**Chapter 5**

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

*Kathy Giannangelo, MA, RHIA, CCS, CPHIMS, FAHIMA*

**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)?

Terminologies, classifications, and code systems are the base of eCOM, they are the information used in the systems that measure quality. They also make the quality measure system simple and easier to use by including terminology, and classifications of diseases already in a pre-designated code for each type.

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

NCQA would choose LOINC and HCPCS for breast cancer screening because LOINC observes, identifies, names, and codes in a standardized way for clinical and research users. HCPCS is an alphanumeric classification system that works on several levels of the healthcare system.

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

To ensure the best possible clinical quality organizations work together to achieve the highest possible quality measures. As each organization specializes in a different part of the same field they can each offer critique and perspective for the development of quality measures.

**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?

They would use SNOMED CT to record the smoking status of a patient on EHR to collect granular and aggregate clinical data for research and records of the patient.

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

ICD-10-CM was not chosen because it is used to describe and code a patient’s condition, smoking is not a condition it is a habit/lifestyle choice.

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

I would recommend the brand and type, because chemicals and additives are different in each type of tobacco product. I would also collect information on what products they may smoke or have in the past.

# 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.

UMLS is a centralized location of health and biomedical terminologies and standards. Compared to the following two systems it has generally everything they have, it is a multipurpose resource.

ICD-10-CM provides a classification of diseases for morbidity; a professional coder based on the physician’s documentation of a patient’s diagnosis assigns the codes. It contains 3-7 character codes and descriptions; it is also divided into 21 chapters.

SNOMED CT uses unique identifiers attached to clinical terms to provide the primary source of the patient’s information, SNOMED identifiers cannot be assigned by any professional coder it is implemented by a software. It is made up of three main components-concepts, descriptions, and relationships.

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 |  | ICF, ICD-10 |  |
| Smoking status | SNOMED CT |  |  |
| Medications | CPT |  | RxNorm |
| Laboratory test(s) | CPT |  | 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) | NANDA | CPT | LOINC |
| Procedures | SNOMED CT, CPT | ICD-10-PCS | HCPCS Level II |
| Immunizations | CPT |  | RxNorm |
| Assessment and plan of treatment | SNOMED CT | ICD-0-3 | LOINC |
| Health concerns | ICF, ICD-10-CM, |  | HCPCS Level II |
| Sex | NANDA |  |  |
| Race | SNOMED CT |  |  |
| Preferred language | ICNP |  |  |
| 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 |  |  |  |

**Conclusion:**

**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

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