

Medical Coding and Billing I

8388 18 weeks

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Course Description

Suggested Grade Level: 11 or 12

Students will be introduced to healthcare systems, how to manage an office, and the electronic medical record as it pertains to the field of medical coding and billing. Students will be exposed to the medical terminology used to describe human anatomy and physiology. Students will also be introduced to the field of health informatics.

Task Essentials Table

- Tasks/competencies designated by plus icons (⊕) in the left-hand column(s) are essential
- Tasks/competencies designated by empty-circle icons (○) are optional
- Tasks/competencies designated by minus icons (⊖) are omitted
- Tasks marked with an asterisk (*) are sensitive.

8388	Tasks/Competencies
Understanding the U.S. Healthcare System	
⊕	Highlight the major developments of healthcare history.
⊕	Differentiate among the types of health insurance.
⊕	Differentiate among the types of medical care delivery systems.
⊕	Describe the roles of healthcare team members and the responsibilities of each member.

8388	Tasks/Competencies
+	Differentiate among the scope and roles of the Virginia Department of Health Professions and the Virginia Department of Health.
+	Examine the impact of the Internet on the healthcare industry and on the individual consumer.
+	Describe an indemnity plan.
+	Define basic terms found in an insurance contract.
+	Demonstrate the completion of a treatment authorization request form.
+	Describe how medical limits may affect an insurance carrier's payment on a claim.
+	Explain what the Consolidated Omnibus Budget Reconciliation Act (COBRA) is and how it affects coverage for preexisting conditions.
Identifying Legal and Ethical Issues in Health Care Practices	
+	Describe the purpose of Occupational Safety and Health Administration (OSHA) regulations as they relate to working in a medical office.
+	Explain confidentiality and its connection to the Health Insurance Portability and Accountability Act (HIPAA).
+	Describe the procedures for handling pharmaceuticals in the office.
+	Identify the Principles of Medical Ethics (e.g., case studies, role playing, research papers).
+	Conduct research on medical cases, legal or ethical issues, medications, new medical procedures, or malpractice information.
Understanding Health Informatics	
+	Describe the role of technology in the healthcare field.
+	Describe techniques for confidential communication of health/medical information within legal/regulatory guidelines.
+	Demonstrate the assessment of abstracted information from medical records and other documents, applying knowledge of medical terminology.
Introducing the Electronic Health Record (EHR)	
+	Define electronic health record (EHR).
+	Explain the core functions of an electronic health record (EHR).
+	Identify different formats and components of an electronic health record (EHR).
+	Describe a codified electronic health record (EHR) system.
+	Explain how billing codes are used in an electronic health record (EHR) system.
Understanding Medical Terminology	
+	Explain how medical terms are developed.
+	Define common medical word roots.
+	Define common medical word prefixes.
+	Define common medical word suffixes.
+	Demonstrate pronunciation of medical terms.
+	Apply the components of medical terminology (i.e., prefixes, word roots, suffixes).
Understanding Medical Abbreviations	
+	Explain medical abbreviations related to body systems.
+	Identify medical abbreviations related to pathological conditions.
+	Identify medical abbreviations related to diagnostic procedures.
+	Explain medical abbreviations related to documentation.

8388	Tasks/Competencies
+	Identify medical abbreviations related to pharmacology.
+	Identify abbreviations related to healthcare regulations and regulatory systems.
Understanding the History of Medical Coding and Billing	
+	Research the historical timeline of medical coding and billing.
+	Explain the history of medical coding and billing documents.
Understanding Medical Practice Administration	
+	Describe the basic job requirements of a medical coder.
+	Describe the job responsibilities of a medical biller.
+	Identify common medical practice staff members and their job titles.
Understanding Medical Practice Accounting	
+	Explain the functions of ledger cards and patient statements.
+	Explain how to use a daily journal.
+	Demonstrate how to post payments to a patient account.
+	Demonstrate how to create a payment plan.
+	Demonstrate how to make a collection call.
+	Demonstrate how to balance petty cash, a petty cash count slip, and petty cash receipts.

Legend: + Essential ○ Non-essential ⊖ Omitted

Curriculum Framework

Understanding the U.S. Healthcare System

Task Number 39

Highlight the major developments of healthcare history.

Definition

Highlights should include

- the Hippocratic Oath
- development of microscopy
- discovery of microbes as cause of disease
- history of medicines and pharmacy practice
- evolution of nursing practices

- aseptic procedures and their impact on medical care
- Vaccines for Children program
- U.S. Department of Health and Human Services
- Office of Public Health Preparedness and Response
- Patient Protection and Affordable Care Act.

Process/Skill Questions

- What is the Hippocratic Oath? Why was it developed?
- How did the development of microscopy and the discovery of microorganisms impact the medical care of infectious diseases?
- What discoveries or inventions improved surgical procedures and patient survival?
- How have the roles of nurses changed in the last century?
- What is the purpose of the Patient Protection and Affordable Care Act?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- Creative Problem Solving
- HOSA Bowl

Task Number 40

Differentiate among the types of health insurance.

Definition

Differentiation should include

- preferred provider organization (PPO)
- health maintenance organization (HMO)
- Medicare
- Medicaid
- private insurance
- managed care
- workers' compensation
- State Children's Health Insurance Program (SCHIP)

- Patient Protection and Affordable Care Act
- TRICARE
- diagnosis-related groups
- health savings accounts
- Railroad Retirement Program benefits
- Veterans Affairs benefits.

Where applicable, differentiation should include elements of health insurance:

- Premiums
- Deductibles
- Co-insurance
- Copayment

Process/Skill Questions

- Why are there various types of health insurance?
- Who determines who is eligible for various types of health insurance?
- What happens to patients who are not insured?
- How are Medicare and Medicaid similar? How are they different?
- How has the development of managed care impacted the cost of medical care?
- What is the difference between an HMO and a PPO?
- What is the purpose of workers' compensation?
- What does the Patient Protection and Affordable Care Act provide related to coverage, cost, and care?
- What happens to citizens who do not comply with the “minimum essential” health insurance coverage requirement?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- Creative Problem Solving
- HOSA Bowl

Task Number 41

Differentiate among the types of medical care delivery systems.

Definition

Differentiation should include

- emergency medical services
- primary care physician's offices
- hospital emergency rooms
- urgent care centers
- community health clinics
- free clinics
- home health care
- assisted living facilities, nursing homes, independent living facilities, and retirement centers
- rehabilitation centers
- hospice care
- public health facilities
- ambulatory facilities
- mental health centers
- physical and occupational therapy offices
- Program of All-Inclusive Care for the Elderly (PACE)
- pharmacies.

Process/Skill Questions

- What is the difference in the type of medical care given by each of the various medical care delivery systems?
- How does a community benefit from having a variety of healthcare delivery systems?
- What types of career opportunities are available within the various types of healthcare delivery systems?
- What are the differences among assisted living facilities, nursing homes, and independent living facilities?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- Creative Problem Solving

- HOSA Bowl

Emergency Preparedness Events

- MRC Partnership
-

Task Number 42

Describe the roles of healthcare team members and the responsibilities of each member.

Definition

Description should include roles of healthcare workers who are typically part of a healthcare team, such as those listed below, along with the responsibilities of each member:

- Physicians
- Pharmacists
- Physician assistants
- Nurse practitioners
- Registered nurses
- Psychiatrists
- Psychologists
- Physical/Occupational therapists
- Social workers
- Nutritionists
- Certified nurse aides
- Patient care technicians
- Dentists/hygienists/assistants
- Opticians/technicians
- Respiratory therapists
- Physical therapists
- Volunteers
- Speech pathologists
- Dietitians
- Chaplains
- Medical assistants

Process/Skill Questions

- Why is it important for healthcare professionals to be able to work positively in a team setting?

- What are the roles of various team members in the different medical care delivery systems?
- What is the chain of command in the various medical care delivery systems?
- What is an interdisciplinary healthcare team?
- What are the characteristics of effective team members?
- What are the best methods for building positive team relationships?

Common Career Technical Core

HL2

Explain the healthcare worker's role within their department, their organization, and the overall healthcare system.

HL4

Evaluate the roles and responsibilities of individual members as part of the healthcare team and explain their role in promoting the delivery of quality health care.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling

Health Professions Events

- Clinical Specialty

Leadership Events

- Interviewing Skills
- Job-Seeking Skills
- Medical Photography

Teamwork Events

- Health Career Display
- Creative Problem Solving
- HOSA Bowl

Recognition

- MRC Volunteer Recognition

Task Number 43

Differentiate among the scope and roles of the Virginia Department of Health Professions and the Virginia Department of Health.

Definition

Differentiation should include a contrast between the scope and functions of the [Virginia Department of Health Professions](#) and those of the [Virginia Department of Health](#).

Process/Skill Questions

- What is the function of the Virginia Department of Health?
- How does the Department of Health reach those in the community?
- What is the function of the Virginia Department of Health Professions?
- Why is a regulatory agency needed for the healthcare industry?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Leadership Events

- Interviewing Skills
- Job-Seeking Skills

Teamwork Events

- Health Career Display
- Creative Problem Solving
- HOSA Bowl

Task Number 44

Examine the impact of the Internet on the healthcare industry and on the individual consumer.

Definition

Examination should include online security issues, such as

- websites
- health insurance
- health savings accounts
- online access
- explanation of benefits
- online medical records
- medical and pharmaceutical information
- National Library of Medicine
- medical support groups
- community service projects
- volunteer opportunities
- the capability to order prescriptions and other health-related purchases online
- the impact of technology on the delivery of health care
- the cost impact of technology on the delivery of health care
- clear communication with healthcare professionals.

Process/Skill Questions

- How do we know that protected health information is being protected on the Internet?
- What are the advantages and disadvantages of the availability of medical information on the Internet?
- How can you determine which sites are reputable for accurate and updated medical information?
- What are the dangers of ordering pharmaceuticals and prescriptions online from foreign countries (e.g., Canada, Germany, and Mexico)?
- What types of medical support groups are available online?
- What types of community service projects or volunteer opportunities are available on the Internet?
- What are the civic and social responsibilities of the healthcare professional?
- How can information technology enhance the nursing practice?
- What are the advantages and disadvantages of using online media to improve health behavior?

Common Career Technical Core

HL5

Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling

- Medical Terminology
- Knowledge Test: Medical Law and Ethics

Teamwork Events

- Creative Problem Solving
 - HOSA Bowl
-

Task Number 45

Describe an indemnity plan.

Definition

Description should include the following:

- Traditional forms of commercial insurance
- Fee for service
- Indemnity plans that require insurance premium payments
- Deductible
- Percentage plans
- Indemnity plan brands

Process/Skill Questions

- What is an 80/20 plan? A 70/30 plan?
- Why does a deductible have to be met?
- What does the term fee for service mean?

HOSA Competitive Events (High School)

Teamwork Events

- HOSA Bowl
-

Task Number 46

Define basic terms found in an insurance contract.

Definition

Defining should include the following terms:

- Eligibility effective date
- Termination of coverage
- Preauthorization
- Precertification
- Preauthorization form
- Authorized treatment record form
- Basic benefits
- Accident benefits
- Preadmission testing
- Second surgical opinion
- Outpatient facility charges
- Coordination of benefits
- Order of benefits
- 13 rules

Process/Skill Questions

- Why is the preauthorization of medical procedures necessary?
- How do accident benefits vary from basic benefits in regard to payment?
- Who initiates second surgical opinions?

HOSA Competitive Events (High School)

Health Science Events

- Medical Terminology

Teamwork Events

- HOSA Bowl

Task Number 47

Demonstrate the completion of a treatment authorization request form.

Definition

Demonstration should include manually and electronically completing a treatment authorization request form using a scenario-based script.

Process/Skill Questions

- What data must be obtained for the completion of a treatment authorization request form?
- Where does the treatment authorization request form go once completed?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Specialty
-

Task Number 48

Describe how medical limits may affect an insurance carrier's payment on a claim.

Definition

Description should include the following:

- Deductible
- Carryover provision
- Family deductible
- Aggregate deductible
- No aggregate deductible
- Health savings account
- Coinsurance
- Coinsurance limit
- Out of pocket limit
- Preexisting conditions
- HIPAA and preexisting conditions
- Patient Protection and Affordable Care Act

Process/Skill Questions

- How do you process a claim with coinsurance?
- What are preexisting conditions?
- Who does the Patient Protection and Affordable Care Act protect?

HOSA Competitive Events (High School)

Health Science Events

- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Task Number 49

Explain what the Consolidated Omnibus Budget Reconciliation Act (COBRA) is and how it affects coverage for preexisting conditions.

Definition

Explanation should include the following:

- Definition of *COBRA*
- COBRA rates
- Preexisting conditions clause
- Denial of insurance

Process/Skill Questions

- Why are COBRA benefits necessary for families?
- How does one receive health coverage if denied for insurance?
- Who created COBRA?

HOSA Competitive Events (High School)

Health Science Events

- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Identifying Legal and Ethical Issues in Health Care Practices

Task Number 50

Describe the purpose of Occupational Safety and Health Administration (OSHA) regulations as they relate to working in a medical office.

Definition

Description should include

- definition of *OSHA*
- precautions taken relating to clothing, personal hygiene, housekeeping, record keeping, and training to minimize the risk of disease or injury
- identification of areas that require compliance with OSHA regulations
- procedures for dealing with disposal of biohazardous waste.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Medical Law and Ethics

Teamwork Events

- HOSA Bowl
-

Task Number 51

Explain confidentiality and its connection to the Health Insurance Portability and Accountability Act (HIPAA).

Definition

Explanation should include

- types of patient information that must be kept confidential (e.g., demographic data, medical records, test results, appointment information, financial information)
- formats of patient information that must be kept confidential (e.g., printed data, handwritten data, electronic data, X-ray and other test reports)
- how the information is stored to ensure privacy
- the importance of maintaining patient confidentiality in and away from the workplace
- the need to inform patients of their right to privacy
- the role of HIPAA in legally mandating patient privacy across the United States.

Process/Skill Questions

- What types of patient information are considered confidential?
- What initiated the need for HIPAA? How has this legislation influenced the healthcare industry?
- What types of patient information can be released to other healthcare providers and third-party payers?

Common Career Technical Core

HL5

Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Medical Law and Ethics
- Knowledge Test: Transcultural Health Care

Teamwork Events

- Health Education
- HOSA Bowl

Task Number 52

Describe the procedures for handling pharmaceuticals in the office.

Definition

Description should include

- the issues of security and inventory procedures
- procedures for secure storage of samples
- procedures for proper disposal
- examples of controlled substances that employees may typically encounter in the workplace
- office policy concerning drug use and product sampling
- office policy concerning pharmaceutical representatives.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
 - Medical Terminology
-

Task Number 53

Identify the Principles of Medical Ethics (e.g., case studies, role playing, research papers).

Definition

Identification, according to the AMA's Principles of Medical Ethics, should include a discussion of

- integrity
- individual responsibility to society and community
- respect for human dignity
- lifelong study
- professional autonomy or self-rule.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Medical Law and Ethics
- Knowledge Test: Transcultural Health Care

Leadership Events

- Researched Persuasive Speaking

Teamwork Events

- HOSA Bowl
-

Task Number 54

Conduct research on medical cases, legal or ethical issues, medications, new medical procedures, or malpractice information.

Definition

Conducting research should include using

- medical libraries and online information
- legal codes
- office policy manuals
- documentation of pertinent information.

HOSA Competitive Events (High School)

Health Science Events

- Knowledge Test: Medical Law and Ethics
- Knowledge Test: Transcultural Health Care

Leadership Events

- Researched Persuasive Speaking

Teamwork Events

- HOSA Bowl

Recognition

- Health Care Issues Exam

Understanding Health Informatics

Task Number 55

Describe the role of technology in the healthcare field.

Definition

Description should include technology related to each body system, as well as

- how to use the electronic medical record (EMR)
- a list of the components of the EMR
- how to use computers and other technological advances in the diagnosis and treatment of disorders.

Process/Skill Questions

- How would you describe the patient's experience when undergoing an MRI or CAT scan?
- What are the benefits of an electronic medical record? Are there any disadvantages?
- What are some recent medical advances? How might these advances be helpful in diagnosing or treating pathologies?

Common Career Technical Core

HL-HI

Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.

HL-HI3

Demonstrate the use of systems used to capture, retrieve and maintain confidential health information from internal and external sources.

HOSA Competitive Events (High School)

Recognition

Task Number 56

Describe techniques for confidential communication of health/medical information within legal/regulatory guidelines.

Definition

Description should include

- ways in which the Health Insurance Portability and Accountability Act (HIPAA) relates to the healthcare system
- how HIPAA compliance is implemented, reviewed, and regulated
- examples of reportable public health information (e.g., sexually transmitted diseases, flu cases, births, deaths)
- list of basic legal and ethical issues related to the healthcare profession
- list of techniques commonly used (e.g., consent forms, Patient Bill of Rights).

Process/Skill Questions

- Why is confidentiality so important in the field of health care? How can you assist in the maintenance of patient confidentiality?
- How would you describe the Patient Bill of Rights?
- What might be the consequences of violating HIPAA regulations?
- Why is it important that certain health information, even though it may be private, be communicated to public health organizations?
- What action would you take if you worked in a medical office and a patient's medical records were subpoenaed in a court case?

Common Career Technical Core

HL-HI

Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.

HL-HI3

Demonstrate the use of systems used to capture, retrieve and maintain confidential health information from internal and external sources.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Medical Law and Ethics

Teamwork Events

- HOSA Bowl
-

Task Number 57

Demonstrate the assessment of abstracted information from medical records and other documents, applying knowledge of medical terminology.

Definition

Demonstration should include

- assessing information for appropriateness, accuracy, and completeness
- assessing information for conformance with legal, ethical, and regulatory guidelines.

Process/Skill Questions

- Why is it essential to have knowledge of medical terminology when abstracting information from medical records?
- What healthcare careers are involved with abstracting information from medical records?
- How might abstracting information from medical records affect reimbursements?
- Where would you find legal, ethical, and regulatory guidelines related to abstracting information from medical records?

Common Career Technical Core

HL-HI

Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.

HL-HI3

Demonstrate the use of systems used to capture, retrieve and maintain confidential health information from internal and external sources.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
 - Medical Terminology
 - Knowledge Test: Medical Law and Ethics
-

Introducing the Electronic Health Record (EHR)

Task Number 58

Define electronic health record (EHR).

Definition

Definition should include

- data retrieval
- storage and processing
- quality assurance methodologies
- statistical reporting.

Process/Skill Questions

- What are the implications of HIPAA/HITETECH on EHR?
- Why do you need to understand the definition of EHR?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
 - Medical Terminology
-

Task Number 59

Explain the core functions of an electronic health record (EHR).

Definition

Explanation should include

- health information and data
- results management
- orders management
- decision support
- electronic communication and connectivity
- patient support
- administrative processes
- reporting and populating health management.

Process/Skill Questions

- How does a patient portal support communication with clinicians?
- What is the importance of electronic orders and patients' results?
- What are advantages and disadvantages of EHR and paper records?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
 - Medical Terminology
-

Task Number 60

Identify different formats and components of an electronic health record (EHR).

Definition

Identification of formats should include

- age-specific

- specialty.

Identification of components should include

- vital signs
- past medical history
- clinical summary
- labs
- medication
- reconciliation
- patient alerts
- appointment reminders
- links to medically recommended websites (i.e., patient educational resources).

Process/Skill Questions

- How could these components be organized in different formats depending on age, specialty, or other factors?
- What are the benefits to healthcare providers and patients of having a patient portal?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Task Number 61

Describe a codified electronic health record (EHR) system.

Definition

Description should include how the system recognizes symptoms to facilitate diagnosis and initiate intervention protocols.

Process/Skill Questions

- What is the importance of a codified EHR system?
- How does a codified EHR system benefit the patient and healthcare provider?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Specialty
-

Task Number 62

Explain how billing codes are used in an electronic health record (EHR) system.

Definition

Explanation should include the following:

- Adaptive software emphasizing practice specifications
- Conversion of "superbills" to claims
- Electronic submission and verification of claims
- Comprehensive accounting/billing reports
- Electronic tracking of payments and a transparent payment process
- Claims rejection analysis in real time displaying clear error codes
- Integration of co-payments into scheduling features
- Billing codes pulled directly from EHR documentation
- Multi-user, secure, and user-friendly interface capabilities
- Server monitoring, backups, and data recovery

Process/Skill Questions

- How do billing codes in an EHR impact reimbursement?
- For what other applications can billing codes in an EHR be used (e.g., tracking mortality and morbidity rates)?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Specialty
-

Understanding Medical Terminology

Task Number 63

Explain how medical terms are developed.

Definition

Explanation should include

- the division of medical terms into components (i.e., roots or combining forms, prefixes, and suffixes)
- the use of connectors or combining vowels
- the process of pluralizing.

Process/Skill Questions

- How would you describe the role of medical terminology in everyday life?
- What is a root?
- What is a prefix?
- What is a suffix?
- How does knowledge of medical roots, prefixes, and suffixes help you determine the meanings of unfamiliar words?
- Why is it always prudent to check the meaning of an unfamiliar word in a medical dictionary?
- What are the rules for pluralizing?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Task Number 64

Define common medical word roots.

Definition

Definitions should include the meaning of each root.

Process/Skill Questions

- Why is knowledge of word roots important?
- What distinguishes a word root from a prefix or a suffix?
- How can you determine the word root in a medical term?
- To what does the root usually refer in a medical term? (The part of the body involved)

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Task Number 65

Define common medical word prefixes.

Definition

Definitions should include the meaning of each prefix.

Process/Skill Questions

- Why is knowledge of prefixes important?
- What distinguishes a prefix from a word root or a suffix?
- How can you determine the prefix in a medical term?
- To what does the prefix usually refer in a medical term? (location, time, number, or status)

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Event

- HOSA Bowl
-

Task Number 66

Define common medical word suffixes.

Definition

Definitions should include the meaning of each suffix.

Process/Skill Questions

- Why is knowledge of suffixes important?
- What distinguishes a suffix from a word root or a prefix?
- How can you determine the suffix in a medical term?
- To what does the suffix usually refer in a medical term? (procedure, condition, disorder, or disease)

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Task Number 67

Demonstrate pronunciation of medical terms.

Definition

Demonstration should include

- use of a medical dictionary to interpret pronunciation marks
- speaking the terms clearly and with proper inflection.

Process/Skill Questions

- Why is correct pronunciation of all words important? Why is it especially important to pronounce medical terms correctly?
- What aids to pronunciation exist?
- How can you access pronunciation aids?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
 - Medical Terminology
-

Task Number 68

Apply the components of medical terminology (i.e., prefixes, word roots, suffixes).

Definition

Application should include

- spelling components correctly
- using medical terms in sentences, both oral and written
- distinguishing among potentially confusing terms that look or sound alike.

Process/Skill Questions

- Why is correct spelling of medical terms essential?
- What are effective methods for improving your spelling abilities, particularly with regard to medical terminology?
- How would you describe the different ways of locating a term in a medical dictionary or in other sources?
- What is the significance of all-capital letters in the pronunciation of medical terms?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling

- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Understanding Medical Abbreviations

Task Number 69

Explain medical abbreviations related to body systems.

Definition

Explanation should include

- identification and safe use of common abbreviations related to body systems
- reasons abbreviations related to body systems are used
- common errors made when using abbreviations related to body systems.

Process/Skill Questions

- How can you find abbreviations related to body systems?
- Why is caution important when using abbreviations related to body systems?
- What are common errors made when using abbreviations related to body systems?
- Are all medical abbreviations spelled with all-capital letters?
- How can the same abbreviation be used for different terms?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Task Number 70

Identify medical abbreviations related to pathological conditions.

Definition

Identification should include

- common abbreviations related to pathological conditions
- reasons abbreviations related to pathological conditions are used
- use of an approved list of abbreviations related to pathological conditions
- common errors made when using abbreviations related to pathological conditions.

Process/Skill Questions

- How can you find abbreviations related to pathological conditions?
- Why is caution important when using abbreviations related to pathological conditions?
- What are common errors made when using abbreviations related to pathological conditions?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Pathophysiology

Teamwork Events

- Forensic Medicine
- HOSA Bowl

Task Number 71

Identify medical abbreviations related to diagnostic procedures.

Definition

Identification should include

- common abbreviations related to diagnostic procedures
- reasons abbreviations related to diagnostic procedures are used
- use of an approved list of abbreviations related to diagnostic procedures
- common errors made when using abbreviations related to diagnostic procedures.

Process/Skill Questions

- How can you find abbreviations related to diagnostic procedures?
- Why is caution important when using abbreviations related to diagnostic procedures?
- What are common errors made when using abbreviations related to diagnostic procedures?

Common Career Technical Core

HL-DIA1

Communicate key diagnostic information to healthcare workers and patients in an accurate and timely manner.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Pathophysiology

Teamwork Events

- HOSA Bowl

Task Number 72

Explain medical abbreviations related to documentation.

Definition

Explanation should include

- identification of common abbreviations related to documentation
- reasons abbreviations related to documentation are used
- use of an approved list of abbreviations related to documentation
- common errors made when using abbreviations related to documentation.

Process/Skill Questions

- How can you find abbreviations related to documentation?
- Why is caution important when using abbreviations related to documentation?
- What are common errors made when using abbreviations related to documentation?
- Why is the patient chart regarded as a legal document? What implications does this have?

Common Career Technical Core

HL-HI

Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.

HL5

Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Task Number 73

Identify medical abbreviations related to pharmacology.

Definition

Identification should include

- common abbreviations related to pharmacology
- reasons abbreviations related to pharmacology are used
- use of an approved list of abbreviations related to pharmacology
- common errors made when using abbreviations related to pharmacology.

Process/Skill Questions

- How can you find abbreviations related to pharmacology?
- Why is caution important when using abbreviations related to pharmacology?
- What are common errors made when using abbreviations related to pharmacology?

Common Career Technical Core

HL-THR2

Communicate patient/client information among healthcare team members to facilitate a team approach to patient care.

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology
- Knowledge Test: Pharmacology

Task Number 74

Identify abbreviations related to healthcare regulations and regulatory systems.

Definition

Identification should include

- common abbreviations
- reasons abbreviations are used
- use of an approved list of abbreviations.

Process/Skill Questions

- How can you find abbreviations related to healthcare regulations and regulatory systems?
- Why is caution important when using abbreviations related to healthcare regulations and regulatory systems?
- What are common errors made when using abbreviations related to healthcare regulations and regulatory systems?

Common Career Technical Core

HL-HI

Communicate health information accurately and within legal and regulatory guidelines, upholding the strictest standards of confidentiality.

HL5

Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl
-

Understanding the History of Medical Coding and Billing

Task Number 75

Research the historical timeline of medical coding and billing.

Definition

Research should include

- describing the events leading to the discovery of medical coding and billing
- explaining the evolution of the ICD system
- identifying significant documents and the medical modalities that led to the development of the coding system.

Process/Skill Questions

- What medical era marked the beginning of medical coding and billing practices?
- What diseases, plagues, and treatments helped form the evolution of medical coding?
- What document had the most impact on the development of the medical coding and billing system?

Task Number 76

Explain the history of medical coding and billing documents.

Definition

Explanation should include

- London Bills of Mortality in 1629
- International List of Causes of Death
- 1949 Sixth Decennial Revision Conference and World Health Organization in Paris
- 1949 Manual of International Statistical Classification of Diseases, Injuries, and Causes of Death
- ICD-1 1900
- ICD-7 until 1968
- ICD-9 1976
- ICD-9-CM.

Process/Skill Questions

- What diseases are detailed in London Bills of Mortality in 1629?
- What impact did the collection of the causes of disease and death have on the development of medical coding and billing?
- How long has the ICD system been in existence?

HOSA Competitive Events (High School)

Health Science Events

- Medical Spelling
- Medical Terminology

Teamwork Events

- HOSA Bowl

Understanding Medical Practice Administration

Task Number 77

Describe the basic job requirements of a medical coder.

Definition

Description should include knowledge of or proficiency in/with

- basic anatomy and physiology
- medical terminology
- ICD-9-CM
- HCPS
- CPT codes
- oral and written communication
- critical reading and comprehension
- technology.

Process/Skill Questions

- Why is basic knowledge of anatomy and physiology needed in the medical and coding field?
- What computer skills are needed in the medical coding and billing field?
- How will reading and comprehension skills help with the use of the ICD-9-CM and CPT codes?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Specialty

Teamwork Events

- Health Career Display
-

Task Number 78

Describe the job responsibilities of a medical biller.

Definition

Description should include:

- billing insurance carriers for services performed
- billing patients for costs not covered by insurance
- performing basic accounting functions, including tracking incoming and outgoing cash flow
- handling collections on overdue accounts.

Process/Skill Questions

- Why do medical billers need basic accounting skills?
- Why do medical billers need to be familiar with insurance carriers?

HOSA Competitive Events (High School)

Leadership Events

- Interviewing Skills
- Job-Seeking Skills
- Medical Photography

Teamwork Events

- Health Career Display
-

Task Number 79

Identify common medical practice staff members and their job titles.

Definition

Identification should include the following:

- Medical Office Assistant

- Medical Biller
- Medical Coder
- Registered Health Information Technician (RHIT)
- Payment Poster
- Medical Collector
- Front Desk Receptionist
- Privacy Compliance Officer

Process/Skill Questions

- What role might the privacy compliance officer play in regard to HIPAA violations?
- Which staff member would work with collection agencies?
- Which staff member can work the front office and back office?

HOSA Competitive Events (High School)

Leadership Events

- Interviewing Skills
- Job-Seeking Skills
- Medical Photography

Teamwork Events

- Health Career Display

Understanding Medical Practice Accounting

Task Number 80

Explain the functions of ledger cards and patient statements.

Definition

Explanation should include the following:

- Record of patient account information (e.g., responsible party, address, telephone, name, account number, special notes, transaction dates, description of services, payments, adjustments, balance)
- Patient receipt
- Balance billing
- Dunning notice
- Insurance tracer

Process/Skill Questions

- In what order should information be documented on a ledger card?
- What is another name for a ledger card?
- How do adjustments affect a remaining balance?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Specialty
-

Task Number 81

Explain how to use a daily journal.

Definition

Explanation should include the following:

- Day sheet
- Deposit slip
- Accounting control summary
- Cumulative trial balance
- Patient aging report

Process/Skill Questions

- What is included in a daily journal?
- What is the purpose of a daily journal?
- Where do you document petty cash in a daily journal?

HOSA Competitive Events (High School)

Health Professions Events

- Clinical Specialty
-

Task Number 82

Demonstrate how to post payments to a patient account.

Definition

Demonstration should include the following:

- Balance billing
- Dunning notice
- Follow-ups
- Insurance payments
- Insurance tracer
- Truth in Lending Act
- Collections
- Payment plans
- Bankruptcy
- Trace of a skip
- Payment schedule form

Process/Skill Questions

- What is a “skip” patient?
 - Under the Truth in Lending Act, what items must be included in a payment plan?
 - What are the proper “ethics” regarding a collection call?
-

Task Number 83

Demonstrate how to create a payment plan.

Definition

Demonstration should include the following:

- Amount of the debt
- Amount of the down payment
- Estimated date of the final payment
- Amount of each installment

- Payment due dates
- Truth in Lending Act, if applicable
- Regulation Z of Truth in Lending Act
- Statute of limitations

Process/Skill Questions

- What is Regulation Z?
 - What are the guidelines in Virginia for payment plans?
 - What is the statute of limitations for payments in most states?
-

Task Number 84

Demonstrate how to make a collection call.

Definition

Demonstration should include the following:

- Identify the debtor
- Identify yourself
- Ask for the full amount in payment
- Identify the problem
- Identify a solution
- Close the deal
- Document the agreement
- Be polite
- Call at appropriate times of the day
- Do not ask third parties or collections or collection information
- Pause and listen

Process/Skill Questions

- Why must you be aware of what time of day you make a collection call?
 - Why is it important to offer solutions when collecting debt?
-

Task Number 85

Demonstrate how to balance petty cash, a petty cash count slip, and petty cash receipts.

Definition

Demonstration should include

- completing a count at the beginning of the day
- locating the morning petty cash slip
- counting and documenting the number of denominations available
- signing the slip once the money has been counted
- completing a petty cash receipt when removing money
- counting petty cash vouchers as cash
- reconciling petty cash each day.

Process/Skill Questions

- What is the purpose of a petty cash receipt?
- Who should manage the petty cash fund?
- What are approved expenditures for a petty cash fund?

SOL Correlation by Task

Highlight the major developments of healthcare history.	History and Social Science: VUS.8, VUS.9, VUS.10, VUS.11, VUS.12, VUS.13, VUS.14
Differentiate among the types of health insurance.	English: 11.5, 11.8, 12.5, 12.8
Differentiate among the types of medical care delivery systems.	English: 11.5, 12.5
Describe the roles of healthcare team members and the responsibilities of each member.	English: 11.5, 12.5
Differentiate among the scope and roles of the Virginia Department of Health Professions and the Virginia Department of Health.	English: 11.5, 11.8, 12.5, 12.8 History and Social Science: GOVT.8, GOVT.9, GOVT.15, GOVT.16
Examine the impact of the Internet on the healthcare industry and on the individual consumer.	English: 11.5, 11.8, 12.5, 12.8 History and Social Science: VUS.14
Describe an indemnity plan.	
Define basic terms found in an insurance contract.	

Demonstrate the completion of a treatment authorization request form.	
Describe how medical limits may affect an insurance carrier's payment on a claim.	English: 11.5, 12.5
Explain what the Consolidated Omnibus Budget Reconciliation Act (COBRA) is and how it affects coverage for preexisting conditions.	English: 11.5, 12.5
Describe the purpose of Occupational Safety and Health Administration (OSHA) regulations as they relate to working in a medical office.	English: 11.5, 11.8, 12.5, 12.8 History and Social Science: GOVT.15, GOVT.16
Explain confidentiality and its connection to the Health Insurance Portability and Accountability Act (HIPAA).	English: 11.5, 12.5 History and Social Science: GOVT.16
Describe the procedures for handling pharmaceuticals in the office.	
Identify the Principles of Medical Ethics (e.g., case studies, role playing, research papers).	History and Social Science: GOVT.16
Conduct research on medical cases, legal or ethical issues, medications, new medical procedures, or malpractice information.	English: 11.8, 12.8
Describe the role of technology in the healthcare field.	English: 11.5, 12.5
Describe techniques for confidential communication of health/medical information within legal/regulatory guidelines.	English: 11.5, 12.5
Demonstrate the assessment of abstracted information from medical records and other documents, applying knowledge of medical terminology.	English: 11.5, 12.5
Define electronic health record (EHR).	
Explain the core functions of an electronic health record (EHR).	English: 11.5, 12.5
Identify different formats and components of an electronic health record (EHR).	
Describe a codified electronic health record (EHR) system.	
Explain how billing codes are used in an electronic health record (EHR) system.	English: 11.2, 11.5, 12.2, 12.5
Explain how medical terms are developed.	English: 11.3, 11.5, 12.3, 12.5
Define common medical word roots.	English: 11.3, 12.3
Define common medical word prefixes.	English: 11.3, 12.3
Define common medical word suffixes.	English: 11.3, 12.3
Demonstrate pronunciation of medical terms.	English: 11.3, 11.5, 12.3, 12.5
Apply the components of medical terminology (i.e., prefixes, word roots, suffixes).	English: 11.3, 11.5, 12.3, 12.5
Explain medical abbreviations related to body systems.	English: 11.5, 12.5

Identify medical abbreviations related to pathological conditions.	English: 11.5, 12.5
Identify medical abbreviations related to diagnostic procedures.	English: 11.5, 12.5
Explain medical abbreviations related to documentation.	English: 11.5, 12.5
Identify medical abbreviations related to pharmacology.	English: 11.5, 12.5
Identify abbreviations related to healthcare regulations and regulatory systems.	English: 11.5, 12.5
Research the historical timeline of medical coding and billing.	English: 11.8, 12.8 History and Social Science: VUS.13, VUS.14
Explain the history of medical coding and billing documents.	English: 11.5, 12.5 History and Social Science: VUS.13, VUS.14
Describe the basic job requirements of a medical coder.	
Describe the job responsibilities of a medical biller.	
Identify common medical practice staff members and their job titles.	
Explain the functions of ledger cards and patient statements.	English: 11.5, 12.5
Explain how to use a daily journal.	English: 11.5, 12.5
Demonstrate how to post payments to a patient account.	
Demonstrate how to create a payment plan.	
Demonstrate how to make a collection call.	
Demonstrate how to balance petty cash, a petty cash count slip, and petty cash receipts.	

Instructional Resources

[American Health Information Management \(AHIMA\)](#)
[American Association of Professional Coders \(AAPC\)](#)
[Medical Coding](#)
[Medical Billing](#)
[Medical Association of Billers \(MAB\)](#)
[Medical Billing Certifications](#)

Appendix: Credentials, Course Sequences, and Career Cluster Information

Industry Credentials: Only apply to 36-week courses

- AAPC Medical Coding Examinations
- Billing Coding Specialist Certification (BCSC) Examination
- Certified Coding and Billing Specialist (CBCS) Examination
- Certified Medical Administrative Assistant (CMAA) Examination
- College and Work Readiness Assessment (CWRA+)
- Electronic Health Record Certification (EHRC) Examination
- Medical Administration Assistant Certification (MAAC) Examination
- Medical Coding and Billing Specialist (MCBS) Examination
- National Career Readiness Certificate Assessment
- National Certified Insurance and Coding Specialist (NCICS) Examination
- Nationally Registered Certified Administrative Health Assistant (NRCAHA) Examination
- Nationally Registered Certified Coding Specialist (NRCCS) Examination
- Workplace Readiness Skills for the Commonwealth Examination

Concentration sequences: *A combination of this course and those below, equivalent to two 36-week courses, is a concentration sequence. Students wishing to complete a specialization may take additional courses based on their career pathways. A program completer is a student who has met the requirements for a CTE concentration sequence and all other requirements for high school graduation or an approved alternative education program.*

- Health Informatics (8338/36 weeks)

Career Cluster: Health Science	
Pathway	Occupations
Health Informatics	Admitting Clerk Financial Manager Medical Assistant Medical Biller, Patient Financial Services Medical Information Technologist Medical, Health Services Manager
Support Services	Administrative Assistant Front Office Assistant