Introduction to Medical Coding

Foundational Curricula:
Cluster 4: Informatics
Module 6: Health Information Management
Unit 5: Introduction to Medical Coding
FC-C4M6U5

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Unit Objectives

• Describe clinical coding principles in health and healthcare
• Define ICD and describe the importance of coding
• Describe different medical coding systems
• Describe classifications and systematic health related terminologies for coding and information retrieval, including ICD, SNOMED and other systems and terminologies
The Importance of Coding in Health Information Management

• Medical coding is the transformation of healthcare diagnosis, procedures, medical services, and equipment into universal medical alphanumerics (or numbers and letters, such as A1) codes
  - The diagnoses, procedures, etc., are usually taken from a variety of sources within the health care record, such as the physician's notes, laboratory results, radiologic results, and other documentation often contained within the EHR
These diagnosis and procedure codes are used by health care providers, government health programs, health insurance companies, and others for a variety of applications in medicine, public health, and health informatics, including:

- statistical analysis of diseases and therapeutic actions
- reimbursement (e.g., to process claims in medical billing, based on diagnostic-related groups (DRGs))
- evidence-based and clinical decision support systems (CDSs)
- direct surveillance of epidemic or pandemic outbreaks
The Importance of Coding in Health Information Management (cont’d)

• EHRs produce more accurate documentation than paper-based records, which can lead to more complete coding

• This can result in better healthcare for patients, help healthcare organizations and providers bill more effectively for their services, and ensure that services are properly reimbursed

• Accurate coding saves time, improving consistency and completeness in medical records, and making the health information management process more efficient
What is ICD?

• One of the primary coding tools of HIM, ICD (International Classification of Diseases) is a worldwide standard used to classify diseases, disorders, injuries and other related health conditions in a comprehensive, hierarchical fashion

  – It was developed by the World Health Organization (WHO). The first international classification edition, known as the International List of Causes of Death, was adopted by the International Statistical Institute in 1893. The WHO was entrusted with the ICD at its creation in 1948 and published the 6th version, ICD-6, that incorporated morbidity for the first time.
What is ICD? (cont’d)

• ICD is the foundation for the identification of health trends and statistics globally, and is the diagnostic classification standard for all clinical and research purposes used in countries worldwide

• ICD allows for:
  – easy storage, retrieval and analysis of health information for evidenced-based decision-making;
  – sharing and comparing health information between hospitals, regions, settings and countries; and
  – data comparisons in the same location across different time periods
Revisions of ICD

- ICD-10 is the 10th revision of the ICD and is used throughout Europe and the US.
- As of late 2015, ICD-10 was implemented in the United States (the US used ICD-9 since 1979).
- ICD-11 is the upcoming 11th revision of the ICD.
  - ICD-11 was released in 2015, but will be rolled out over a period of years slowly.
  - ICD-11 incorporates a more interactive web platform, to help users call upon codes more easily. In addition, ICD-11 is available in multiple languages, unlike the purely English release of ICD-10. ICD-11 is EHR ready.
Medical Classifications

• Medical classifications involve taking the universal alphanumeric codes and organizing them into specific standards and international classification systems.

• Many different medical classifications exist, though they occur into two main groupings: health statistical classifications (coding systems) and health nomenclatures.
• Types of coding systems specific to health care (health statistical classifications) include:
  – Diagnostic codes
    • Used to determine diseases, disorders, and symptoms
    • Can be used to measure morbidity and mortality
    • Examples: ICD-10, ICD-11
  – Procedural codes
    • Numbers or alphanumeric codes used to identify specific health interventions taken by medical professionals
    • Examples: ICPM (International Classification of Procedures in Medicine), ICHI (International Classification of Health Interventions), CPT (Current Procedural Terminology) (US)
  – Nomenclatures
    • Used to define terminologies
    • Separate listing and code for every clinical concept
    • Examples: SNOMED (Systematized Nomenclature of Medicine) and LOINC (Logical Observation Identifiers Names and Codes) (US)
  – Other coding classifications
    • Include specialty coding classifications, pharmaceutical codes, evaluation and management codes, and others
ICD-10 Structure

• The Alphabetic Index and electronic coding tools facilitates proper code selection

• The structure and specificity of ICD-10-CM facilitates the development of increasingly sophisticated electronic coding tools that assists in faster code selection
ICD-10 Structure (cont’d)

Each code contains:

- 3 - 7 characters
- Character 1 is alphabetical (all letters except U are used)
- Character 2 is numeric
- Characters 3 - 7 are alpha or numeric
- A decimal is used after 3 characters
- A dummy placeholder “x” can be used
- Alpha characters are not case-sensitive
Examples of Individual Health Codes

• Examples of codes within coding systems specific to health care include:
  
  – Example of **ICD-10** Diagnostic Codes:
    
    • M1A.3120 = chronic gout, renal impairment, left shoulder, without *tophus* (a deposit of crystalline uric acid and other substances in the joints, skin or cartilage)
    • M1A.39X0 = Chronic gout due to renal impairment, multiple sites, without tophus
    • M06.072 = Rheumatoid arthritis without rheumatoid factor, left ankle and foot
    • H65.01 = Acute serous *otitis media* (middle ear infection), right ear
    • H66.011 = Acute *suppurative* (pus-producing) otitis media with spontaneous rupture of ear drum, right ear
    • H72.01 = Central *perforation* (tear) of *tympanic membrane* (ear drum), right ear
    • Z77.22 = Contact with and (suspected) exposure to environmental tobacco smoke (acute) (chronic)
    • P96.81 = Exposure to (parental) (environmental) tobacco smoke in the *perinatal* (around the time of birth) period

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Examples of Individual Health Codes (cont’d)

– Example of **International Classification of Procedures in Medicine (ICPM)**

  Procedural Code:
  
  • 1-441 = biopsy of stomach by endoscopy (1-44 is a biopsy of any upper alimentary tract)
  
  • 1-240 = routine otoscopy

– Example of **Systematized Nomenclature of Medicine**

  • T-28000 = lung
Unit Review Checklist

- Described clinical coding principles in health and healthcare (EB01)
- Defined ICD and described the importance of coding (EL03)
- Described different medical coding systems (EN02)
- Describe classifications and systematic health related terminologies for coding and information retrieval, including ICD, SNOMED and other systems and terminologies (EL01)
1. Name three types of medical coding/classification systems

2. An 82-year-old woman presents to her physician with complaints of left shoulder, foot and ankle pain. Her doctor diagnoses her with left shoulder gout and foot and ankle arthritis. Which of the ICD-10 codes on slide 13 would likely apply?
3. A 10-year-old presents to his doctor with fever and right ear pain. Examination reveals acute right middle ear infection with slight tearing of the eardrum. No drainage is found. The patient’s parents are smokers, and the patient is often exposed to cigarette smoke in the home. The doctor makes diagnoses. Which of the ICD-10 codes on slide 11 would likely apply?

4. Bonus: What is the ICPM code for the routine procedure to view the ear?
1. Which of the following is not one of the routine uses of medical coding?
   a) Processing medical claims
   b) Statistical analysis
   c) Diagnosing diseases
   d) De-identifying a patient’s health information

2. Which of the following is true regarding ICD-10?
   a) It was first developed in 1983
   b) It was developed by the World Health Organization
   c) It has been used in the United States since 1979
   d) It is primarily a procedural coding classification system
3. Which of the following classification systems is used for medical terminology?
   a) ICD
   b) SNOMED
   c) CPT
   d) ICPM

4. Which of the following classification systems is used to code illnesses and diseases?
   a) ICD
   b) SNOMED
   c) CPT
   d) ICPM