

## **Course: Health Records Management**

### **Lecture: 4 Answers to Self-Assessment Questions**

**Lecturer: Dr. Johnson Masinde**

- 1) **Explain the key differences between classification and indexing systems in health records, highlighting how each supports health information management.**

Classification systems are structured frameworks used to group medical information into categories based on diseases, procedures, or other health-related attributes. Examples include ICD for diseases and CPT for medical procedures. Their main function is to ensure consistency and standardization in how health data is recorded, analyzed, and shared. Classification supports epidemiology, billing, research, and policy formulation. Indexing systems, on the other hand, provide access points that allow specific patient or medical information to be located easily. They are typically arranged by identifiers such as patient name, physician, diagnosis, or procedure. Examples include the Master Patient Index (MPI), disease index, or physician index. Indexing supports quick retrieval of information and continuity of care. While classification emphasizes categorization and standardization, indexing focuses on retrieval and accessibility. Together, they ensure that health information is both organized and easily retrievable for use in healthcare delivery and management.

- 2) **Discuss how the International Classification of Diseases (ICD-11) and SNOMED CT contribute to standardization and interoperability in healthcare.**

ICD-11, developed by the World Health Organization, provides a global standard for classifying diseases, conditions, and causes of death. It allows healthcare providers across different countries to use a common coding language, facilitating the production of comparable health statistics, disease surveillance, and mortality tracking. It also integrates better with digital systems compared to previous versions, enabling smoother adoption in electronic health records.

SNOMED CT is a comprehensive clinical terminology system that enables detailed recording of clinical data. It provides granular descriptions of patient conditions, treatments, and findings, which can then be mapped to broader classification systems

such as ICD. By serving as a common reference terminology, SNOMED CT enhances interoperability between health information systems. Together, ICD-11 and SNOMED CT ensure that health information is standardized, transferable, and interpretable across institutions, countries, and digital platforms.

3) **Describe the role of the Master Patient Index (MPI) in indexing systems and explain how it reduces duplication of records.**

The Master Patient Index (MPI) is a central database that contains a unique record for every patient in a healthcare facility or system. Each entry in the MPI includes essential identifiers such as patient name, date of birth, gender, address, and a unique patient identification number. The MPI serves as the backbone of indexing systems, ensuring that patient information can be accurately retrieved across different departments and electronic systems.

By assigning a unique identifier to each patient, the MPI prevents the creation of duplicate records and ensures that all medical encounters for a patient are linked to a single profile. This improves the accuracy of health records, reduces administrative inefficiencies, and minimizes risks such as fragmented patient histories or misdiagnoses. In integrated health systems, an MPI allows continuity of care by connecting patient data across multiple facilities.

4) **What are the major challenges in classification and indexing of health records, and how can technology help address them?**

Key challenges include the complexity of coding systems like ICD-11 and SNOMED CT, which require significant training for accurate use. Data entry errors, duplication of records, and inconsistent patient identifiers also compromise accuracy. Interoperability remains a major barrier, as different health systems often use different standards or outdated software. Additionally, resource limitations in low-income settings hinder the implementation of advanced classification and indexing systems.

Technology provides several solutions to these challenges. Automated coding tools within electronic health record systems reduce manual errors and improve consistency. Patient-matching algorithms enhance MPI accuracy by detecting duplicates and mismatches. Interoperability frameworks such as HL7 and FHIR enable smoother data exchange across different systems. Data analytics tools can also be applied to identify

inconsistencies and optimize coding practices. Overall, technology helps streamline classification and indexing while improving efficiency, accuracy, and interoperability.

**5) Identify and discuss at least three best practices that health records managers can adopt to improve the accuracy and reliability of classification and indexing.**

The first best practice is the adoption of standardized classification systems such as ICD-11, CPT, and SNOMED CT. These ensure uniformity in data entry and make health information comparable across institutions and countries. The second is continuous training and capacity building for health records staff. Regular refresher training ensures that professionals are familiar with coding updates, indexing procedures, and system requirements, reducing the risk of errors.

Another best practice is the implementation of robust quality control measures, including regular audits and verification of coding and indexing accuracy. This allows errors to be identified and corrected quickly. Additionally, health records managers should integrate Master Patient Index systems to prevent duplication and ensure consistent patient identification. The use of secure and interoperable electronic health records also enhances indexing and classification by automating processes and facilitating data sharing. By combining these practices, health records managers can achieve accuracy, efficiency, and reliability in health information management.