CENGAGE

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3-2-1 CODE IT!

Michelle A. Green
MPS, RHIA, FAHIMA, CPC

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***3-2-1 Code It!*: 2022, 10th edition**
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Preface

Introduction

Accurate coding is crucial to the successful operation of any health care facility or provider's office because reported codes determine the amount of reimbursement received. The annual (and sometimes more frequent) revision of coding guidelines and payer requirements serve to challenge coders. Those responsible for assigning and reporting codes in any health care setting require thorough instruction in the use of the ICD-10-CM, ICD-10-PCS, CPT, and HCPCS Level II coding systems. Students who are completing formal coursework as part of an academic program and experienced coders who are already employed in the health care field will find that *3-2-1 Code It!* provides the required information in a clear and comprehensive manner.

Due to the comprehensive nature of the *3-2-1 Code It!* textbook, instructors may choose to cover its content in more than one course.

- Chapters 1 through 5 could be taught in a course that includes outpatient and physician office ICD-10-CM coding.
- Chapters 6 and 7 would be taught for an inpatient hospital coding course, which covers ICD-10-PCS coding and inpatient ICD-10-CM/PCS coding guidelines (in addition to Chapters 1 through 5, ICD-10-CM coding).
- Chapters 8 through 19 could be taught in a CPT and HCPCS Level II coding course.

Instructors for medical assistant (MA) and medical office administration (MOA) programs may choose to cover the following chapters only in their coding course(s):

- Chapters 2 through 5, and 8 in an ICD-10-CM and HCPCS Level II coding course (because ICD-10-PCS and inpatient ICD-10-CM/PCS coding guidelines are not used for outpatient and physician office coding, and ICD-10-CM/PCS inpatient hospital coding is covered in Chapters 6 and 7)
- Chapters 9 through 19 in a CPT coding course

Chapter 20 could be included as required reading in a coding course or for an insurance and reimbursement course, either as an introductory or summary chapter.

NOTE:

Your academic program's community of interest (e.g., employers of graduates) will determine which sections of Chapters 12 through 16 (CPT Surgery) should be covered in your CPT coding course. If your graduates obtain employment assigning and submitting CPT Anesthesia codes, your course should include Chapter 11. If your graduates do not assign radiology or pathology/laboratory codes during their employment, Chapters 17 and 18 can be excluded from your CPT coding course.

The *3-2-1 Code It!* textbook requires users to have access to paper-based coding manuals (ICD-10-CM, ICD-10-PCS, HCPCS Level II, and CPT) because they are used as references when coding rules are explained and for completing exercises and reviews in each chapter.

The intended use of *3-2-1 Code It!* is for:

- Academic programs in coding and reimbursement, health information management, medical assisting, medical office administration, and so on.
- In-service education programs in health care facilities (e.g., physicians' offices, hospitals, nursing facilities, home health agencies, hospices), health insurance companies, quality improvement organizations, and so on
- Health care professionals who need a comprehensive coding reference to assist them in accurately assigning codes

It is recommended that students complete the following course work before they begin and/or during the same time they are learning concepts presented in *3-2-1 Code It!*:

- Essentials of health information management
- Medical terminology
- Anatomy and physiology
- Essentials of pharmacology
- Human diseases/pathophysiology

The text was designed and revised to support core learning objectives for the medical coder. Chapter objectives, content, and assessments are all aligned to ensure students learn and practice the concepts and skills they'll need on the job. Student learning is supported through chapter outlines and measurable objectives identified at the beginning of each chapter, as well as chapter headings and assessments that map to the chapter outlines and objectives.

Special attention was focused on selecting appropriate Bloom's taxonomy levels for each chapter along with mapping assessment items (e.g., exercises, exam questions) to each objective.

Organization of This Textbook

This textbook is organized into 20 chapters.

- Chapter 1 includes an overview of coding systems used to report inpatient and outpatient diagnoses and procedures and services to health plans. It also focuses on coding career opportunities in health care, the importance of joining professional organizations and obtaining coding credentials, the impact of networking with other coding professionals, and the development of opportunities for career advancement. Coding manuals, encoders, and computer-assisted coding (CAC) are also covered.
- Chapter 2 covers ICD-10-CM coding concepts, an overview about coding guidelines, ICD-10-CM general coding guidelines, ICD-10-CM coding conventions, and it provides coding practice. Chapters 3 and 4 cover ICD-10-CM chapter-specific coding guidelines and provide coding practice. Chapter 5 covers outpatient ICD-10-CM coding concepts and official outpatient guidelines, including assigning codes in the physician office and hospital emergency and outpatient department health care settings. (ICD-10-CM chapters are sequenced before HCPCS Level II and CPT chapters in this textbook because diagnosis codes are reported to justify the medical necessity of procedures and/or services provided.)
- Chapter 6 covers ICD-10-PCS coding concepts, general coding guidelines, coding conventions, and section coding guidelines, and it provides coding practice. Chapter 7 covers inpatient hospital coding concepts, which apply to acute care hospitals (and is not typically covered by academic programs that focus on outpatient and physician coding); this chapter requires students to assign ICD-10-CM and ICD-10-PCS codes to inpatient hospital diagnoses and procedures, respectively.
- Chapter 8 covers the HCPCS Level II national coding system, which was developed by the Centers for Medicare & Medicaid Services.

- Chapters 9 through 19 cover CPT coding concepts. Each CPT section has its own chapter, except for the Surgery section, which requires five separate chapters.
- Chapter 20 contains a detailed discussion of insurance and reimbursement concepts. (For comprehensive coverage of third-party payers and reimbursement methodologies, refer to Cengage's *Understanding Health Insurance: A Guide to Billing and Reimbursement*, by Michelle A. Green.)

Features of the Textbook

Each textbook chapter contains the following elements:

- List of chapter headings
- Chapter learning objectives
- Key terms
- Introduction
- Exercises
- Summary
- Internet links
- Review

Textbook features include

- Learning objectives and key terms located at the beginning of each chapter to help organize the material
- Boldfaced key terms throughout each chapter to assist students in learning the technical vocabulary associated with coding systems
- Coding tips and notes that highlight important concepts presented in each chapter
- Exercises after each chapter section that reinforce content presented
- Multiple choice and coding practice reviews that allow for mastery of coding concepts

New to This Edition

Chapters 2–7 have been reorganized to allow educators to more easily decide content to be covered in their courses. For example, educators who teach medical assistant and medical office administration students may choose to cover Chapters 1–5, and educators who teach health information management students may choose to cover Chapters 1–7.

- In response to reviewer feedback, Part II of the textbook was revised to remove ICD-10-PCS content and resequence all ICD-10-CM content so it is located at the beginning of the textbook. This resulted in a name change from *Part II: ICD-10-CM and ICD-10-PCS Coding Systems* to *Part II: ICD-10-CM Coding System*. The titles of Chapters 2 through 5 underwent name changes as a result.
  - Chapter 2: Introduction to ICD-10-CM Coding and Conventions
  - Chapter 3: Chapter-Specific Coding Guidelines: ICD-10-CM Chapters 1–10
  - Chapter 4: Chapter-Specific Coding Guidelines: ICD-10-CM Chapters 11–22
- The new *Part III: ICD-10-CM Outpatient and Physician Office Coding* contains Chapter 5: ICD-10-CM Outpatient and Physician Office Coding (relocating it from Chapter 7 in the previous edition).
- The new *Part IV: ICD-10-PCS Coding System* was created, and it contains Chapter 6: Introduction to ICD-10-PCS Coding, Conventions, and Section Coding Guidelines.

- The new *Part V: ICD-10-CM and ICD-10-PCS Inpatient Hospital Coding* contains Chapter 7: ICD-10-CM and ICD-10-PCS Inpatient Hospital Coding (relocating it from Chapter 5 in the previous edition).
- The textbook and its ancillaries have been updated to include the latest ICD-10-CM, ICD-10-PCS, CPT, and HCPCS Level II code sets, conventions, and guidelines.
- Textbook coding assignments, examples, exercises, and reviews have been updated to include the most recent ICD-10-CM, ICD-10-PCS, CPT, and HCPCS Level II codes.
- Answer keys have been updated in the *Solution and Answer Guide to Accompany 3-2-1 Code It!* The guide and other instructor resources for this product are available online. Sign up or sign in at www.cengage.com to search for this product and its online resources.

NOTE:

Chapter exercises and reviews were extensively revised, and the *Solution and Answer Guide* now contains detailed analysis about correct answers, including code paths.

- ICD-10-CM code answers include the code path from index to tabular list; coding conventions, general coding guidelines, and chapter-specific guidelines are included to clarify code answers.
- HCPCS Level II codes include the code path from index (when applicable), along with the section name where the code is located.
- CPT codes include the code path from index to the applicable section, subsection, category (or heading), and subcategory (or subheading), along with clarification about notes that apply to code answers.

Chapter-Specific Updates

- Chapter 1 contains new content about single-path coding; content about coding manuals and encoders was relocated from Chapter 2 to this chapter.
- Chapter 2 is newly titled *Introduction to ICD-10-CM Coding and Conventions*, and it was revised to update ICD-10-CM content, include ICD-10-CM coding conventions, and remove ICD-10-PCS coding. Examples, exercises, and the chapter review were also updated in the chapter.
- Chapter 3 is newly titled *Chapter-Specific Coding Guidelines: ICD-10-CM Chapters 1–10*, and it contains updated chapter-specific coding guidelines for ICD-10-CM Chapters 1 through 10, and Chapter 4 is newly titled *Chapter-Specific Coding Guidelines: ICD-10-CM Chapters 11–22*, and it contains updated chapter-specific coding guidelines for ICD-10-CM Chapters 11 through 22. Content, examples, exercises, and chapter reviews were also updated in both chapters.
- Chapter 5 is newly titled ICD-10-CM Outpatient and Physician Office Coding, and it contains updated content about ICD-10-CM outpatient (and physician office) diagnosis coding guidelines. Content, examples, exercises, and the chapter review have also been updated.
- Chapter 6 is newly titled *Introduction to ICD-10-PCS Coding and Conventions*, and it was entirely rewritten to contain ICD-10-PCS coding concepts, conventions, and section coding guidelines. Content, examples, exercises, and chapter reviews were also updated; they include many more procedure statements for coding practice.
- Chapter 7 is newly titled *ICD-10-CM and ICD-10-PCS Inpatient Hospital Coding*, and it contains content about inpatient ICD-10-CM diagnosis coding guidelines and inpatient ICD-10-PCS procedure coding guidelines. Content, examples, exercises, and chapter reviews were also updated.
- Chapter 8 contains updated content about HCPCS Level II coding. Examples, exercises, and the chapter review have also been updated.
- Chapter 9 contains updated introductory content about CPT coding. Examples, exercises, and the chapter review have also been updated.

- Chapter 10 contains updated content about CPT's evaluation and management (E/M) section, including an introduction about proposed CPT 2023 changes for selecting E/M codes related to remaining subsections (as a result of implemented changes for selecting CPT 2021 Office or Other Outpatient Services codes.) Examples, exercises, and the chapter review have also been updated.
- Chapter 11 contains updated content about CPT's Anesthesia section. Examples, exercises, and the chapter review have also been updated.
- Chapters 12 through 16 contain updated content about CPT's Surgery section. Examples, exercises, and the chapter review have also been updated.
- Chapter 17 contains updated content about CPT's Radiology section. Examples, exercises, and the chapter review have also been updated.
- Chapter 18 contains updated content about CPT's Pathology and Laboratory section. Examples, exercises, and the chapter review have also been updated.
- Chapter 19 contains updated content about CPT's Medicine section. Examples, exercises, and the chapter review have also been updated.
- Chapter 20 contains updated content about insurance and reimbursement, specifically the End-Stage Renal Disease Prospective Payment System (ESRD PPS). Examples, exercises, and the chapter review have also been updated.

Resources for the Instructor

Additional instructor resources are available online. Instructor assets include an Instructor's Manual, Educator's Guide, Solution and Answer Guide, PowerPoint® slides, a test bank powered by Cognero®, and a transition guide.

Sign up or sign in at www.cengage.com to search for and access this product and its online resources.

Resources for the Student

Additional student resources for this product are available online, and include

- Revisions to textbook due to coding changes as they become available
- Tutorials for how to code patient records

Sign up or sign in at www.cengage.com to search for and access the product and its online resources.

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A Note About CPT Coding Manual Editions

Every attempt is made to make the material within this textbook and its ancillary products (e.g., Solution and Answer Guide, Instructor's Manual) as current as possible by updating to CPT 2022 just prior to publication.

About the Author

Michelle A. Green, MPS, RHIA, FAHIMA, CPC, is an educational consultant for health information management academic programs, which involves mentoring program directors as they pursue CAHIIM accreditation, building new online courses (e.g., Blackboard, Moodle, TopClass), and reviewing existing online course content. She taught traditional classroom-based courses at Alfred State College from 1984 through 2000, when she transitioned all of the health information management and coding courses to an Internet-based format and continued teaching full-time online until 2016. Upon relocating to Syracuse, New York, she began teaching for the health information technology program at MVCC, Utica, New York in 2017. Prior to 1984, she worked as a director of health information management at two acute care hospitals in the Tampa Bay, Florida, area. Both positions required her to assign codes to inpatient cases. Upon becoming employed as a college professor, she routinely spent the semester breaks coding for a number of health care facilities so that she could further develop her inpatient and outpatient coding skills.

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- *ICD-10-CM Professional*
- *ICD-10-PCS Professional*

Michelle A. Green, MPS, RHIA, FAHIMA, CPC

Feedback

Contact the author at michelle.ann.green@gmail.com with questions, suggestions, or comments about the text or its supplements. Please realize that the publisher (www.cengage.com) authorizes the release of the Solution and Answer Guide to educators only.

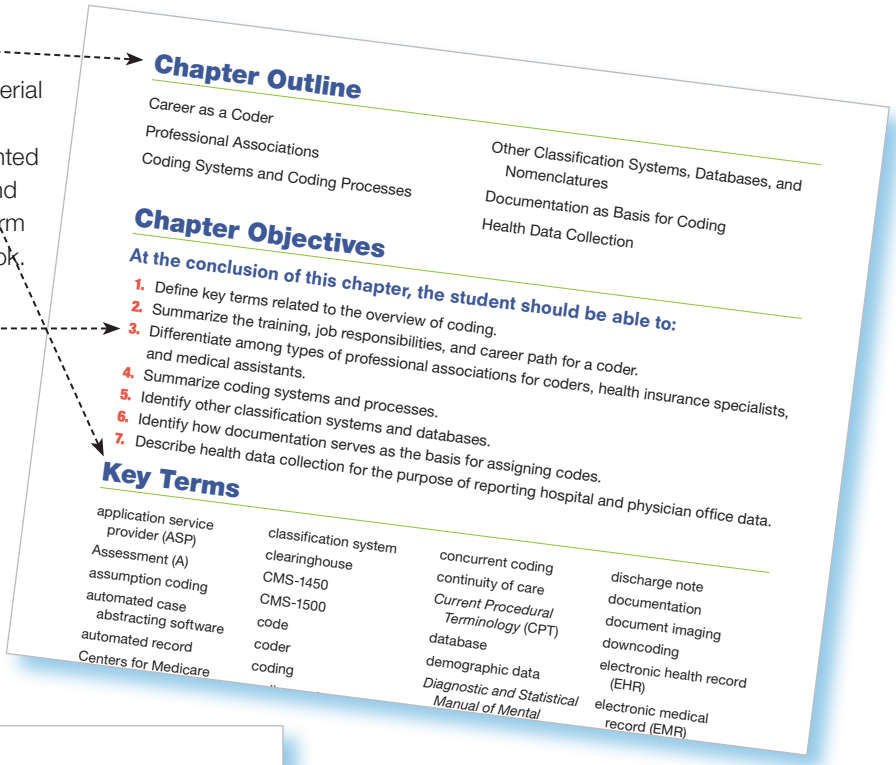
How to Use This Text

Chapter Outline and Key Terms

The **Chapter Outline** organizes the chapter material at a glance. The **Key Terms** list represents new vocabulary in each chapter. Each term is highlighted in color in the chapter, where it is also defined and used in context. A complete definition of each term appears in the Glossary at the end of the textbook.

Objectives

The **Objectives** list the outcomes expected of the learner after a careful study of the chapter. Read the objectives before reading the chapter content. When you complete the chapter, read the objectives again to see if you can say for each one, "Yes, I know that." If you cannot say this about an objective, go back to the appropriate content and reread. These outcomes are critical to a successful career as a coder.



Chapter Outline

Career as a Coder
Professional Associations
Coding Systems and Coding Processes
Other Classification Systems, Databases, and Nomenclatures
Documentation as Basis for Coding
Health Data Collection

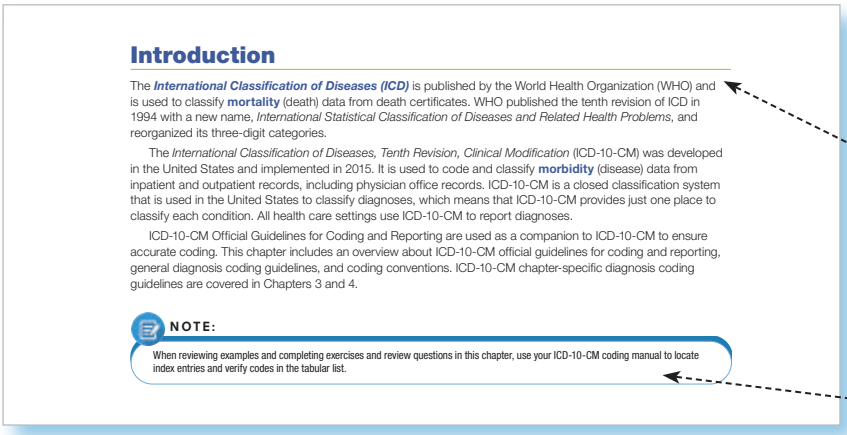
Chapter Objectives

At the conclusion of this chapter, the student should be able to:

1. Define key terms related to the overview of coding.
2. Summarize the training, job responsibilities, and career path for a coder.
3. Differentiate among types of professional associations for coders, health insurance specialists, and medical assistants.
4. Summarize coding systems and processes.
5. Identify other classification systems and databases.
6. Identify how documentation serves as the basis for assigning codes.
7. Describe health data collection for the purpose of reporting hospital and physician office data.

Key Terms

application service provider (ASP)
Assessment (A)
assumption coding
automated case abstracting software
automated record
Centers for Medicare
classification system
clearinghouse
CMS-1450
CMS-1500
code
coder
coding
concurrent coding
continuity of care
Current Procedural Terminology (CPT)
database
demographic data
Diagnostic and Statistical Manual of Mental
discharge note
documentation
document imaging
downcoding
electronic health record (EHR)
electronic medical record (EMR)



Introduction

The ***International Classification of Diseases (ICD)*** is published by the World Health Organization (WHO) and is used to classify **mortality** (death) data from death certificates. WHO published the tenth revision of ICD in 1994 with a new name, *International Statistical Classification of Diseases and Related Health Problems*, and reorganized its three-digit categories.

The *International Classification of Diseases, Tenth Revision, Clinical Modification* (ICD-10-CM) was developed in the United States and implemented in 2015. It is used to code and classify **morbidity** (disease) data from inpatient and outpatient records, including physician office records. ICD-10-CM is a closed classification system that is used in the United States to classify diagnoses, which means that ICD-10-CM provides just one place to classify each condition. All health care settings use ICD-10-CM to report diagnoses.

ICD-10-CM Official Guidelines for Coding and Reporting are used as a companion to ICD-10-CM to ensure accurate coding. This chapter includes an overview about ICD-10-CM official guidelines for coding and reporting, general diagnosis coding guidelines, and coding conventions. ICD-10-CM chapter-specific diagnosis coding guidelines are covered in Chapters 3 and 4.

NOTE:

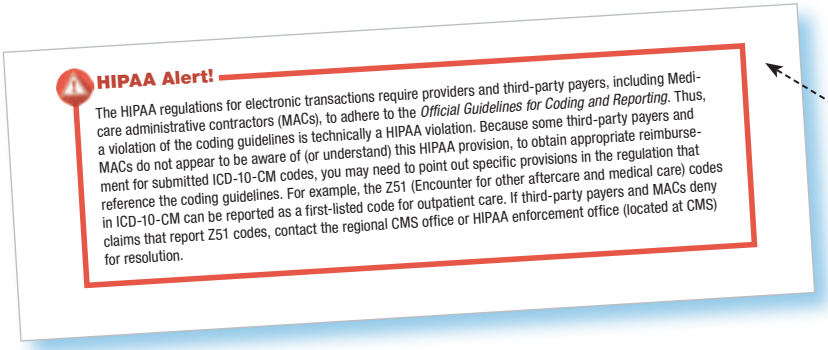
When reviewing examples and completing exercises and review questions in this chapter, use your ICD-10-CM coding manual to locate index entries and verify codes in the tabular list.

Introduction

The **Introduction** provides a brief overview about major topics covered in the chapter. The introduction (and the objectives) provides a framework for your study of the content.

Notes

Notes appear throughout the text and serve to bring important points to your attention. The notes clarify content, refer you to reference material, provide more background for selected topics, or emphasize exceptions to rules.



HIPAA Alert!

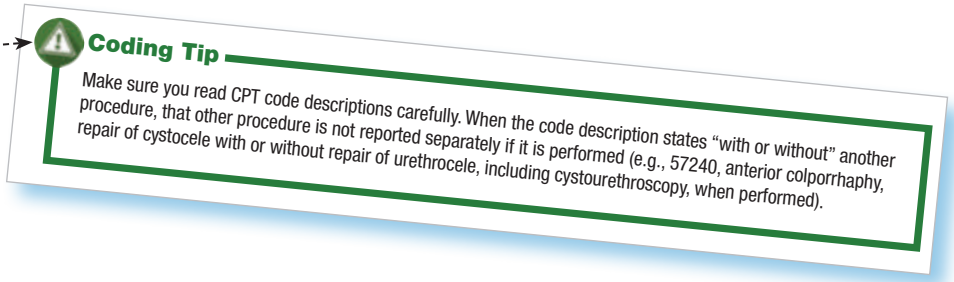
The HIPAA regulations for electronic transactions require providers and third-party payers, including Medicare administrative contractors (MACs), to adhere to the *Official Guidelines for Coding and Reporting*. Thus, a violation of the coding guidelines is technically a HIPAA violation. Because some third-party payers and MACs do not appear to be aware of (or understand) this HIPAA provision, to obtain appropriate reimbursement for submitted ICD-10-CM codes, you may need to point out specific provisions in the regulation that reference the coding guidelines. For example, the Z51 (Encounter for other aftercare and medical care) codes in ICD-10-CM can be reported as a first-listed code for outpatient care. If third-party payers and MACs deny claims that report Z51 codes, contact the regional CMS office or HIPAA enforcement office (located at CMS) for resolution.

HIPAA Alerts

The **HIPAA Alert** feature highlights issues related to the privacy and security of personal health information.

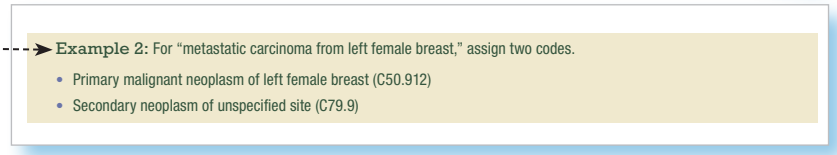
Coding Tips

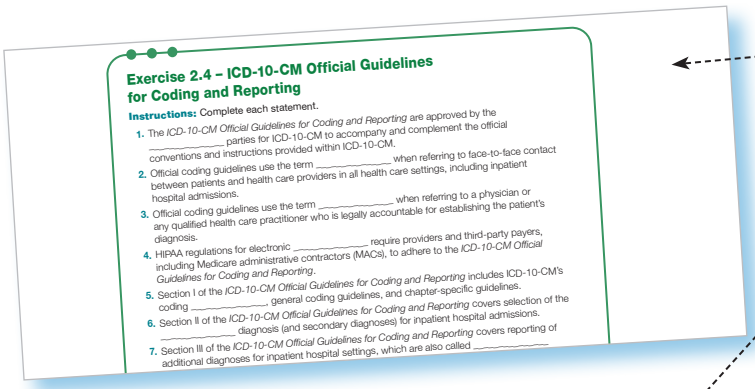
The **Coding Tips** feature provides recommendations and hints for selecting codes and for the correct use of the coding manuals.



Examples

Examples appear throughout the text to promote understanding of presented concepts.



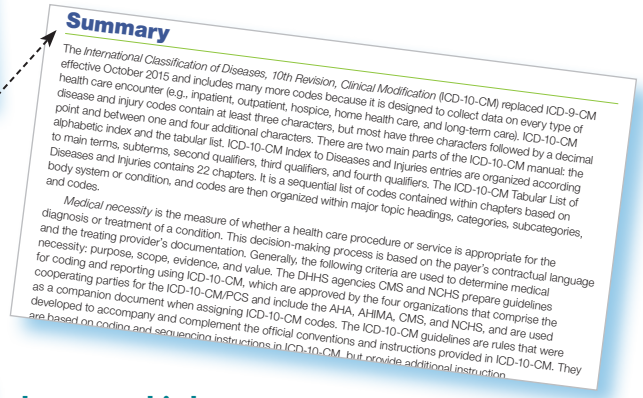


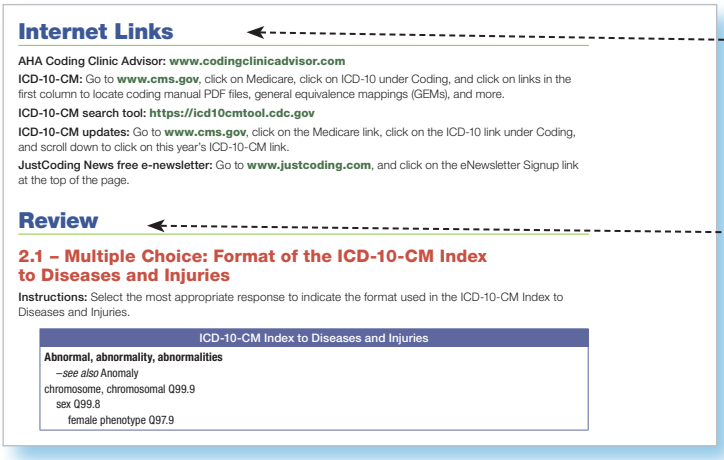
Exercises

Exercises reinforce chapter content.

Summary

The **Summary** at the end of each chapter recaps the key points of the chapter. The summary also serves as a review aid when preparing for tests.





Internet Links

Internet Links are provided to encourage you to expand your knowledge at various state and federal government agency, commercial, and organization sites.

Review

Each chapter **Review** includes multiple-choice questions and coding practice cases that will test your understanding of chapter content and critical thinking ability.

Notes

Part

I

Coding Overview

Chapter 1

Overview of Coding

Chapter Outline

Career as a Coder

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Coding Systems and Coding Processes

Other Classification Systems, Databases, and Nomenclatures

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6. Identify how documentation serves as the basis for assigning codes.
7. Describe health data collection for the purpose of reporting hospital and physician office data.

Key Terms

application service provider (ASP)

Assessment (A)

assumption coding

automated case abstracting software

automated record

Centers for Medicare & Medicaid Services (CMS)

claims examiner

classification system

clearinghouse

CMS-1450

CMS-1500

code

coder

coding

coding system

computer-assisted coding (CAC)

concurrent coding

continuity of care

Current Procedural Terminology (CPT)

database

demographic data

Diagnostic and Statistical Manual of Mental Disorders (DSM)

diagnostic/management plan

discharge note

documentation

document imaging

downcoding

electronic health record (EHR)

electronic medical record (EMR)

encoder

encoding

evidence-based coding
evidence-verification coding
HCPCS Level II
HCPCS national codes
health care clearinghouse
Healthcare Common Procedure Coding System (HCPCS)
health care provider
health data collection
Health Insurance Portability and Accountability Act of 1996 (HIPAA)
health insurance specialist
health plan
hospitalist
hybrid record
indexed
initial plan
integrated record
International Classification of Diseases for Oncology, Third Edition (ICD-O-3)
International Classification of Diseases, 11th Revision (ICD-11)
International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM)
International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM)
International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System (ICD-10-CM/PCS)
International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS)
International Classification of Functioning, Disability and Health (ICF)
internship
internship supervisor
jamming
listserv
Logical Observation Identifiers Names and Codes (LOINC®)
manual record
medical assistant
medical coding process
medical management software
medical necessity
medical nomenclature
medical record
Medicare Prescription Drug, Improvement, and Modernization Act (MMA)
National Drug Codes (NDC)
Objective (O)
online discussion board
overcoding
patient education plan
patient record
physician query process
Plan (P)
problem list
problem-oriented record (POR)
progress notes
provider
resident physician
RxNorm
scanner
sectionalized record
single-path coding
source-oriented record (SOR)
specialty coders
Subjective (S)
Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT)
teaching hospital
teaching physician
therapeutic plan
third-party administrator (TPA)
third-party payer
transfer note
UB-04
unbundling
Unified Medical Language System (UMLS)
upcoding

Introduction

This chapter focuses on coding career opportunities in health care, the importance of joining professional associations and obtaining coding credentials, the impact of networking with other coding professionals, and the development of opportunities for career advancement. It also provides a coding overview that explains clinical documentation improvement, the physician query process, and the use of computer-assisted coding (CAC) and encoder software. Documentation as a basis for coding includes patient record formats and the importance of establishing medical necessity. Health data collection covers the reporting of hospital and physician office data using abstracting software, medical practice management software, and CMS-1500 and UB-04 claims.

NOTE:

This chapter does *not* require the use of ICD-10-CM, ICD-10-PCS, CPT, or HCPCS Level II coding manuals. However, later chapters in this textbook do require them (because learning how to code is easier when you use paper-based coding manuals). (According to CAHIIM/AHIMA requirements, students should also learn how to use encoder software and interpret the results of computer-assisted coding [CAC] software.)

Career as a Coder

A **coder** acquires a working knowledge of coding systems (e.g., CPT, HCPCS Level II, ICD-10-CM, ICD-10-PCS), coding conventions and guidelines, government regulations, and third-party payer requirements to ensure that all diagnoses (conditions), services (e.g., office visits), and procedures (e.g., surgery, x-rays) documented in patient records are coded accurately for reimbursement, research, and statistical purposes. Excellent interpersonal skills are required of coders because they communicate with providers about documentation and compliance issues related to the appropriate assignment of diagnosis and procedure/service codes.

NOTE:

- *Professional coding* captures the complexity and intensity of procedures performed and services provided during an outpatient or physician office encounter.
- *Institutional (or facility) coding* captures the *intensity of services* used to provide inpatient care (e.g., intensive care unit) and *severity of illness* to classify how sick inpatients are (e.g., respiratory failure).
- An increase in multi-hospital systems that provide physician office services (along with traditional inpatient, outpatient, and emergency department hospital care) has resulted in the introduction of a concept called **single-path coding**, which combines professional and institutional coding to improve productivity and ensure the submission of clean claims, leading to improved reimbursement. Instead of separate professional and institutional coders (who are typically employed at different health care settings), a single-path coder will manage both professional and institutional coding for the same patient using computer-assisted coding (CAC) software and accessing all documents required for inpatient institutional (ICD-10-CM and ICD-10-PCS) and outpatient professional (ICD-10-CM, CPT, and HCPCS Level II) coding. This process facilitates professional and institutional billing by the organization.
- Early in her career, as a health information manager in Florida, your author implemented a process to provide the hospital's medical staff with copies of discharged inpatient record face sheets, which contained diagnosis (and procedure) codes that were reported on the hospital's UB-04 claim. Physicians generated CMS-1500 claims to obtain reimbursement for professional services provided to their hospital inpatients. These claims reported the same diagnosis codes assigned by the health information management (HIM) department's coders, and the HIM committee approved the process because it improved the accuracy of reporting diagnosis codes on physician CMS-1500 claims. (Physicians and outpatient settings report CPT and HCPCS Level II codes for procedures and services, while inpatient hospitals report ICD-10-PCS codes.)

Training

Training methods for those interested in pursuing a coding career include college-based programs that contain coursework in medical terminology, anatomy and physiology, health information management, pathophysiology, pharmacology, ICD-10-CM, ICD-10-PCS, HCPCS Level II, and CPT coding, and reimbursement methodologies. Many college programs also require students to complete a nonpaid internship (e.g., 120 hours) at a health care facility. Professional associations (e.g., the American Health Information Management Association) offer noncredit-based coding training, usually as distance learning (e.g., Internet-based), and some health care facilities develop internal programs to retrain health professionals (e.g., nurses) who are interested in a career change.

NOTE:

Pharmacology plays a significant role in accurate and complete coding. Coders review the medication administration record (MAR) to locate medications administered that impact diagnosis coding. For example, upon review of the MAR the coder notices that the patient received a course of Librium (chlordiazepoxide) during inpatient hospitalization. Librium is classified as an antianxiety medication, but it can be also used to counteract alcohol withdrawal symptoms. If a physician documents that the Librium was administered to counteract alcohol withdrawal symptoms, the coder can assign an appropriate alcohol dependence diagnosis code as well as alcohol detoxification procedure codes.

Coding Internship

The coding **internship** benefits the student and the facility that accepts the student for placement. Students receive on-the-job experience prior to graduation, and the internship assists them in obtaining permanent employment. Facilities benefit from the opportunity to participate in and improve the formal education process. Quite often, students who complete professional practice experiences (or internships) are later employed by the facility at which they completed the internship.

The **internship supervisor** is the person to whom the student reports at the site. Students are often required to submit a professional résumé to the internship supervisor and to schedule an interview prior to being accepted for placement. While this experience can be intimidating, it is excellent practice for the interview process that the student will undergo prior to obtaining permanent employment. Students should research the résumé writing and interview technique services available from their college's career services office. This office will review résumés and will provide interview tips. (Some even videotape mock interviews for students.)

NOTE:

Breach of patient confidentiality can result in termination from the internship site, failure of the internship course, and even possible suspension and/or expulsion from your academic program. Make sure you check out your academic program's requirements regarding this issue.

The internship is on-the-job training even though it is nonpaid, and students should expect to provide proof of immunizations (available from a physician) and possibly undergo a preemployment physical examination and participate in facility-wide and department-specific orientations. In addition, because of the focus on privacy and security of patient information, the facility will likely require students to sign a nondisclosure agreement (to protect patient confidentiality), which is kept on file at the college and by the professional practice site.

During the internship, students are expected to report to work on time. Students who cannot attend the internship on a particular day (or who arrive late) should contact their internship supervisor and program faculty. Students are also required to make up any lost time. Because the internship is a simulated job experience, students are to be well groomed and should dress professionally. Students should show interest in all aspects of the experience, develop good working relationships with coworkers, and react appropriately to constructive criticism and direction. If any concerns arise during the internship, students should discuss them with their internship supervisor and/or program faculty.

Credentials

The American Health Information Management Association (AHIMA) and the AAPC (previously called the American Academy of Professional Coders) offer certification in coding. Credentials available from AHIMA include the following:

- Certified Coding Associate (CCA)
- Certified Coding Specialist (CCS)
- Certified Coding Specialist—Physician-based (CCS-P)

The AAPC offers the following core coding certification exams:

- Certified Professional Coder (CPC)
- Certified Inpatient Coder (CIC)
- Certified Outpatient Coder (COC)

The AAPC also offers specialty certifications in response to a demand for **specialty coders** who have obtained advanced training in medical specialties and who are skilled in compliance and reimbursement areas, such as the Certified Ambulatory Surgical Center Coder (CASCC) credential.

The type of setting in which you seek employment will indicate which credential(s) you should pursue. Inpatient and/or outpatient coders obtain CCS and/or CIC certification, and physician office coders choose the CCS-P and/or CPC credential. Outpatient coders also have the option of selecting the COC credential. Insurance specialists who work for health care facilities and third-party payers obtain the CCS-P. Those who have not met requirements for field experience as a coder can seek apprentice-level certification as a CCA. (Once certified, professional associations require maintenance of the credential through continuing education [CE] recertification per two-year cycle.)

Employment Opportunities

Coders can obtain employment in a variety of settings, including clinics, consulting firms, government agencies, hospitals, insurance companies, nursing facilities, home health agencies, hospice organizations, and physicians' offices. Coders also have the opportunity to work at home for employers that partner with an Internet-based **application service provider (ASP)**, which is a third-party entity that manages and distributes software-based services and solutions to customers across a *wide area network (WAN)* (computers that are far apart and are connected via the Internet) from a central data center.

Other Professions Related to Coding

One profession that is closely related to a coder is that of a **health insurance specialist** (or **claims examiner**). When employed by third-party payers, these specialists review health-related claims to determine whether the costs are reasonable and medically necessary based on the patient's diagnosis reported for procedures performed and services provided. This process involves verification of the claim against third-party payer guidelines to authorize appropriate payment or to refer the claim to an investigator for a more thorough review.

Another profession that is closely related to a coder is the **medical assistant**. When employed by a provider, this person performs administrative and clinical tasks to keep the office and clinic running smoothly. Medical assistants who specialize in administrative aspects of the profession answer telephones, greet patients, update and file patient medical records, complete insurance claims, process correspondence, schedule appointments, arrange for hospital admission and laboratory services, and manage billing and bookkeeping.

When employed by a physician's office, health insurance specialists and medical assistants perform medical billing, coding, record keeping, and other medical office administrative duties. Health insurance specialists (or claims examiners) and medical assistants receive formal training in college-based programs or at vocational schools. They also receive on-the-job training.

- Health insurance specialists (or claims examiners) often become certified as a Certified Professional Biller (CPB) (through the AAPC).
- The health insurance specialist also has the option of becoming credentialed by the Medical Association of Billers (MAB) as a Certified Medical Billing Specialist (CMBS).
- Medical assistants often become credentialed as a Certified Medical Assistant (CMA) through the American Association of Medical Assistants (AAMA) or as a Registered Medical Assistant (RMA) through the American Medical Technologists (AMT).

Health insurance specialists (or claims examiners) and medical assistants obtain employment in clinics, health care clearinghouses, health care facility billing departments, insurance companies, physicians' offices, and with third-party administrators (TPAs). When employed by clearinghouses, insurance companies, or TPAs, they often have the opportunity to work at home, where they process and verify health care claims using an Internet-based application service provider (ASP).

Exercise 1.1 – Career as a Coder

Instructions: Complete each statement.

1. A coder is required to have a working knowledge of the CPT, HCPCS Level II, ICD-10-CM, and _____ coding systems.
2. The complexity and intensity of procedures performed and services provided during an outpatient or physician office encounter are captured as part of _____ coding.
3. The intensity of services and severity of illness associated with the provision of inpatient care are captured as part of _____ (or facility) coding.
4. When a multi-hospital system provides physician office services along with traditional inpatient, outpatient, and emergency department hospital care, the concept of _____ coding is adopted to facilitate professional and institutional billing.
5. A profession that is closely related to that of a coder is health _____ specialist (or claims examiner) who review health-related claims to determine whether the costs are reasonable and medically necessary based on the patient's diagnosis reported for procedures performed and services provided.

Professional Associations

Students are often able to join a professional association (Table 1-1) for a reduced membership fee and receive most of the same benefits as active members (who pay much more!). Benefits of joining a professional association include the following:

- Eligibility for scholarships and grants
- Opportunity to network with members (internship and job placement)
- Publications (e.g., professional journals)
- Reduced certification exam fees
- Website access for members only

Attending professional association conferences and meetings provides opportunities to network (or interact) with professionals, which can facilitate being placed for an internship or being considered for employment after graduation. Another way to network is to join an **online discussion board** (or **listserv**) (Table 1-2), which is an Internet-based discussion forum that covers a variety of professional topics and issues.

TABLE 1-1 Professional Associations

Career	Professional Association
Coder	AAPC (previously called the American Academy of Professional Coders) American Health Information Management Association (AHIMA)
Health Insurance Specialist	Alliance of Claims Assistance Professionals (ACAP) Medical Association of Billers (MAB)
Medical Assistant	American Association of Medical Assistants (AAMA) American Medical Technologists (AMT)

TABLE 1-2 Internet-Based Discussion Boards (Listservs)

Discussion Board	Website
AHIMA Access	AHIMA members can log in at www.ahima.org.
AAPC	Go to www.aapc.com, and click on the Forum link, and scroll down to Medical Coding.
Medicare Part B	Go to www.partbnews.com, hover over Communities, and select Forum from the pop-up menu.

Exercise 1.2 – Professional Associations

Instructions: Complete each statement.

1. Students who become members of _____ association(s) usually pay a reduced membership fee and receive most of the same benefits as active members.
2. Attending professional association conferences and meetings provides opportunities to _____ (or interact) with other professionals, which can facilitate being placed for internship or job placement.
3. A medical assistant usually joins the American Medical Technologists (AMT) or the _____.
4. An Internet-based discussion forum that covers a variety of professional topics and issues is called an online discussion board or _____.
5. A coder usually joins either the American Health Information Management Association (AHIMA) or the _____.

Coding Systems and Coding Processes

Coding systems and medical nomenclatures are used by health care facilities, health care providers, and third-party payers to collect, store, and process data for a variety of purposes (e.g., health care reimbursement). A **coding system** (or **classification system**) organizes a medical nomenclature according to similar conditions, diseases, procedures, and services, and it contains codes for each (e.g., ICD-10-CM arranges these elements into appropriate chapters and sections). A **medical nomenclature** includes clinical terminologies and clinical vocabularies that are used by health care providers to document patient care. *Clinical terminologies* include designations, expressions, symbols, and terms used in the field of medicine, such as "pupils equal, round, and reactive to light," commonly abbreviated as PERRL in a patient's physical examination report. *Clinical vocabularies* include clinical phrases or words along with their meanings, such as "myocardial infarction," which is defined as the sudden deprivation of blood flow to the heart muscle due to coronary artery blockage resulting in tissue damage (necrosis) and commonly called a "heart attack." A **code** includes numeric (e.g., CPT) and alphanumeric (e.g., ICD-10-CM) characters that are reported to health plans for health care reimbursement, to external agencies (e.g., state departments of health) for data collection, and internally (acute care hospital) for education and research. **Coding** is the assignment of codes to diagnoses, services, and procedures based on patient record documentation.

NOTE:

You are already familiar with a well-known coding system called the United States Postal Service ZIP Code system, which classifies addresses as numbers (e.g., 12345-9876).

Coding Systems

- The ***International Classification of Diseases, Ninth Revision, Clinical Modification*** **(ICD-9-CM)** was adopted in 1979 to classify diagnoses (Volumes 1 and 2) and procedures (Volume 3). The ***International Classification of Diseases, Tenth Revision, Clinical Modification*** **(ICD-10-CM)** (and ICD-10-PCS) replaced ICD-9-CM on October 1, 2015, to classify all diagnoses. ICD-10-CM classifies all diagnoses whether patients are treated as inpatients or outpatients, or at physicians' offices.
- The ***International Classification of Diseases, Tenth Revision, Procedure Coding System*** **(ICD-10-PCS)** was developed by the National Center for Health Statistics (NCHS) to classify inpatient hospital procedures and services, and it was implemented on October 1, 2015 (replacing Volume 3 of ICD-9-CM).

NOTE:

International Classification of Diseases, Tenth Revision, Clinical Modification/Procedure Coding System **(ICD-10-CM/PCS)** is the shortened name the Centers for Medicare & Medicaid Services uses to identify both classification systems.

- The ***Current Procedural Terminology*** **(CPT)** is published by the American Medical Association annually. CPT classifies procedures and services, and it is used by physicians and outpatient health care settings (e.g., the hospital ambulatory surgery department) to assign CPT codes for reporting procedures and services on health insurance claims. CPT is considered Level I of the Healthcare Common Procedure Coding System (HCPCS).
- The **Healthcare Common Procedure Coding System (HCPCS)** also includes Level II (national) codes, called **HCPCS Level II** (or **HCPCS national codes**), which are managed by the **Centers for Medicare & Medicaid Services (CMS)**, an administrative agency in the federal Department of Health & Human Services (DHHS). HCPCS Level II classifies medical equipment, injectable drugs, transportation services, and other services not classified in CPT. Physicians and ambulatory care settings use HCPCS Level II to report procedures and services.

NOTE:

HCPCS Level III local codes were discontinued in 2004. They had been managed by Medicare carriers and fiscal intermediaries (FIs). You might come across their legendary use in health care facility or insurance company databases. Some payers still use them.

The **Health Insurance Portability and Accountability Act of 1996 (HIPAA)** is federal legislation that amended the Internal Revenue Code of 1986 to

- improve portability and continuity of health insurance coverage in the group and individual markets;
- combat waste, fraud, and abuse in health insurance and health care delivery;
- promote the use of medical savings accounts;
- improve access to long-term care services and coverage;
- simplify the administration of health insurance by creating unique identifiers for providers, health plans, employers, and individuals;
- create standards for electronic health information transactions; and
- create privacy and security standards for health information.

To facilitate the creation of standards for electronic health information transactions, HIPAA requires two types of code sets to be adopted for the purpose of encoding data elements (e.g., procedure and service codes). This type of **encoding** is a process of standardizing data by assigning alphanumeric values (codes or numbers) to text and collecting other information (e.g., gender). (The concept of a medical *encoder* is covered later in this chapter.)

Large code sets encode:

- diseases, injuries, impairments, and other health-related problems and their manifestations;
- causes of injury, disease, impairment, or other health-related problems;
- actions taken to prevent, diagnose, treat, or manage diseases, injuries, and impairments; and
- substances, equipment, supplies, or other items used to perform these actions.

Example: The diagnosis of *essential hypertension* is assigned ICD-10-CM code I10.

Small code sets encode

- race/ethnicity;
- type of facility; and
- type of unit.

Example: A patient's sex is assigned a 1 if male, a 2 if female, or a 3 if undetermined.

HIPAA also requires the following code sets to be adopted for use by clearinghouses, health plans, and providers:

- *International Classification of Diseases, Tenth Revision, Clinical Modification* and *Procedure Coding System* (ICD-10-CM/PCS)
- *Current Procedural Terminology* (CPT)
- *HCPCS Level II* (national codes)
- *Current Dental Terminology* (CDT)
- *National Drug Codes* (NDC)

A **clearinghouse** (or **health care clearinghouse**) is a public or private entity (e.g., billing service) that processes or facilitates the processing of health information and claims from a nonstandard to a standard format. (A *third-party clearinghouse* processes claims from a nonstandard to standard format. Clearinghouses may also manage and provide other employer functions, such as employee benefits.) A **health plan** (or **third-party payer**) (e.g., Blue Cross/Blue Shield, a commercial insurance company) is an insurance company that establishes a contract to reimburse health care facilities and patients for procedures and services provided. A **provider** (or **health care provider**) is a physician or another health care professional (e.g., a nurse practitioner or physician assistant) who performs procedures or provides services to patients. Adopting HIPAA's standard code sets has improved data quality and simplified claims submission for health care providers who routinely deal with multiple third-party payers. The code sets have also simplified claims processing for health plans. Health plans that do not accept standard code sets are required to modify their systems to accept all valid codes or to contract with a health care clearinghouse that does accept standard code sets.

NOTE:

A health care clearinghouse is not a **third-party administrator (TPA)**, which is an entity that processes health care claims and performs related business functions for a health plan. The TPA might contract with a health care clearinghouse to standardize data for claims processing.

The **Medicare Prescription Drug, Improvement, and Modernization Act (MMA)** requires all code sets (e.g., ICD-10-CM, ICD-10-PCS) to be valid at the time services are provided. The new code releases in April each year are related to new technologies (and resultant new diseases) only. Thus, April 1 and October 1 coding updates are implemented immediately so accurate codes are reported on claims. (HIPAA legislation requires the reporting of codes on health insurance claims, such as the UB-04 for hospital inpatient and outpatient health care services.) *In 2021, CMS began exploring the release of updated codes, guidelines, and MS-DRG changes in April (as well as October) of each year. No decision was announced at the time of textbook publication.*

The purchase of updated coding manuals and updating of billing systems with coding changes is crucial so that billing delays (e.g., due to waiting for new coding manuals to arrive) and claims rejections are avoided. If outdated codes are submitted on claims, providers and health care facilities will incur administrative costs associated with resubmitting corrected claims and delayed reimbursement for services provided.

- For manual coding, coders should consider using updateable coding manuals, which publishers offer as a subscription service. These *coding manuals* are usually stored in a three-ring binder so that coders can remove outdated pages and add newly printed pages provided by the publisher.
- Another option is to purchase *encoder* software, which publishers offer as a subscription service. Coders have access to the most up-to-date encoder software, which contains edits for new, revised, and discontinued codes. An *encoder* automates the coding process using computerized or web-based software; instead of manually looking up conditions (or procedures) in the coding manual index, the coder uses the software's search feature to locate and verify diagnosis and procedure codes.
- Automating the medical coding process is the goal of *computer-assisted coding (CAC)*, which uses a natural language processing engine to "read" electronic health records and generate ICD-10-CM, ICD-10-PCS, HCPCS Level II, and CPT codes. Because of this process, coders become coding auditors (or coding editors), responsible for ensuring the accuracy of codes reported to payers. (CAC can be compared to speech recognition technology that has impacted the role of medical transcriptionists.)

NOTE:

Coding manuals, encoders, and computer-assisted coding (CAC) are discussed in more detail later in this chapter.

Coding References

Professional organizations that are recognized as national authorities on CPT, HCPCS Level II, ICD-10-CM, and ICD-10-PCS coding publish references and resources that are invaluable to coders. To ensure the development of excellent coding skills, make sure you become familiar with and use the following references and resources:

- *AHA Coding Clinic for ICD-10-CM and ICD-10-PCS,* and *AHA Coding Clinic for HCPCS*, quarterly newsletters published by the American Hospital Association and recognized by the CMS as official coding resources
- *Conditions of Participation* (CoP) and *Conditions for Coverage* (CfC), Medicare regulations published by CMS

NOTE:

- Official coding policy is published in the AHA *Coding Clinic for ICD-10-CM and ICD-10-PCS,* AHA *Coding Clinic for HCPCS,* and AMA *CPT Assistant*, and as National Correct Coding Initiative (NCCI) edits.
- The AAPC and AHIMA publish coding newsletters, journals, and so on, but such publications do not contain official coding policy.

- *CPT Assistant*, monthly newsletter published by the AMA and recognized by CMS as official coding resource
- *National Correct Coding Initiative* (NCCI), code edit pairs that cannot be used in the same claim (developed by CMS and published by the federal government's National Technical Information Service [NTIS])
- Compliance program guidance documents, guidelines published by the DHHS OIG
- *ICD-10-CM Official Guidelines for Coding and Reporting*, guidelines provided by CMS and NCHS to be used as a companion document to the official version of the ICD-10-CM
- *ICD-10-PCS Official Guidelines for Coding and Reporting*, guidelines provided by CMS and NCHS to be used as a companion document to the official version of ICD-10-PCS
- *Outpatient Code Editor with Ambulatory Payment Classification* (OCE/APC), software developed by CMS, distributed by NTIS, and used by hospitals to edit outpatient claims to help identify possible CPT/HCPCS Level II coding errors and assign Ambulatory Payment Classifications (APCs) that are used to generate reimbursement

Incorporating the use of the above references and resources assists coders in avoiding the following abusive and fraudulent (dishonest and illegal) coding practices, depending on intent. (Abuse involves mistakenly submitting incorrect codes, and fraud involves intentionally submitting incorrect codes to increase reimbursement.)

- **Unbundling**: Reporting multiple codes to increase reimbursement when a single combination code should be reported.
- **Upcoding**: Reporting codes that are not supported by documentation in the patient record for the purpose of increasing reimbursement.
- **Overcoding**: Reporting codes for signs and symptoms in addition to the established diagnosis code.
- **Jamming**: Routinely assigning an unspecified ICD-10-CM disease code instead of reviewing the coding manual to select the appropriate code.
- **Downcoding**: Routinely assigning lower-level CPT codes for convenience instead of reviewing patient record documentation and the coding manual to determine the proper code to be reported.

ICD-11 Classification System

The **International Classification of Diseases, 11th Revision (ICD-11)** was developed by the World Health Organization (WHO) and released in 2018 to facilitate the implementation process, such as translation into languages other than English. Implementation of ICD-11 for member states is January 1, 2022. (A planned USA implementation date has not been announced.)

ICD-11 was revised for the purpose of recording, reporting, and analyzing health information. It contains improved usability, which means it contains more clinical detail and requires less training time. Other improvements include classifying all clinical detail, readying eHealth for the electronic health record, linking to other classifications and terminologies (e.g., SNOMED-CT), multilingual support, and updating scientific content.

The structure of ICD-11 is different from ICD-10, with the biggest changes focused on stem codes; extension codes; a supplementary section for the assessment of (patient) functioning; multiple parenting; and precoordination, postcoordination, and cluster coding. The number of chapters was expanded from 22 in ICD-10-CM to 26 in ICD-11, and while the ICD-11 *coding scheme* remains alphanumeric, codes range from 1A00.00 through ZZ9Z.ZZ. The second character of ICD-11 always contains a letter to differentiate the codes from ICD-10, and the third character is always a number (referred to as a *forced number*) so that the spelling of "undesirable words" is prevented. The first character of an ICD-11 code indicates the related chapter, and letters "I" and "O" are omitted to prevent confusion with numbers "1" and "0" (just like in ICD-10-PCS).

Multiple parenting allows a condition to be correctly classified in two different places (e.g., site or etiology). For example, esophageal cancer is classified in both the neoplasm chapter and the digestive system chapter. Thus, stem code 2B70.Z (malignant neoplasms of esophagus) appears in each chapter.

Stem codes are clinical conditions described by one single category to ensure the assignment of one code per case, resulting in the (data) collection of a *meaningful minimum of information. Precoordination coding* is the assignment of stem codes, which contain all pertinent information in a pre-combined manner. For example, pneumonia due to *Mycoplasma pneumoniae* includes the disease and its histopathology in ICD-11 stem (or standalone) code CA40.04.

Extension codes standardize the way additional information (e.g., anatomy, histopathology) is added to a stem code, begin with the letter "X," and can never be reported without a stem code. *Cluster coding* is used to indicate that more than one code is reported together using either a forward slash (/) or an ampersand (&) to separate multiple codes that describe a clinical case. *Postcoordination coding* is the process of combining or linking multiple (stem and extension) codes to completely describe a clinical case. For example, duodenal ulcer with acute hemorrhage is classified as stem codes DA63 (duodenal ulcer) and ME24.90 (acute gastrointestinal bleeding, NEC), and extension code XA9780 is added to indicate duodenum as the anatomic location. The codes are reported as DA63/ME24.90&XA9780.

Coding conventions such as code also, use additional code, includes, excludes, NEC, NOS, residual categories (e.g., certain, other, unspecified), and/or, due to, and with also appear in ICD-11 to provide additional information.

While ICD-11 was ready for distribution in 2018 and can be adopted by member states for implementation on January 1, 2022, there is no time line established for its adoption by the United States.

Medical Coding Process

The **medical coding process** requires the review of patient record documentation to identify diagnoses, procedures, and services for the purpose of assigning ICD-10-CM, ICD-10-PCS, HCPCS Level II, and/or CPT codes. Each health care covered entity (e.g., hospital, medical clinic, physician office) implements a unique medical coding process, which requires adherence to the following:

- Code of ethics
- Steps to accurate coding
- Coding quality
- Avoid assumption coding
- Physician query process
- Clinical Documentation Improvement Program
- Coding compliance program

Code of Ethics

Professional associations establish a *code of ethics* to help members understand how to differentiate between "right" and "wrong" and apply that understanding to decision making. The AAPC publishes a code of ethics, and AHIMA publishes standards of ethical coding; both serve as guidelines for ethical coding conduct, and they demonstrate a commitment to coding integrity.

Steps to Accurate Coding

Regardless of health care setting, the *steps to accurate coding* begin with a review of the entire patient record (manual or electronic) before selecting diagnoses, procedures, and services to which codes are assigned. Depending on the setting, coders perform retrospective coding, concurrent coding, or a combination of both.

Retrospective coding is the review of records to assign codes after the patient is discharged from the health care facility (e.g., hospital inpatient) or released from same-day outpatient care (e.g., hospital outpatient surgery unit). It is most commonly associated with inpatient hospital stays because accurate coding requires verification of diagnoses and procedures by reviewing completed face sheets, discharge summaries, operative reports, pathology reports, and progress notes in the patient records.

Concurrent coding is the review of records and/or use of encounter forms and chargemasters to assign codes during an inpatient stay (e.g., hospital) or an outpatient encounter (e.g., hospital outpatient visit for laboratory testing or x-rays, physician office visit). It is typically performed for outpatient encounters because encounter forms (e.g., physician office) and chargemasters (e.g., hospital emergency department visit, hospital outpatient visit for laboratory testing) are completed in "real time" by health care providers as part of the charge-capture process.

- *Encounter forms* are used to record data about office procedures and services provided to patients.
- *Chargemasters* contain a computer-generated list of procedures, services, and supplies, and corresponding revenue codes along with charges for each.

NOTE:

Information about encounter forms and chargemasters is located in Chapter 20 of this textbook, along with samples of each.

Coding Quality

According to the American Hospital Association, "The importance of understanding and following the basic ICD-10-CM, and ICD-10-PCS coding principles cannot be overemphasized in the training of coders and in quality control activities undertaken to improve the accuracy of data reported for internal and external hospital use. The measures for coding accuracy include (a) adherence to ICD-10-CM and ICD-10-PCS coding principles and instructions, (b) attention to specificity in code selection where indicated by physician documentation in the medical record [patient record], (c) grasp of medical terminology, and (d) absence of clerical-type errors, such as those due to carelessness in reading or in transposing [letters and] numbers. Auditing of coded diagnostic and procedural information for accuracy should not be confused with the review for relevancy in sequencing of the codes at hand. They are separate tasks linked together in the data reporting process."

The statement located in (b) of the aforementioned quote is significant because it means that coders are expected to review the *entire* record when assigning codes to diagnoses and procedures documented on the face sheet and in the discharge summary. Thus, coders should review the face sheet, discharge summary, and other documentation (e.g., progress notes, operative reports, pathology reports, laboratory data) to assign the most specific codes possible.

EHR Results in Greater Implementation of Concurrent Coding

Concurrent coding was introduced for inpatient coding just after the inpatient prospective payment system (using diagnosis-related groups) was implemented on October 1, 1983. Coders from the health information department worked part of the day on nursing units, accessing paper-based manual medical records to begin the process of assigning codes to diagnoses and procedures. On discharge of the patient from the hospital, the coders performed a final review of the patient record to ensure accuracy of reported codes. Because the paper-based manual patient record can be handled by just one individual at a time, coders "competed" with nurses, physicians, and other health care providers for access to the record. As a result, concurrent coding as a process was discontinued in some facilities because it was inefficient.

Today, implementation of the electronic health record (EHR) has resulted in a resurgence of concurrent coding practices because coders (still located in the health information department) access patient records in an electronic format. They no longer "compete" with other health care providers for access to the record and, as a result, efficiency associated with the concurrent coding concept has been realized. In practice, coders remain at their work stations in the health information department (and *remote coders* use their at-home work stations) to access patient EHRs to begin the discharge coding process. Rising health care costs created an impetus for concurrent coding processes because it is a much faster method for coders to review and verify the accuracy of codes on discharge of inpatients based on concurrent coding work performed (according to an established schedule) up until the date of discharge. For tertiary-care facilities that provide complex health care (e.g., transplant surgery) and quaternary-care facilities that provide highly specialized care (e.g., experimental medicine), both of which are also characterized as providing high-cost care (e.g., transplant surgery), having the ability to submit codes for reimbursement purposes within hours (instead of days) of inpatient discharge significantly and positively impacts their accounts receivables (and their "bottom line"). In addition, community-based hospitals also realize the benefits of concurrent coding.

Remember! Coders must avoid assumption coding, and when a problem with documentation quality is noted (e.g., conflicting diagnostic statements on the discharge summary, face sheet, and elsewhere in the record) the physician query process is initiated (discussed below).

Example 1: The provider documented *congestive heart failure* on the face sheet of the patient record. On review of progress notes that document the patient's response to treatment, the coder finds documentation of *acute and chronic diastolic and systolic congestive heart failure* in the discharge progress note. Instead of reporting a code for *congestive heart failure*, report the more specific code for *acute and chronic diastolic and systolic congestive heart failure*.

Example 2: The provider documented *malnutrition* on the discharge summary in the patient record. On review of progress notes, the coder finds documentation of *moderate malnutrition*. Instead of reporting the nonspecific code for *malnutrition*, report the more specific code for *moderate malnutrition*.

Avoid Assumption Coding

Coders are prohibited from performing **assumption coding**, which is the assignment of codes based on the presumption, from a review of clinical evidence in the patient's record, that the patient has certain diagnoses or

received certain procedures/services even though the provider did not specifically document those diagnoses or procedures/services. According to the *Compliance Program Guidance for Third-Party Medical Billing Companies*, published by the Department of Health and Human Services' Office of the Inspector General, assumption coding creates risk for fraud and abuse because the coder assumes certain facts about a patient's condition or procedures/services, although the physician has not specifically documented the level of detail to which the coder assigns codes. (Coders can avoid fraudulent assumption coding by implementing the physician query process discussed in the following section.)

Example: An older adult patient is admitted to the hospital for treatment of a fractured femur. Upon examination, the physician documents that the skin around the fractured femur site has split open. X-ray of the left femur reveals a displaced fracture of the shaft. The patient underwent fracture reduction and full-leg casting. The physician documents *open Type I fracture of shaft, left femur* as the final diagnosis.

The coder assigns code S72.302B for the *open Type I fracture of shaft, left femur*, which is correct. The coder assigns code 0QS90ZZ for the *fracture reduction and full leg casting procedure*, which is incorrect because its code description is *reposition left femoral shaft, open approach (no device), femur (shaft)*. Although the patient has an open fracture, the physician did *not* perform an open reduction procedure. (An open reduction involves making a surgical incision to align displaced bones, and it may require external fixation to heal properly.) In this case, the coder incorrectly "assumed" that an open reduction was performed because the patient's open fracture was treated. The code that should be assigned for this procedure is 0QS9XZZ because its code description is *reposition left femoral shaft, external approach*. (A closed reduction involves casting the affected limb to stabilize the fracture for healing, and it might also require the physician to pull back two ends of bone that are touching each other and/or to correct any wide angles.)

Physician Query Process

When coders have questions about documented diagnoses and procedures or services, they use a **physician query process** to contact the responsible physician to request clarification about documentation and the code(s) to be assigned. The electronic health record (EHR) allows for development of an *automated* physician query process, which is used by utilization managers (or case managers), clinical documentation improvement specialists, and coders to obtain clarification about patient record documentation. Integrating the automated physician query process with the EHR allows physicians to more easily receive and reply to queries, which results in better and timely responses from physicians.

NOTE:

The query should not lead the physician to a desired outcome.

- A leading query would be phrased as, "Is the patient's anemia due to blood loss?" and leads the physician to add due to blood loss to the anemia diagnosis for more specific code assignment and possible increased reimbursement.
- A nonleading query would be phrased as, "Can the cause of the patient's anemia be specified? The history documents symptoms of fatigue, headaches, inflamed tongue, and lightheadedness. The CBC reveals low hemoglobin levels." This query allows the physician to determine whether the anemia can be qualified according to type.

The following guidelines should be followed when activating the physician query process:

- Establish a policy to indicate when a coder should generate a physician query, such as when documentation in the patient's record fails to meet one of the following five criteria (according to AHIMA's practice brief, entitled *Managing an Effective Query Process*):
  - *Legibility* (e.g., illegible handwritten patient record entries)
  - *Completeness* (e.g., abnormal test results but clinical significance of results is not documented)
  - *Clarity* (e.g., signs and symptoms are present in the patient record, but a definitive diagnosis is not documented)

  - *Consistency* (e.g., discrepancy among two or more treating providers regarding a diagnosis, such as a patient who presents with shortness of breath and the consulting physician documents pneumonia as the cause while the attending physician documents congestive heart failure as the cause)
  - *Precision* (e.g., clinical documentation indicates a more specific diagnosis than is documented, such as a sputum culture that indicates bacterial pneumonia and the diagnosis does not indicate the cause of the pneumonia)
- Query the physician when the following are noted by the coder and when provider documentation in the patient record is not present (according to AHIMA's practice brief, entitled *Managing an Effective Query Process*):
  - Clinical indicators of a diagnosis (e.g., lab, x-ray) but the diagnosis is not documented
  - Clinical evidence for a higher degree of specificity or severity (e.g., progress notes) but specificity or severity is not documented in the diagnosis
  - Cause-and-effect relationship between two conditions but the relationship is not documented in the diagnosis (e.g., due to, with)
  - An underlying cause when a patient is admitted with symptoms (e.g., shortness of breath is documented instead of diagnosed pneumonia)
  - Treatment is documented without a corresponding diagnosis for medical necessity (e.g., antibiotics for a secondary diagnosis of UTI, which is not documented as a diagnosis)
  - Lack of present on admission (POA) indicator status (e.g., history did not indicate diagnoses that were present on admission, such as chronic asthma) (The POA indicator status is discussed in this textbook in Chapter 20.)

NOTE:

Utilization managers (or case managers) are responsible for coordinating inpatient care to ensure the appropriate utilization of resources, delivery of health care services, and timely discharge or transfer. They usually have a bachelor's degree (e.g., nursing), professional licensure (e.g., RN), and clinical practice experience.

Utilization managers work closely with physicians on a daily basis, and they are a logical choice to facilitate the physician query process. In this role, they serve as the liaison for coders (and physicians) by helping coders write appropriate queries and clarifying queries for physicians so that responses are timely and complete.

- Determine whether the query will be generated concurrently (during inpatient hospitalization) or retrospectively (after patient discharge).
- Designate an individual who will serve as the physician's contact during the physician query process (e.g., coding supervisor, utilization manager). Remember that the coder's role is to assign codes based on documentation and that asking for clarification is appropriate, but making an assumption about codes to be assigned is considered fraud. That means that coders should ask physicians open-ended questions to avoid leading the physicians by indicating a preference for a particular response. Coders do not make clinical assumptions—that is the sole responsibility of the physician.

Use a physician query form (Figures 1-1A and 1-1B), not scrap paper, to document the coder's query and the physician's response. If the completed query form is filed in the patient's record, determine whether it is considered an official part of the record and subject to disclosure by those requesting copies of records or whether it is an administrative form that is not subject to disclosure. The query form could also be stored in an administrative file in the coding supervisor's office and the information resulting from the query documented kept in the patient record by the physician (e.g., an addendum to the discharge summary). The length of time that the completed query form is retained is determined by each health care organization.

PHYSICIAN QUERY FORM

Patient Name: John Public
Admission Date: 03/30/YYYY
Patient Number: 123456

Date: April 14, YYYY
Coder: Lynn Smith
Email Address: lsmith@clinic.org
Office Number: (101) 555-1234

Dear Dr. Hughes,

The diagnosis or procedure of pneumonia requires more specific information in order to assign the most accurate and complete code. The following information is documented in the discharge summary.
The patient had signs and symptoms of upper respiratory infection upon admission.

I have the following question(s) about this record:
RSV testing was positive for respiratory syncytial virus. Based on your clinical judgment, can you provide a diagnosis that represents the RSV positive finding? If so, please document the condition and causative organism (if known) in the patient record.

Please respond to this question in the space below, and also document an amendment in the patient record (if appropriate):
Patient has RSV. This is now documented in an addendum to the discharge summary in the patient record.

FIGURE 1-1A Sample open-ended physician query form

Example: A patient is admitted with severe dyspnea (shortness of breath), chest pain, and fever. Upon physical examination, the physician documents rhonchi (gurgling sound in the lungs), wheezing, and rales (clicking, bubbling, or rattling sounds in the lungs). Laboratory data during the hospitalization include a culture and sensitivity report of sputum that documents the presence of gram-negative bacteria. A review of the physician orders reveals documentation of appropriate medications to treat *pneumonia due to gram-negative bacteria*. The medication administration record (MAR) documents administration of the medications, and the physician progress notes document the patient's positive response to medications (and resolution of the pneumonia). The physician documents *viral pneumonia* as the final diagnosis.

Depending on the health care facility's coding policy and procedure, the coder has two options.

1. If the coding policy and procedure allow coders to use the entire patient record as the basis of assigning codes to final diagnoses and procedures, because documentation in the record supports a final diagnosis of *pneumonia due to gram-negative bacteria* (instead of viral pneumonia), the coder would assign the code for that condition.
2. If the coding policy and procedure require coders to generate a *physician query* when the final diagnosis (on the face sheet or in the discharge summary) differs from documentation found in the patient record, the coder would submit the following query to the physician, which allows the physician an opportunity to correct the documented final diagnosis if warranted. In this case, the physician changed *viral pneumonia* to *pneumonia due to gram-negative bacteria* (using the proper procedure for amending the patient record).

   The assignment of a code to pneumonia due to *gram-negative bacteria* results in reimbursement of about $3,500, and the assignment of a code to *viral pneumonia* results in reimbursement of about $2,500. Not querying the physician would have resulted in a loss of $1,000 to the facility.

   This case also includes documentation of signs and symptoms, which are due to the pneumonia. Thus, the coder would *not* assign codes to symptoms of dyspnea, chest pain, fever, or signs of rhonchi, wheezing, and rales.

PHYSICIAN QUERY: CHEST PAIN DIAGNOSIS CLARIFICATION

Hospital:	ANYWHERE CLINIC	Patient Number:	123456
Physician:	Dr. Hughes	Admission Date:	03/31/YYYY
Patient Name:	John Public	Discharge Date:	04/04/YYYY
Doctor:	Hughes	Date of Query:	April 5, YYYY

The patient record reflects the following clinical finding(s) (to be completed by coder):

Clinical Indicators:	Location of Documentation in current record:
Chest pain (e.g., description, location, level of exertion)	History and Physical Examination
Signs/Symptoms (e.g., diaphoresis, palpitations, etc.)	Admission Progress Note
Shortness of breath (e.g., respiratory rate, activity)	History and Physical Examination
Abnormal test results (e.g., EKG, cardiac cath, chest x-ray)	EKG report and Chest x-ray report (negative)
Abnormal lab findings (e.g., troponin, CK and CK-MBs)	Laboratory report (cardiac enzymes negative)
Abnormal EGD (e.g., esophagitis, esophageal varices)	Not applicable
Treatment prescribed (e.g., nitroglycerine)	Not applicable

TO THE PHYSICIAN: The following may be a factor in determining and reporting the severity of illness of your patient (to be completed by physician, if applicable).

There is clinical documentation of ***chest pain*** in the patient record. Clarification of documentation is initiated to the provider when there is conflicting, incomplete, or ambiguous information in the patient record. Please use your clinical judgment in responding to this query. (**Note:** This physician query does not imply that any particular answer is desired or expected.)

Please respond to **ALL 4 sections below.** Per CMS guidelines or facility policy, please document your response in the patient record (e.g., progress note, dictated report).

Section 1: Specificity

- ☐ Cardiac
- ☐ Chest wall
- ☐ Musculoskeletal
- ☒ Psychogenic
- ☐ Atypical
- ☐ Traumatic
- ☐ Other:
- ☐ Unknown

Section 2: Etiology

- ☐ Unstable angina
- ☐ Acute MI
- ☐ Costochondritis
- ☐ Exacerbation of COPD
- ☐ Pneumonia
- ☒ Anxiety
- ☐ GERD
- ☐ Other:
- ☐ Unknown

Section 3: Acuity

- ☐ Acute
- ☐ Acute on chronic
- ☐ Chronic
- ☒ Other: *related to Anxiety*
- ☐ Unknown

Section 4: Present on Admission (POA)

- ☒ Yes
- ☐ No
- ☐ Clinically undetermined
- ☐ Unknown

Coder Name: Sally Smith, CCS Extension: 1234 Date: April 5, YYYY

Physician Signature: *Mark Hughes, M.D.* Date: *April 6, YYY*

FIGURE 1-1B Sample multiple choice physician query form

Clinical Documentation Improvement Program

The purpose of a *clinical documentation improvement (CDI) program* is to help health care facilities comply with government programs (e.g., RAC audits, ARRA/HITECH) and other initiatives (Joint Commission accreditation) with the goal of improving health care quality. As part of a CDI program, the CDI specialist initiates concurrent and retrospective reviews of inpatient and outpatient records to identify conflicting, incomplete, or nonspecific provider documentation. Concurrent reviews are performed on patient care units (to access paper-based patient records) or remotely (to access EHRs). The CDI program helps ensure that patient diagnoses and procedures are supported by ICD-10-CM and ICD-10-PCS codes, and CDI specialists use a physician query form to communicate with physicians (and other health care providers) with the intended result of improving

documentation, coding, reimbursement, and severity of illness (SOI) and risk of mortality (ROM) classifications. CDI programs are usually associated with acute health care facilities; however, they are also implemented in alternate health care settings (e.g., acute rehabilitation facility, skilled nursing facility). A *clinical documentation improvement (CDI) specialist* is responsible for performing inpatient record reviews for the purpose of:

- implementing documentation clarification and specificity processes (as part of the physician query process);
- using and interpreting clinical documentation improvement statistics;
- conducting research and providing education to improve clinical documentation; and
- ensuring compliance with initiatives that serve to improve the quality of health care, which include:
  - complying with fraud and abuse regulations;
  - enforcing privacy and security of patient information; and
  - monitoring a *health information exchange (HIE)*.

Coding Compliance Program

A *coding compliance program* ensures that the assignment of codes to diagnoses, procedures, and services follows established coding guidelines, such as those published by the Centers for Medicare & Medicaid Services (CMS). Health care organizations write *policies* (guiding principles that indicate "what to do") and *procedures* (processes that indicate "how to do it") to assist in implementing the coding compliance stages of detection, correction, prevention, verification, and comparison.

- *Detection* is the process of identifying potential coding compliance problems. For example, a coder notices that some patient records contain insufficient or incomplete documentation, which adversely impacts coding specificity. The coder brings these records to the attention of the coding compliance officer (e.g., coding supervisor), who implements the next stage of the coding compliance program.
- *Correction* is based on the review of patient records that contain potential coding compliance problems, during which specific compliance issues are identified and problem-solving methods are used to implement necessary improvements (corrections). For example, the coding compliance officer conducts a careful review of the patient records that contain insufficient or incomplete documentation. It is determined that all of the records are the responsibility of a physician new to the practice. Educational material specific to documentation issues noted during the review process is then prepared.
- *Prevention* involves educating coders and providers so as to prevent coding compliance problems from recurring. For example, the coding compliance officer schedules a meeting with the physician responsible for insufficient or incomplete documentation, and educates the physician about the specific areas of insufficient or incomplete documentation that adversely impact medical coding. This meeting is conducted in a nonconfrontational manner, with education and correction as its goals.
- *Verification* provides an "audit trail" that the detection, correction, and prevention functions of the coding compliance program are being actively performed. For example, the coding compliance officer maintains a file that contains the following:
  - Original codes assigned based on insufficient and incomplete documentation
  - Educational materials prepared specific to the documentation issues
  - Minutes of the educational meeting with the responsible physician
  - Final codes assigned based on sufficient and complete documentation
  - Remittance advice from third-party payer, which contains adjudication (decision about reimbursement, including possible claims denial)
- *Comparison* requires the analysis of internal coding patterns over specified periods of time (e.g., quarterly) as well as the analysis of external coding patterns by using external benchmarks (trends). For example, the coding compliance officer reviews reports of quarterly medical audits to determine whether the new physician's documentation has improved. Such reports contain the results of claims submission, which indicate the number of claims denials based on nonspecific codes submitted as a result of insufficient and incomplete documentation. In addition, the coding compliance officer obtains benchmark data (reports)

from third-party payers and compares the coding practices in the facility with those of similar providers; if reimbursement to similar providers is significantly higher (or lower) than that paid to the provider, the *detection* process is initiated in an attempt to identify related coding compliance problems.

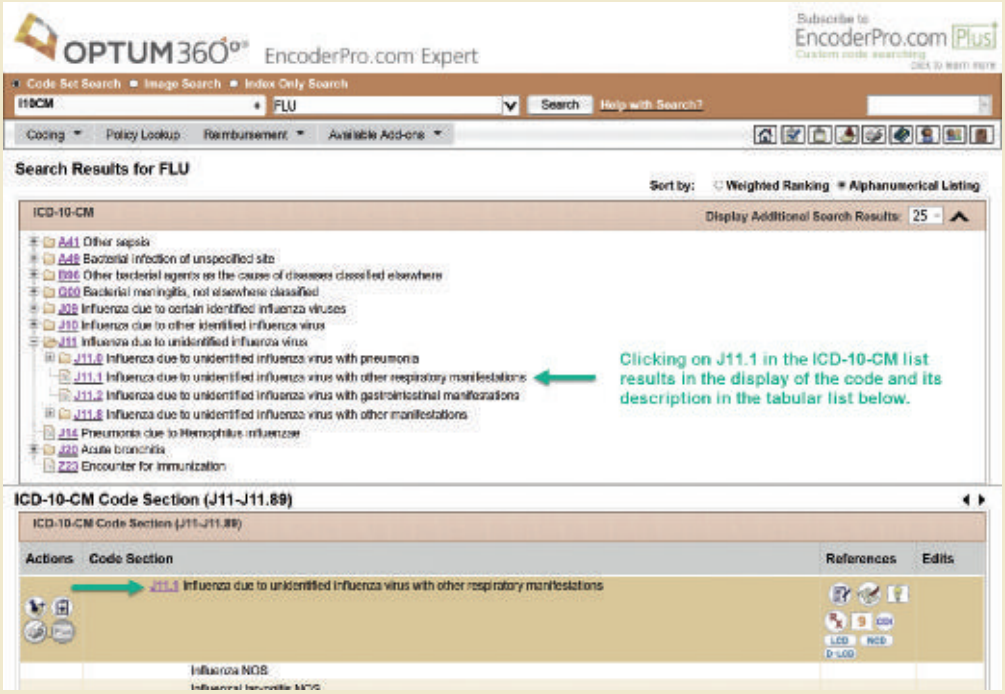
An effective coding compliance program monitors coding processes for completeness, reliability, validity, and timeliness.

- *Completeness* ensures that codes are assigned to all *reportable* diagnoses, procedures, and services documented in the patient record. For example, coders review the entire patient record to assign the most specific codes possible.
- *Reliability* allows for the same results to be consistently achieved. For example, when the same patient record is coded by different coding professionals, they assign identical diagnosis and procedure/service codes.
- *Validity* confirms that assigned codes accurately reflect the patient's diagnoses, procedures, and services. For example, coders do *not* assign codes to diagnoses that were not medically managed or treated during an encounter.
- *Timeliness* means that patient records are coded in accordance with established policies and procedures to ensure timely reimbursement.

Coding Manuals, Encoders, and Computer-Assisted Coding

Many publishers produce their own versions of the ICD-10-CM, ICD-10-PCS, and HCPCS Level II coding manuals. (The AMA publishes CPT.) Companies also publish **encoders**, which automate the coding process by using the search feature to locate and verify medical codes.

Example: ICD-10-CM codes are assigned to justify the medical necessity of procedures and services provided by physicians, which are reported with CPT and HCPCS Level II codes. (ICD-10-PCS codes are reported for inpatient hospital procedures only.) If the reason for a patient encounter is the "flu," the patient's respiratory symptoms are also documented. Optum360's *EncoderPro.com Expert* software can be used to select ICD-10-CM as the Code Set Search, entering "flu" in the search box. A list of ICD-10-CM codes generated results in selection of "J11.1 Influenza due to unidentified influenza virus with other respiratory manifestations" based on review of its tabular list entry. The tabular entry includes the J11.1 code and its description and notes (e.g., Use additional code). J11.1 is then selected as the code to be reported on the claim. (Codes associated with the "Use additional code" notes were not documented in the patient record and, thus, not reported.)



Source: Optum360

Computer-assisted coding (CAC) uses software to automatically generate medical codes by analyzing clinical documentation located in the electronic health record (EHR) or electronic medical record (EMR) (and provided by health care practitioners) (Figure 1-2). CAC uses "natural language processing" technology to generate codes that are reviewed and validated by coders for reporting on third-party payer claims. Similar to the medical editor's role in ensuring the accuracy of reports produced from speech recognition technology, the coder's role changes from that of data entry to validation or audit. The coder reviews and approves the CAC-assigned codes, improving efficiency and offering expanded career opportunities for enthusiastic coders. Coders use data analytic skills to review CAC-generated codes and determine which are to be reported. Data analytic skills allow coders to review codes generated by CAC software, compare codes to documentation in the electronic health record, and select appropriate codes to report for reimbursement purposes. Thus, coders use basic data analytic skills to turn data (e.g., CAC-assigned code) into action (coder-reviewed and approved code) using a logical and efficient method.

Coding auditors perform **evidence-based coding**, also referred to as **evidence-verification coding**, which involves clicking on codes that CAC software generates (Figure 1-3) to review electronic health record

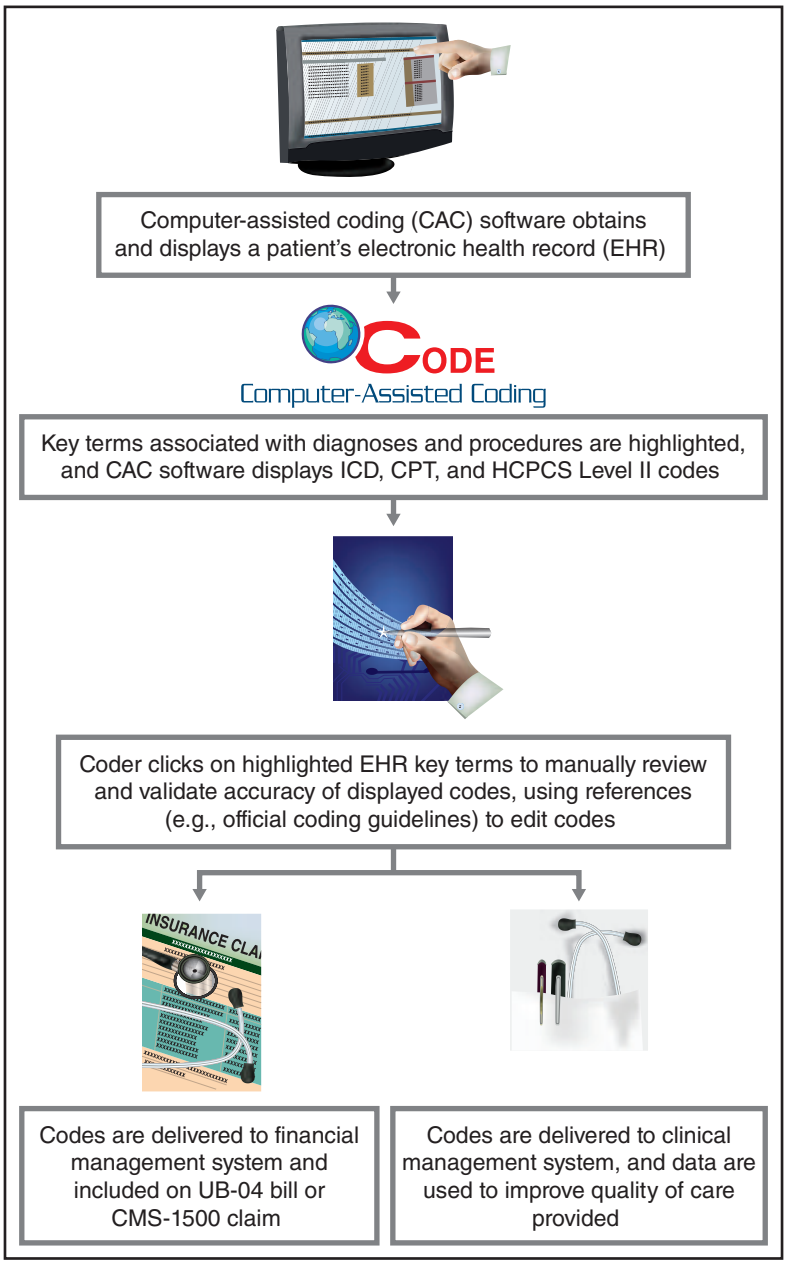
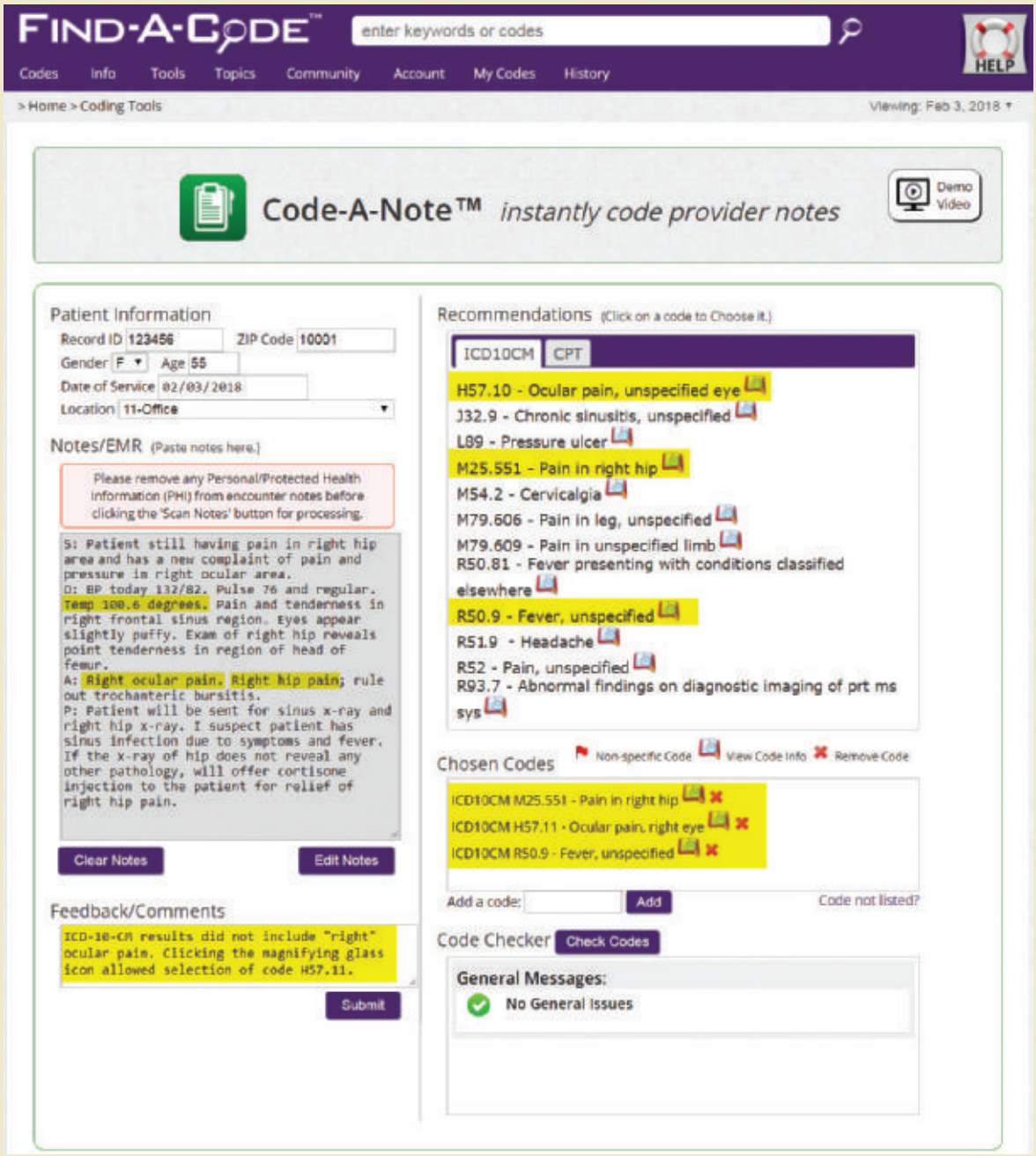


FIGURE 1-2 Computer-assisted coding (CAC)

documentation (evidence) used to generate the code. When it is determined that documentation supports the CAC-generated code, the coding auditor clicks to accept the code. When documentation does not support the CAC-generated code, the coding auditor replaces it with an accurate code. For example, when the CAC-generated ICD-10-CM code does not indicate laterality or does not include a manifestation code, the coding auditor edits codes to ensure accurate reporting.

Example of Computer-Assisted Coding: A physician office EMR note is pasted into the *Code-A-Note* CAC product (published by Find-A-Code, LLC), and the *Scan Notes* link in the software is clicked to generate a list of possible ICD-10-CM, CPT, and HCPCS Level II codes. The software's list of ICD-10-CM codes requires the coder to compare patient record documentation of diagnoses and conditions to select codes for reporting on the health insurance claim. Likewise, the software's list of CPT and HCPCS Level II codes requires the coder to compare patient record documentation of procedures and services to select codes for reporting on the health insurance claim. (In this case, the provider had already selected the appropriate CPT evaluation and management service code from the encounter form.)



Source: www.findacode.com

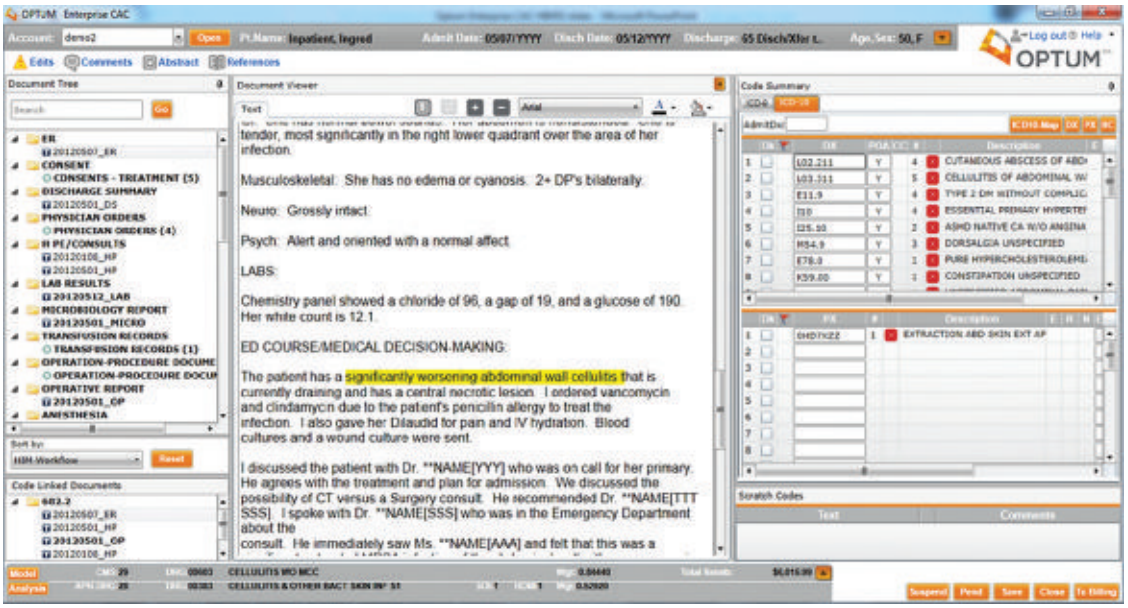


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FIGURE 1-3 Sample screen from Optum360 Enterprise computer-assisted coding (CAC) software

Exercise 1.3 – Coding Systems and Processes

Instructions: Complete each statement.

1. A medical nomenclature that is organized according to similar conditions, diseases, procedures, and services, and contains codes for each is called a _____ (or classification) system.
2. All diagnoses, whether patients are treated as inpatients or outpatients, or at physician offices, are coded using the _____ classification system.
3. Inpatient hospital procedures and services are coded using the _____ classification system.
4. A public or private entity that processes or facilitates the processing of health information and claims from a nonstandard to a standard format is called a health care _____.
5. Routinely assigning lower-level CPT codes for convenience instead of reviewing patient record documentation and the coding manual to determine the proper code to be reported is called _____.
6. Reporting codes that are not supported by documentation in the patient record for the purpose of increasing reimbursement is called _____.
7. Reporting codes for signs and symptoms in addition to the established diagnosis code is called _____.
8. Reporting multiple codes to increase reimbursement when a single combination code should be reported is called _____.
9. Coders should always avoid assumption coding, and can do so by generating a physician _____ when documentation needs clarification prior to the assignment of codes.
10. Software that automatically generates medical codes by analyzing clinical documentation in the electronic health record or electronic medical record is called _____.

Other Classification Systems, Databases, and Nomenclatures

In addition to the ICD-10-CM, ICD-10-PCS, HCPCS Level II national, and CPT coding systems, health care providers use the following classifications, clinical vocabularies, databases, and nomenclatures:

- *Alternative Billing Codes* (ABC codes)
- *Clinical Care Classification* (CCC) *System*
- *Current Dental Terminology* (CDT)
- *Diagnostic and Statistical Manual of Mental Disorders* (DSM)
- *Health Insurance Prospective Payment System* (HIPPS) Rate Codes
- *International Classification of Diseases for Oncology, Third Edition* (ICD-O-3)
- *International Classification of Functioning, Disability and Health* (ICF)
- Logical Observation Identifiers Names and Codes (LOINC®)
- *National Drug Codes* (NDC)
- RxNorm
- *Systematized Nomenclature of Medicine Clinical Terms* (SNOMED CT)
- Unified Medical Language System (UMLS)

NOTE:

A *database* allows for the storage of comprehensive and accurate information that serves a critical function in health care, including

- Administration (e.g., financial data)
- Education and research (e.g., cures for disease)
- Patient care (e.g., improving treatment methods)

Alternative Billing Codes (ABC Codes)

The *Alternative Billing Codes* (ABC codes) classify services not included in the CPT manual to describe the service, supply, or therapy provided; they may also be assigned to report nursing services and alternative medicine procedures. Codes are five characters in length, consisting of letters, and are supplemented by two-digit code modifiers to identify the practitioner performing the service.

HIPAA authorized the Secretary of DHHS to permit exceptions from HIPAA transaction and code set standards to commercialize and evaluate proposed modifications to those standards. The ABC code set was granted that exception in 2003, and the codes were being commercialized and evaluated through 2005. The intent was for ABC codes to be adopted as part of the electronic code set (as HCPCS Level I and Level II were in 2000); however, in 2006, ABC codes could no longer be used in electronic claims processing.

Example: During an office visit, an acupuncture physician assessed the health status of a new client and developed a treatment plan, a process that took 45 minutes. ABC code ACAAC-1C is assigned.

Clinical Care Classification (CCC) System

The *Clinical Care Classification* (CCC) *System* includes care components that classify each of three interrelated CCC terminologies:

- CCC of Nursing Diagnoses
- CCC of Nursing Interventions and Actions
- CCC of Nursing Outcomes

CCC care components represent behavioral, functional, physiological, and psychological patterns of clinical nursing care. CCC codes classify the standards of the American Nurses Association (ANA), which include assessment, diagnosis, evaluation, implementation, outcome identification, and planning.

Example: 73-year-old female patient discharged from the hospital after treatment for acute myocardial infarction presents today for the scheduled outpatient cardiac rehabilitation sessions. Assign CCC code C08.1.4 (manage cardiac rehabilitation).

Current Dental Terminology (CDT)

The *Current Dental Terminology* (CDT) is published by the American Dental Association (ADA) as an annual revision. It classifies dental procedures and services. Dental providers and ambulatory care settings use the CDT to report procedures and services. CDT codes are also included in HCPCS Level II, beginning with the first digit of D. The CDT also includes the Code on Dental Procedures and Nomenclature (Code), instructions for use of the Code, questions and answers, ADA dental claim form completion instructions, and tooth numbering systems.

Example: Patient underwent incision and drainage of intraoral soft tissue abscess. CDT code D7510 is assigned.

Diagnostic and Statistical Manual of Mental Disorders (DSM)

The ***Diagnostic and Statistical Manual of Mental Disorders*** **(DSM)** is published by the American Psychiatric Association as a standard classification of mental disorders used by mental health professionals in the United States. The first edition was published in 1952, and subsequent revisions have been published as:

- DSM-II (1968)
- DSM-III (1980)
- DSM-III-R (1987)
- DSM-IV (1994)
- DSM-IV-TR (2000) (This includes a *text revision* to correct DSM-IV errors, the updating of codes according to ICD-9-CM or ICD-10-CM annual revisions, and so on.)
- DSM-5 (2014)

  DSM-5 is designed for use in a variety of health care settings and consists of three major components:

  - Diagnostic classification
  - Diagnostic criteria sets
  - Descriptive text

According to the Substance Abuse and Mental Health Services Administration (**www.samhsa.gov**), DSM-5 focuses on a "lifespan perspective [by] recognizing the importance of age and development on the onset, manifestation, and treatment of mental disorders." DSM-5 also eliminates "the multi-axial system, removing the *Global Assessment of Functioning (GAF score)* and reorganizing the classification of disorders and changing how disorders that result from a general medical condition are conceptualized. DSM-IV and DSM-5 both categorize disorders into *classes* with the intent of grouping similar disorders (particularly those that are suspected to share etiological mechanisms or have similar symptoms) to help clinicians and researchers use the manual. [In] DSM-5, there has been a reclassification of many disorders that reflects a better understanding of the classifications of disorders from emerging research or clinical knowledge."

Example: DMS-V separately classifies *bipolar and related disorders, depressive disorders,* and *anxiety disorders* (instead of incorporating them as *mood disorders* in DSM-IV).

DSM-5 eliminated the class of *disorders usually first diagnosed in infancy, childhood, or adolescence* and placed such disorders within other classes. For example, *Tic Disorders* are classified as *Neurodevelopmental Disorders* in DSM-5 (instead of *Disorders usually first diagnosed in infancy*, as in DSM-IV).

Health Insurance Prospective Payment System (HIPPS) Rate Codes

The *Health Insurance Prospective Payment System* (HIPPS) rate codes are alphanumeric codes consisting of five digits. Each HIPPS code contains intelligence, with certain positions of the code indicating the case-mix group itself and other positions providing additional information (e.g., information about the clinical assessment used to arrive at the code). HIPPS was created as part of the prospective payment system for skilled nursing facilities in 1998. Additional HIPPS codes were created for other prospective payment systems, including a system for home health agencies in October 2000, and one for inpatient rehabilitation facilities in January 2002. The HIPPS represents specific sets of patient characteristics (or case-mix groups) on which payment determinations are made under several prospective payment systems. HIPPS codes are not assigned from a coding manual; they are created when information for a data set is entered into software.

Example: The home health prospective payment system (HHPPS) requires entry of the Outcome and Assessment Information Set (OASIS) data set into grouper software, which generates the five-digit alphanumeric HIPPS code that is entered on the UB-04 claim. For example, HIPPS code HAEJ1 is entered on the UB-04 claim.

International Classification of Diseases for Oncology, Third Edition (ICD-O-3)

The ***International Classification of Diseases for Oncology, Third Edition*** **(ICD-O-3)** was implemented in 2001 as a classification of neoplasms used by cancer registries throughout the world to record incidence of malignancy and survival rates. The data produced are used to provide information for cancer control programs (e.g., National Comprehensive Cancer Control Program), research activity, treatment planning, and health economics. (The first edition of ICD-O was published in 1976, and a revision of topography codes was published in 1990.) ICD-O-3 codes classify a tumor in the following way:

- Primary site (four-character topography code)
- Morphology (six-character code)
  - Four-digit histology (cell type) code
  - One-digit behavior code (such as malignant, benign, and so on)
  - One-digit aggression code (differentiation or grade)

Example: Fibrosarcoma of the left knee. ICD-O-3 codes C49.2 (Knee, NOS) and M8810/39 (Fibrosarcoma, NOS) are assigned.

ICD-O Morphology Codes

ICD-O morphology codes indicate the type of cell that has become neoplastic and its biologic activity; in other words, the kind of tumor that developed and how it behaves. There are three parts to a complete morphology code:

- M as the first character of each morphology code
- 4-digit cell type (histology) (e.g., 8010)
- 1-digit behavior (e.g., /o)
- 1-digit grade, differentiation, or phenotype (e.g., /x1)

A common root codes the cell type of a tumor, an additional digit codes the behavior, and yet another additional digit codes the grade, differentiation, or phenotype to provide supplementary information about the tumor.

Cancer and Carcinoma

The words *cancer* and *carcinoma* are often (incorrectly) used interchangeably. For example, squamous cell cancer is often used for squamous cell carcinoma. Both conditions happen to have the same ICD-10-CM code.

However, a condition such as "spindle cell cancer" could refer to "spindle cell sarcoma" or "spindle cell carcinoma." Each condition has an entirely different ICD-10-CM code assigned to it.

Behavior

The behavior of a tumor is the way it acts within the body. Pathologists use a variety of observations to characterize the behavior of a tumor. A tumor can grow in place without the potential for spread (/0, benign); it can be malignant but still growing in place (/2, noninvasive or in situ); it can invade surrounding tissues (/3, malignant, primary site); or it can disseminate from its point of origin and begin to grow at another site (/6, metastatic).

Fifth-Digit Behavior Codes for Neoplasms

Code	Behavior of Neoplasm
/0	Benign
/1	Uncertain whether benign or malignant Borderline malignancy Low malignant potential Uncertain malignant potential
/2	Carcinoma in situ Intraepithelial Noninfiltrating Noninvasive
/3	Malignant, primary site
/6	Malignant, metastatic site Malignant, secondary site
/9	Malignant, uncertain whether primary or metastatic site

NOTE:

Cancer registries collect data on malignant and in situ neoplasms, or /2 and /3 behavior codes. They do not collect data about behavior codes /6, malignant, metastatic site, or /9, malignant, uncertain whether primary or metastatic site. For example, carcinoma that has spread to the lung and for which the site of origin is unknown is assigned ICD-10-CM code C80.1 (unknown primary site) and ICD-O code M-8010/3 (carcinoma). (The /3 signifies the existence of a malignant neoplasm of a primary site.)

Use of Behavior Code in Pathology Laboratories

Pathologists are usually interested in "specimen coding" (whereas a cancer registry identifies just the primary tumor). A pathologist receives the following tissue specimens on the same patient:

- Biopsy of supraclavicular lymph node
- Resection of fundus of stomach
- Resection of upper lobe bronchus

The pathologist has to track each of these specimens (while the cancer registry tracks only the primary cancer). Each pathological specimen is coded with the appropriate topography and morphology; for example, the term "metastatic" in the pathological diagnosis for tissue specimen, "supraclavicular lymph node (biopsy)," results in assignment of behavior character /6.

Tissue Specimen	Pathological Diagnosis	Codes
Supraclavicular lymph node (biopsy)	Metastatic signet ring cell adenocarcinoma, most likely from stomach (metastatic site)	C77.0 M8490/6
Fundus of stomach (resection)	Signet ring cell adenocarcinoma (primary site)	C16.1 M8490/3
Upper lobe bronchus (resection)	Metastatic signet ring cell adenocarcinoma (metastatic site)	C34.10 M8490/6

Code for Histologic Grading and Differentiation

The highest grade code is assigned according to the description documented in the diagnostic statement. The sixth digit of the morphology code is a single-digit code number that designates the grade of malignant neoplasms. Only malignant tumors are graded. The practice of assigning codes for Histologic grading varies greatly among pathologists throughout the world, and many malignant tumors are not routinely graded.

Sixth Digit Code for Histologic Grading and Differentiation

Code	Grade	Differentiation
1	I	Well differentiated Differentiated, NOS
2	II	Moderately differentiated Moderately well differentiated Intermediate differentiation
3	III	Poorly differentiated
4	IV	Undifferentiated anaplastic
9		Grade or differentiation not determined, not stated or not applicable

Differentiation describes how much or how little a tumor resembles the normal tissue from which it arose. There is great variability in pathologists' use of differentiation descriptors. In general, adverbs such as *well, moderately,* and *poorly* indicate degrees of differentiation, which map to grades I, II, and III. Adjectives such as *undifferentiated* and *anaplastic* usually map to grade IV. Grading codes are assigned to all malignant neoplasms listed in ICD-O *if the diagnosis documents the grade and/or differentiation*.

Example: The diagnosis *squamous cell carcinoma, grade* II, which is described as *moderately well differentiated squamous cell carcinoma*, is assigned morphology code M-8070/32.

When a diagnosis indicates two different degrees of grading or differentiation, the higher number is assigned as the grading code.

Example: *Moderately differentiated squamous cell carcinoma with poorly differentiated areas* is assigned grading code 3, and the morphology code is M-8070/33.

This same sixth-digit column is also used to indicate cell lineage for leukemias and lymphomas, which provides useful ICD-O-3 comparison data (with ICD-O-2). Cell lineage is implicit in the four-digit histology code, and an additional grade of differentiation (sixth digit) code is not required. However, some registries assign the sixth digit to identify cases in which the diagnosis is supported by immunophenotypic data. In such instances, the immunophenotype code takes precedence over other diagnostic terms for grade or differentiation (e.g., well differentiated, grade III).

Sixth Digit for Immunophenotype Designation for Lymphomas and Leukemias

Code	Designation
5	T-cell
6	B-cell
	Pre-B
	B-precursor
7	Null cell
	non-T, non-B
8	NK cell
	Natural killer cell
9	Cell type not determined, not stated, or not applicable

International Classification of Functioning, Disability and Health (ICF)

The ***International Classification of Functioning, Disability and Health*** **(ICF)** classifies health and health-related domains that describe body functions and structures, activities, and participation. (The ICF was originally published as the *International Classification of Injuries, Disabilities, and Handicaps (ICIDH)* in 1980.) The ICF complements ICD-10, looking beyond mortality and disease.

Example: A trauma patient is evaluated two years after the initial injury, and the physician determines that the patient has a severe impairment in mental function as well as a severe impairment of the upper extremity. The patient experiences moderate difficulty in bathing without the use of assistive devices. Products for education are a moderate barrier for this patient. The following ICF codes are assigned:

- b175.3 (severe impairment in mental function)
- s730.3 (severe impairment of the upper extremity)
- a5101.2 (moderate difficulty bathing without use of assistive devices)
- e145.2 (products for education are a moderate barrier)

Logical Observation Identifiers Names and Codes (LOINC®)

Logical Observation Identifiers Names and Codes (LOINC®) is an electronic database and universal standard that is used to identify medical laboratory observations and for the purpose of clinical care and management. Developed in 1994, it is currently maintained by the Regenstrief Institute, a U.S. nonprofit medical research organization. Health care providers use LOINC® codes when reportable disease results are sent to state and federal public health laboratories.

The Centers for Disease Control and Prevention (CDC) has developed a LOINC® panel specifically for public health case reporting called the Reportable Condition Mapping Tool (RCMT). This panel should be of considerable assistance to health care providers in identifying the correct LOINC® code for their reports. Laboratories are also required to archive LOINC® codes for test results they receive from other laboratories to which they have referred specimens and, similarly, referral laboratories should provide their clients with LOINC® codes when sending results.

Example: The complete blood count (CBC) laboratory test of blood (without differential) is assigned LOINC® code 24317-0.

National Drug Codes (NDC)

The ***National Drug Codes*** **(NDC)** is published by a variety of vendors, and the coding system is in the public domain. It is managed by the Food and Drug Administration (FDA) and was originally established as part of an out-of-hospital drug reimbursement program under Medicare Services as a universal product identifier for human drugs. The current edition is limited to prescription drugs and a few selected over-the-counter (OTC) products. Pharmacies use NDC to report transactions, and some health care professionals also report NDC on claims.

Example: Aspirin tablets, 800 milligrams, is assigned NDC code 64125-*106-01. (There are many different NDC codes for aspirin, depending on dosage, manufacturer, and so on.)

RxNorm

RxNorm is a nomenclature that provides normalized names for clinical drugs and links drug names to many of the drug vocabularies commonly used in pharmacy management and drug interaction software, including those of First Databank, Micromedex, MediSpan, Gold Standard Drug Database, and Multum. By providing links

among these vocabularies, RxNorm can mediate messages among systems that do not use the same software and vocabulary.

RxNorm is a normalized naming system for generic and branded drugs, and it is a tool for supporting semantic interoperation among drug terminologies and pharmacy knowledge base systems. The National Library of Medicine (NLM) produces RxNorm. The NLM receives drug names from many data sources, analyzes and processes the data, and outputs the data into RxNorm files in a standard format.

Purpose of RxNorm

RxNorm is a terminology built on and derived from other terminologies. RxNorm reflects and preserves the meanings, drug names, attributes, and relationships from its sources. Hospitals, pharmacies, and other organizations use computer systems to record and process drug information. Because these systems use many different sets of drug names, it can be difficult for one system to communicate with another. To address this challenge, RxNorm provides normalized names and unique identifiers for medicines and drugs. The goal of RxNorm is to allow computer systems to communicate drug-related information efficiently and unambiguously.

Scope of RxNorm

RxNorm contains the names of prescription and many OTC drugs available in the United States.

RxNorm includes generic and branded:

- Clinical drugs (pharmaceutical products given to or taken by a patient with therapeutic or diagnostic intent)
- Drug packs (packs that contain multiple drugs, or drugs designed to be administered in a specified sequence)
- Radiopharmaceuticals, bulk powders, contrast media, food, dietary supplements, and medical devices, such as bandages and crutches, which are out of scope for RxNorm

NOTE:

RxNorm also includes the National Drug File—Reference Terminology (NDF-RT), created for the Veterans Health Administration. NDF-RT is a terminology used to code clinical drug properties, including mechanism of action, physiologic effect, and therapeutic category.

Example: When Synthroid is entered in the RxNorm database, results display levothyroxine as the ingredient and Levothyroxine Sodium as the precise ingredient. In addition, all possible dosages of the ingredient and brand name are listed under the clinical drug component, branded drug component, clinical drug or pack, and branded drug or pack. Oral product or pill is listed below the dose form group, with expanded information listed below the clinical dose form group and branded dose form group.

Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT)

The ***Systematized Nomenclature of Medicine Clinical Terms*** **(SNOMED CT)** is a comprehensive and multilingual clinical terminology of body structures, clinical findings, diagnoses, medications, outcomes, procedures, specimens, therapies, and treatments. It combines the content and structure of a previous revision of SNOMED with the following medical nomenclatures:

- United Kingdom's *National Health Service's Clinical Terms Version 3* (formerly called *Read Codes*, developed in the early 1980s by Dr. James Read to record and retrieve primary care data in a computer)
- *Logical Observation Identifier Names and Codes (LOINC®)* database, which provides a universal code system for reporting laboratory and other clinical observations

SNOMED CT supports the development of comprehensive high-quality clinical content in patient records; it provides a standardized way to represent clinical phrases documented by clinicians, facilitating automatic interpretation (e.g., computer-assisted coding).

Unified Medical Language System (UMLS)

The **Unified Medical Language System (UMLS)** is a set of files and software that allows many health and biomedical vocabularies and standards to enable interoperability among computer systems. UMLS can be used to enhance or develop applications, including electronic health records, classification tools, dictionaries, and language translators. The UMLS is used to link health information, medical terms, drug names, and billing codes across different computer systems.

Example 1: UMLS is used to link billing codes, drug names, medical terms, and health information across different computer systems, such as among a patient's health care provider, pharmacy, and third-party payer or patient care coordination among several departments within a hospital.

Example 2: UMLS uses include search engine retrieval, data mining, public health statistics reporting, and medical terminology research.

The UMLS contains three tools, called Knowledge Sources, which include the following:

- Metathesaurus (terms and codes from many vocabularies, including CPT, ICD-10-CM, LOINC®, MeSH®, RxNorm, and SNOMED CT) (MeSH is the National Library of Medicine's controlled vocabulary thesaurus.)
- Semantic network (broad categories, which are semantic types, and their relationships, which are semantic relations)
- SPECIALIST lexicon and lexical tools (natural language processing tools)

Exercise 1.4 – Other Classification Systems and Databases

Instructions: Complete each statement.

1. The classification of neoplasms used by cancer registries throughout the world to record incidence of malignancy and survival rates is called the _____.
2. Specific sets of patient characteristics (or case-mix groups) on which payment determinations are made under several prospective payment systems is represented by the _____.
3. The set of files and software that allows many health and biomedical vocabularies and standards to enable interoperability among computer systems is called the _____.
4. The coding system that is used to classify dental procedures and services is called the _____.
5. The system that classifies health and health related domains to describe body functions and structures, activities, and participation is called the _____.
6. The system that classifies services not included in the CPT manual to describe the service, supply, or therapy provided and may also be assigned to report nursing services and alternative medicine procedures is called _____.
7. The nomenclature that provides normalized names for clinical drugs and links its names to many of the drug vocabularies commonly used in pharmacy management and drug interaction software is called _____.

(continues)