**Chapter 5**

**Clinical Terminologies, Classifications, and Code Systems**

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**Real-World Case 5.1**

Clinical quality measure developers create evidence-based standards used to assess the performance of providers in the provision of care. Developers include government agencies, accreditation organizations, and physician specialty groups among others. They select terminologies, classifications, and code sets as a way to express healthcare performance data used in the measure. For example, the National Committee for Quality Assurance (NCQA) may want to author an electronic Clinical Quality Measure (eCQM) for breast cancer screening. Using the web-based Measure Authoring Tool (MAT), NCQA decides to include mammograms as a population criterion. Having identified mammogram as one of the criteria, NCQA determines LOINC and HCPCS are necessary for the measure. Mammogram codes from these two systems are then selected to create the content for the breast cancer screening eCQM.

# Real-World Case Discussion Questions

1. What purpose do terminologies, classifications, and code systems serve in an electronic Clinical Quality Measure (eCQM)?

eCQM uses clinical terminology as a set of standardized terms that record patients findings, circumstances, and events with enough detail to support clinical care, decision support, and quality improvement. Classification is used to provide the proper clinical words. Codes are used for exchanging or storing information by using numeric, alphanumeric, or codes.

1. Why would NCQA choose LOINC and HCPCS for the electronic Clinical Quality Measure (eCQM) for breast cancer screening?

NCQA works to improve health care quality through standards, measures, programs, and accreditation. Choosing LOINC will include observations, measurements, and tests will be recorded. Data will be shared through facilities. HCPCS includes being updated quarterly, assignment by professional coder, modifiers, and used for reimbursement of ambulatory care. With all that is included, quality care is provided.

1. Why are the various types of organizations important to the development of the clinical quality measures?

Organizations are important to the development of the clinical quality measures to provide high quality health care and relate to one or more quality goals for health care. Goals such as effective, safe, efficient, and patient centered.

**Real-World Case 5.2**

The 2015 Edition EHR technology certification criteria states the following:

*Smoking status*: Enable a user to electronically record, change, and access the smoking status of a patient in accordance with the standard specified.

45 CFR 170.315(a)(11).Coded to one of the following SNOMED CT codes:

* Current every day smoker. 449868002
* Current some day smoker. 428041000124106
* Former smoker. 8517006
* Never smoker. 266919005
* Smoker, current status unknown. 77176002
* Unknown if ever smoked. 266927001
* Heavy tobacco smoker. 428071000124103
* Light tobacco smoker. 428061000124105

*Objective*: Record smoking status for patients 13 years or older.

*Measure*: More than 85 percent of all unique patients 13-years-old or older seen by the eligible professional or admitted to the eligible hospital’s or critical care hospital’s inpatient or emergency department during the EHR reporting period have smoking status records as structured data.

Included in the National Learning Consortium’s resources is a quick reference guide from the American Academy of Family Physicians (AAFP) for meeting the smoking status Meaningful Use requirement. The AAFP supports the incorporation of tobacco cessation into EHR templates (AAFP n.d.). The quick reference provides guidance on what should be included in a tobacco cessation EHR template.

# Real-World Case Discussion Questions

1. Why would SNOMED CT be used to record the smoking status of a patient on an EHR template?

SNOMED CT is a clinical terminology used for document and recording. It allows for the collection of clinical data at a small level. It will allow a user to electronically record, change, and access the smoking status of a patient in granting with the standard specified.

1. Why was ICD-10-CM not chosen as the system to capture smoking status?

ICD-10-Cm is used to report diagnosis on healthcare claims. It provides a classification of diseases.

1. Review the SNOMED CT codes. What else related to smoking would you recommend should be collected?

Family history of health issues related to smoking, cancer, emphysema, or heart disease. Maybe weather there is breathing related issues for the individual.

# Application Exercises

*Instructions:* Answer the following questions.

1. Choose one clinical terminology, one classification, and one code system mentioned in this chapter and compare and contrast its general characteristics, purpose, use, content, and structure.

Clinical terminologies form the basis for coded data and provide the data structure. Current Procedural Terminology (CPT) provides uniform language for procedures and reports procedures on healthcare claims. Nomenclature is used for reporting procedures and has assignment by professional coder. CPT consists of three Categories. CPT 1 is the major terminology. It contains a description along with a code for service and procedure. CPT 2 is used for performance measure. CPT 3 is used for emerging technologies, services, and procedures. A five - character identifier represents the service or procedure a patient receives from a health care provider. A two - character modifier indicates the service or procedure performed that has been altered but not changed in definition.

Classifications are key to secondary data use. Aggregated data that includes, healthcare statistics, determine payment, monitor public health, and improve financial performance. The International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS) was created by Health Information Systems. It is maintained by Centers for Medicare and Medicaid Services, reports procedures for inpatient claims, updates, print, online, and software applications. It is assignment by professional coders. Contains seven – character codes and descriptions for procedures.

Codes are characteristics of a terminology or a classification. Includes primary or secondary data. Logical Observation Identifiers, Names, and Codes (LOINC) is a system for recording tests, measurements, and observations. There is no book codes or no assignment by a coding professional, implemented in software applications, and it is so facilities can share data. LOINC standardizes names and codes for the identification of laboratory and clinical test results or observations.

CPT, ICD – 10- PCS, and LOINC all have software application and use codes in the healthcare system. CPT and ICD-10-PCS have assignment by professional coder where LOINC has no book for codes or no assignment by a coding professional. GREAT

2. Search the Internet and locate information on the Common Clinical Data Set in order to determine which terminologies, classifications, and code systems **mentioned in this chapter** are used for the individual data elements in table 5.4. Duplicate table 5.4 and adds three columns. See below. Once completed, draw a conclusion about what the table shows with regards to terminology, classification, and code system use in the Common Clinical Data Set.

|  |  |  |  |
| --- | --- | --- | --- |
| **Criteria** | **Clinical Terminology** | **Classification** | **Code System** |
| Patient name |  |  |  |
| Date of birth |  |  |  |
| Ethnicity |  |  |  |
| Smoking status | SNOMED CT |  |  |
| Medications |  |  | RxNorm |
| Laboratory test(s) |  |  | LOINC |
| Vital signs (body height, body weight, diastolic blood pressure, systolic blood pressure, heart rate, respiratory rate, body temperature, pulse oximetry, and inhaled oxygen saturation, body mass index (ratio), and mean blood pressure) |  |  | LOINC |
| Procedures | SNOMED CT, CPT |  | HCPCS Level II |
| Immunizations |  |  |  |
| Assessment and plan of treatment |  |  |  |
| Health concerns |  |  |  |
| Sex |  |  |  |
| Race |  |  |  |
| Preferred language |  |  |  |
| Problems | SNOMED CT |  |  |
| Medication allergies |  |  | RxNorm |
| Laboratory value(s)/result(s) |  |  |  |
| Care plan field(s), including goals and instructions |  |  |  |
| Care team member(s) |  |  |  |
| Unique device identifier(s) for a patient’s implantable device |  |  |  |
| Goals |  |  |  |

The smoking status is coded with the SNOMED CT codes. These codes consist of current every day smoker, current same day smoker, former smoker, never smoker, smoker, current status unknown, unknown if ever smoked, heavy tobacco smoker, and light tobacco smoker. Smoking status is limited to any form of tobacco that is smoked. The specific SNOMED CT codes are to be used to reflect the patient’s smoking status where the data is required to be included as part of the Common Clinical Data Set. The SMNED CT codes are also used for procedures and problems so the electronic health information is accurate.

RXNORM is used to communicate drug related information. It has unique identifiers that include the ingredients, strength, and dose form. All medications may not yet have an RXNORM code. Where corresponding RXNORM codes exist, health IT must be able to use those codes.

LOINC has identification codes for laboratory and clinical tests. The data can be shared. LOINC is also used for vital signs. It records measurements, tests, and observations that can be shared throughout healthcare facilities.

Procedure’s use CPT codes to allow accurate descriptions of medical, surgical, and diagnostic services. Very Good!

The Data Set shows that the individual may be a smoker. The individual has had laboratory and clinical tests done. The procedures met the operational needs of Medicare and Medicaid reimbursement programs. It also shows that the individual is on medications.

**Review Quiz**

*Instructions:* For each item, complete the statement correctly or choose the most appropriate answer.

1. If data aggregation is the goal of collecting the data, \_\_\_\_\_\_ are the best choice.

a. Classifications

b. Code systems

c. Clinical terminologies

d. Nomenclatures

2. The SNOMED CT \_\_\_\_\_\_\_\_\_ includes the semantic tag.

a. Definition

b. Preferred term

c. Synonym

d. Fully specified name

3. The \_\_\_\_\_\_\_\_\_\_\_ is a core component of SNOMED CT.

a. Identifier

b. Hierarchy

c. Concept

d. Definition

4. \_\_\_\_\_\_\_\_\_\_\_ is a nursing terminology.

a. International Classification of Procedures

b. Clinical Care Classification

c. International Classification of Functioning

d. International Classification of Diseases

5. Category I CPT includes which of the following?

a. HCPCS Level II

b. Surgery

c. Drugs

d. Durable medical equipment

6. A \_\_\_\_\_\_\_\_\_\_\_ is a set of terms representing the system of concepts for the medical field.

a. Clinical terminology

b. Code system

c. Nomenclature

d. Classification

7. ICD-10-PCS is a classification of \_\_\_\_\_\_\_\_\_.

a. Emergency room procedures

b. Nursing procedures

c. Inpatient procedures

d. Outpatient procedures

8. Which of the following developed the Diagnostic and Statistical Manual of Mental Disorders?

a. Mental Health Association

b. American Psychiatric Association

c. Mental Health Foundation

d. World Psychiatric Association

9. A classification provides clinical data to \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. Allow collection and reporting of healthcare statistics

b. Indicate smoking status in the Common Clinical Data Set

c. Facilitate electronic data collection at the point of care

d. Use for primary data purposes

10. The \_\_\_\_\_\_\_\_\_\_\_ is responsible for the development and maintenance of ICD-10-CM.

a. NCHS

b. CMS

c. ICD-10 C&M Committee

d. NCHS and CMS

11. The \_\_\_\_\_\_\_\_\_ is a system for classifying the topography and morphology of neoplasm.

a. ICD-O-3

b. ICD-10-CM

c. ICD-10

d. SNOMED CT

12. WHO defines \_\_\_\_\_\_\_\_\_\_\_ as a reference classification.

a. SNOMED CT

b. DSM-5

c. ICF

d. ICD-O-3

13. An accumulation of numeric or alphanumeric representations or codes for exchanging or storing information is a \_\_\_\_\_\_\_\_\_\_\_.

a. Nomenclature

b. Code system

c. Concept system

d. Data set

14. Which of the following is the standard for clinical lab test results under the Meaningful Use program?

a. CPT

b. LOINC

c. ICD-10-PCS

d. HCPCS Level II

15. HCPCS is made up of which code systems?

a. CPT and HCPCS Level II

b. Dental codes and HCPCS Level II

c. ICD-10-PCS, CPT and HCPCS Level II

d. CPT, HCPCS Level II and HCPCS Level III

16. If you were looking for a code for a medication taken orally, in which system is it found?

a. ICD-10-CM

b. HCPCS Level II

c. RxNorm

d. ICD-10-PCS

17. The \_\_\_\_\_\_\_ is responsible for development and maintenance of RxNorm

a. AMA

b. ONC

c. FDA

d. NLM

18. One of the two major groups of LOINC content is \_\_\_\_\_\_\_\_\_.

a. Clinical drugs

b. Clinical diagnoses

c. Clinical observations

d. Clinical interventions

19. The \_\_\_\_\_\_\_\_\_\_\_ is responsible for the publishing and maintaining HCPCS Level II.

a. CMS

b. AMA

c. NCHS

d. ADA

20. The \_\_\_\_\_\_\_\_ originated from federal reporting requirements tied to certification criteria found in the Meaningful Use regulations.

a. Outcomes and Assessment Information Set

b. Healthcare Effectiveness Data and Information Set

c. Common Clinical Data Set

d. Uniform Hospital Discharge Data Set

21. Home health agency process and improvement outcome measures are based on data from the \_\_\_\_\_.

a. Home Health Compare Data Set

b. Outcomes and Assessment Information Set

c. Uniform Hospital Discharge Data Set

d. Common Clinical Data Set

22. The standardized HEDIS data elements are collected by \_\_\_\_\_\_\_\_\_.

a. Acute care hospitals

b. Certified survey vendors

c. Healthcare purchasers

d. Consumers

23. The UHDDS’s core data elements were incorporated into the \_\_\_\_\_\_\_\_\_\_\_ prospective payment system.

a. Outpatient

b. Long-term care

c. Inpatient rehabilitation

d. Acute inpatient

24. Which standard is attached to the data element smoking status contained in the Common Clinical Data Set?

a. ICD-10-CM

b. HCPCS Level II

c. ICD-10-PCS

d. SNOMED CT

25. LOINC would be found in the UMLS \_\_\_\_\_\_\_\_\_\_\_\_.

a. Terminology Network

b. SPECIALIST Lexicon

c. Semantic Network

d. Metathesaurus