee for the Florida Health Information Management Association (FHIMA). In the past, she has served on several committees and practice councils on the national, state, and local levels of the American Health Information Management Association (AHIMA).





# A Brief Review of ICD-10-CM Basics

One of the major advantages of ICD-10-CM implementation is the ability to report diseases and conditions more accurately, leading to more data and ultimately better patient care. Due to the expanded code set, understanding the way the human body operates is more important than ever, since coders will have so many more specific options from which to choose.

Before looking at each body system and the specific coding guidelines to follow in ICD-10-CM, coders should review the basic conventions of the system and how they differ from ICD-9-CM conventions.

## **Placeholders**

ICD-9-CM codes are three to five characters in length. ICD-10-CM codes may consist of up to seven characters. Some ICD-10-CM codes may have a seventh but no fifth and/or sixth character. Assigning a valid code will require using an X as a fifth- and/or sixth-character placeholder.

For example, ICD-10-CM code T50.1X1A denotes an accidental poisoning of loop (high-ceiling) diuretics, initial encounter. The X fills in for the fifth character, ensuring the sixth and seventh characters will fall into their correct positions. ICD-10-CM code T82.6XXA denotes infection and inflammatory reaction due to cardiac valve prosthesis, initial encounter, illustrating placeholders for both the fifth and sixth characters, enabling the seventh character to be placed correctly.

The position of the X within an ICD-10-CM code is important. An X as the first character denotes a code series within ICD-10-CM (i.e., X00 to X99) in Chapter 20, External Causes of Morbidity, but an X as the fifth and/or sixth character is a placeholder.

## Seventh characters

Some ICD-10-CM codes require a seventh-character to complete the code. The seventh character options will change, depending upon the chapter and need for additional detail. The most frequently available options are:

- A, initial encounter. Report this character when a condition is actively treated during the initial encounter (e.g., surgical treatment, ED encounter, evaluation by new physician[s]).
- D, subsequent encounter. Report this character for encounters after initial treatment has been provided but while the patient continues to receive care during the healing or recovery phase (e.g., cast change or removal, follow-up visits). Note that in ICD-9-CM, coders would usually report these situations with aftercare codes (V codes).
- S, sequela (late effect). Report this character for complications or conditions that arise as a direct result of an acute condition.

Some code categories, such as those for fractures, include other seventh-character options. Most, though not all, fracture categories, identify the following options:

- Initial vs. subsequent vs. sequela
- Closed vs. open
- Absence or presence of complications during healing:
  - Routine healing
  - Delayed healing
  - Nonunion
  - Malunion

Specifically, these seventh-character extensions are associated with most fractures:

- A, initial encounter for closed fracture
- B, initial encounter for open fracture
- D, subsequent encounter for fracture with routine healing
- G, subsequent encounter for fracture with delayed healing
- K, subsequent encounter for fracture with nonunion
- P, subsequent encounter for fracture with malunion
- S, sequela

For example, ICD-10-CM code S62.241B denotes a displaced fracture of the shaft of the first metacarpal bone, initial encounter.

Generally, coders must be aware of ICD-10-CM codes that require seventh characters. When a code requires one, coders must ensure that physician documentation supports assignment of a particular character.

## **Laterality**

Laterality (i.e., codes that specify whether a condition affects the left or right side) is a new concept specific to ICD-10-CM. For example, report ICD-10-CM code S62.611D to denote a displaced fracture of the proximal phalanx of the left index finger, subsequent encounter, with routine healing. The identification of the left index finger is included within this code description.

## **Excludes notes**

ICD-9-CM incorporates only one type of excludes note, which, confusingly, can mean two different things. ICD-10-CM, on the other hand, incorporates two types.

An Excludes1 code should never be used along with the code above the Excludes1 note. For example, ICD-10-CM code S60.371A (other superficial bite of right thumb, initial encounter) should never be reported along with S61.051A (open bite of right thumb without damage to nail, initial encounter) at the same time. The coder assigns only one code to identify the most severe description (open) of the wound.

An Excludes2 condition is not part of the condition above the Excludes2 note, but a coder may assign an additional code (if applicable). For example, assign ICD-10-CM S60.221A to denote a contusion of the right hand. This code excludes contusion of the fingers (S60.0-, S60.1-); however, a coder may report both codes when applicable. This means a patient can have a contused hand without having contused fingers; however, if the patient's fingers are also contused, two codes are necessary to identify both conditions.

These excludes notes may be familiar concepts, but ICD-9-CM has never explicitly distinguished between the two. Distinguishing them in ICD-10-CM may make it easier for coders to determine which exclusion applies to a specific scenario.

## **Default codes**

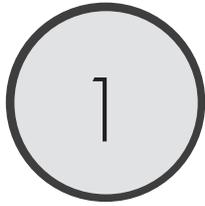
Like ICD-9-CM, ICD-10-CM includes default codes. These codes, listed next to the main term in the ICD10-CM Alphabetic Index, represent either the most common term associated with a main term or the unspecified code for that condition. Coders should assign them when further specificity or documentation is unavailable. However, before doing so, the coder must query the physician to obtain more detailed documentation to avoid this.

For example, in ICD-10-CM, the term “otitis” defaults to the most commonly associated term of “otitis media” (H66.90-H66.93), whereas the term “stroke” defaults to code I63.9 (cerebral infarction, unspecified), the unspecified option.

## **Dashes**

The dash in ICD-10-CM indicates that the term referenced in the Alphabetic Index needs additional characters that a coder must find in the Tabular Index. For example, ICD-10-CM code M25.07- denotes “hemarthrosis, ankle.” An additional character is necessary to identify laterality (i.e., right, left, or unspecified) and the specific site (i.e., ankle or foot). Of course, coders are forbidden to report a code without referencing the Tabular List and all the symbols and notations within.

Note that a dash is not used in the Alphabetic Index when the seventh-character extension is required. For example, in the Alphabetic Index, “Burn, finger, left, first degree” denotes category T23.122 (no dash), yet this code requires a seventh character to be a valid code.



# Integumentary System

As the largest organ in the body, the skin is subject to a number of diseases and conditions. ICD-10-CM will allow coders to report these conditions with a much higher degree of specificity.

Although the skin is the largest part of the integumentary system, it also includes accessory structures, such as:

- Nails (fingers and toes)
- Hair
- Sensory receptors
- Sebaceous glands
- Sweat glands

The skin has three layers. They are as follows:

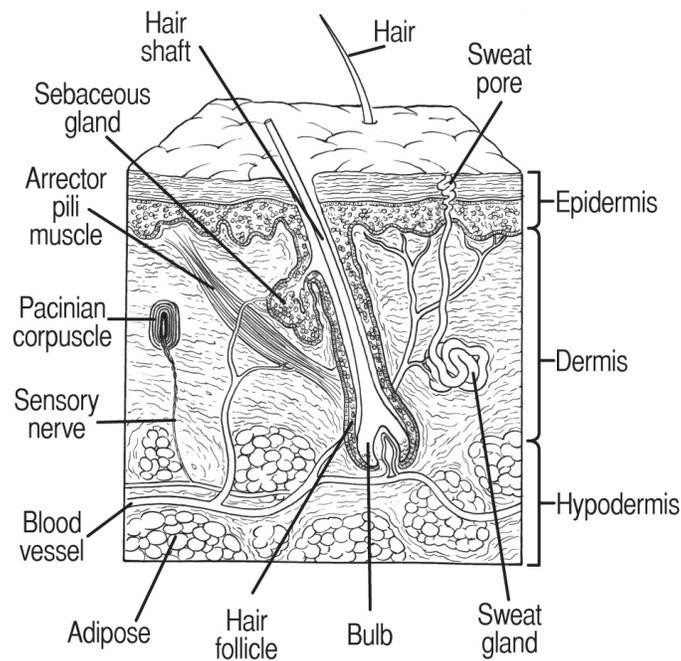
- The epidermis, the top layer of skin, is a waterproof barrier to infection, consisting mostly of keratinocytes. Sebaceous glands, which produce sebum, provide the waterproofing effect. This layer also contains melanocytes, which produce melanin and are responsible for the skin's tone.
- The dermis, located beneath the epidermis, contains connective tissue, hair follicles, and sweat glands, cushioning the body from stress and strain.
- The hypodermis is the deeper subcutaneous tissue made of fat (adipose) and connective tissue, which contains blood vessels and nerves. These blood vessels continue upward into the dermis. This layer is also referred to as the subcutaneous layer or the adipose layer.

In addition to protecting the visceral aspect of the body (the internal organs and anatomical parts) from infection, the skin's eccrine, or sweat, glands helps to regulate body temperature. Apocrine glands, which are mostly concentrated in axillae (armpit), anal, and genital regions,

also help to regulate body temperature and secrete compounds that create body odor. The nerves of the skin allow for sensations of touch and temperature, thereby called the sensory nerves.

Hair is made from pigmented hard keratin. It grows from a hair follicle, which is located in the dermis and subcutaneous tissue. Nails, on the toes and fingers, are also made of the protein keratin. The cuticle, or eponychium, is the thick layer of tissue that covers the nail where it joins the skin. Beneath the cuticle, the white part of the nail matrix, known as the lunula, is visible.

Figure 1.1 | Skin and Subcutaneous Layers



## Coding for skin diseases

The codes for diseases of the skin and subcutaneous tissue are located in ICD-10-CM Chapter 12 (L00 to L99).

Instructional notes underneath many subcategories in this chapter contain direction for when to report additional codes, such as infectious agents or causative organisms.

For example, code category L02 (cutaneous abscess, furuncle, and carbuncle) includes a notation to use an additional code from B95–B96 to identify the infectious agent.

Subcategory L02.2 (cutaneous abscess, furuncle, and carbuncle of trunk) lists the following Excludes1 notes:

- Non-newborn omphalitis (L08.82)
- Omphalitis of newborn (P38.-)

In ICD-10-CM, an Excludes1 note indicates that the code identified should never be reported with codes in the category it appears under. Excludes1 notations list mutually exclusive diagnoses.

This subcategory also includes the following Excludes2 notes:

- Abscess of breast (N61)
- Abscess of buttocks (L02.3)
- Abscess of female external genital organs (N76.4)
- Abscess of male external genital organs (N48.2, N49.-)
- Abscess of hip (L02.4)

An Excludes2 note is used in ICD-10-CM to identify that the noted condition is not part of the above-given code but could be reported at the same time.

Coders will also find much more anatomical and clinical detail in the codes in this section than in ICD-9-CM. For example, ICD-9-CM uses one code to identify carbuncles and furuncles of the trunk (680.2). ICD-10-CM has separate subcategories for furuncles (L02.22-) and carbuncles (L02.23-) of the trunk, as well as cutaneous abscesses (L02.21-). Each category is further defined by the specific anatomic site on the trunk identified with a sixth character:

- 1, abdominal wall
- 2, back (any part, except buttock)
- 3, chest wall
- 4, groin
- 5, perineum
- 6, umbilicus
- 9, unspecified

Other body sections also include more specific options, including bilaterality. Physicians will have to document this specificity in order for coders to determine the most accurate code from this section.

## **Coding pressure ulcers**

Codes for pressure ulcers are located in code category L89 in ICD-10-CM. The subsection includes a notation to first code any associated gangrene (I96).

ICD-10-CM still uses the four stages of pressure ulcers defined by the National Pressure Ulcer Advisory Panel (NPUAP):

- Stage 1, nonblanchable erythema
- Stage 2, partial thickness
- Stage 3, full-thickness skin loss
- Stage 4, full-thickness tissue loss

Each combination code for pressure ulcers also contains characters to report the anatomical site and laterality, instead of reporting separate codes.

For example, to report a stage 1 pressure ulcer of the right upper back in ICD-9-CM, two codes are required:

- 707.02, pressure ulcer, upper back
- 707.21, pressure ulcer stage 1

Coders will need only one code in ICD-10-CM: L89.111 (pressure ulcer of right upper back, stage 1).

ICD-10-CM also includes a code category for pressure ulcers that span multiple body parts, L89.4- (contiguous site of back, buttock, and hip).

If the provider does not document the specific stage, coders will have to look in the documentation for language that matches the NPUAP definitions in order to code it to that stage. The documentation can be from a physician or other nonphysician practitioner, such as a wound care nurse.

For example, if provider documentation includes “Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough,” coders would report a stage 2 pressure ulcer.

An ulcer could also be reported as unstageable. This is when there is full-thickness tissue loss, in which the actual depth of the ulcer is completely obscured by slough (yellow, tan, gray, green, or brown) and/or eschar (tan, brown, or black) in the wound bed.

If a clinician cannot stage an ulcer at a given time because the bottom cannot be visualized, coders can report it as unstageable. For example, if the patient has a pressure ulcer of the left elbow and a provider documents he or she can't determine the stage, coders would report L89.020 (pressure ulcer of left elbow, unstageable).

Unstageable and unspecified are not the same, however. If the clinician simply fails to document a stage, a coder would report L89.029 (pressure ulcer of left elbow, unspecified stage). However, proper protocol is to never report an unspecified code. Instead, the provider should be queried to have the details added to the documentation.

### **Coding nonpressure ulcers**

Nonpressure chronic ulcer codes, located in code category L97 in ICD-10-CM, include a category-wide “Code First” notation with a long list of potential associated conditions:

- Any associated gangrene (I96)
- Atherosclerosis of the lower extremities (I70.23-, I70.24-, I70.33-, I70.34-, I70.43-, I70.44-, I70.53-, I70.54-, I70.63-, I70.64-, I70.73-, I70.74-)
- Chronic venous hypertension (I87.31-, I87.33-)
- Diabetic ulcers (E08.621, E08.622, E09.621, E09.622, E10.621, E10.622, E11.621, E11.622, E13.621, E13.622)
- Postphlebotic syndrome (I87.01-, I87.03-)
- Postthrombotic syndrome (I87.01-, I87.03-)
- Varicose ulcer (I83.0-, I83.2-)

Similar to reporting pressure ulcers, coders will need to identify the anatomical site and laterality, as well as one of four stages of severity. Severity is represented by the sixth character in the code.

The severity levels for nonpressure ulcers in ICD-10-CM are:

- Limited to breakdown of skin (sixth character 1)
- With fat layer exposed (2)
- With necrosis of muscle (3)
- With necrosis of bone (4)

For example, a provider documents the following: Patient is a type 2 diabetic who presents with a type 2 diabetic nonpressure ulcer of the right lower leg with the fat layer exposed.

The correct codes to report in ICD-10-CM are:

- E11.622, type 2 diabetes mellitus with other skin ulcer
- L97.812, nonpressure chronic ulcer of other part of right lower leg with fat layer exposed

# Guide to Anatomy and Physiology for ICD-10-CM

Learning new coding conventions and guidelines isn't the only training coders are likely to need for ICD-10-CM. The new code set may require coders to refresh or learn aspects of anatomy that were not relevant for ICD-9CM coding. ICD-10-CM adds laterality and the ability to capture much more detail in many conditions and disease processes.

*JustCoding's Guide to Anatomy and Physiology for ICD-10-CM* will aid coders just learning how to code in ICD-10-CM, and will serve as a quick reference guide for all coders after implementation. Readers will learn about the relevant anatomical details, as well as gain information on information providers will need to document to choose the most accurate code. Dozens of detailed illustrations are included to highlight important anatomical elements for coders to review, including the skeletal and muscular systems and specific organs and structures.

From the trusted team at JustCoding and reviewed by coding expert and teacher Shelley C. Safian, PhD, CCS-P, CPC-H, CPC-I, AHIMA-approved ICD-10-CM/PCStrainer, the book serves as a quick reference tool for coders to quickly access the information.