HIM-1424: HEALTH INFORMATICS AND INFORMATION MANAGEMENT

Cuyahoga Community College

Viewing: HIM-1424 : Health Informatics and Information Management

Board of Trustees:
January 2024

Academic Term:
Fall 2024

Subject Code
HIM - Health Information Management

Course Number:
1424

Title:
Health Informatics and Information Management

Catalog Description:
Documentation requirements for complete and accurate health records as required by licensing, certifying and accrediting agencies; functions of data analysis and abstracting; concepts of managing data; healthcare data sets and standards; data dictionaries; privacy and security strategies to health information; health informatics concepts; clinical vocabularies and classification standards; primary and secondary healthcare data sources; displaying health care data through graphical representations.

Credit Hour(s):
3

Lecture Hour(s):
2

Lab Hour(s):
2

Requisites

Prerequisite and Corequisite
HIM-1301 Introduction to Health Information Management, and HIM-1311 Legal Aspects of Health Care.

Outcomes

Course Outcome(s):
Apply policies, regulations, and standards to the management of information.

Essential Learning Outcome Mapping:
Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Examine federal legislation such as HIPAA, HITECH, ARRA.
2. Identify policies and strategies to achieve data integrity.
3. Determine compliance of health record content within the health organization.
4. Identify the components of risk management related to health information management and methods to safeguard health information.
5. Justify the importance of healthcare information to the healthcare industry.
6. Describe the content, creation and use of health records for both primary and secondary purposes in healthcare.

Course Outcome(s):

Explain the use of classification systems, clinical vocabularies, and nomenclatures.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Discuss the history, uses, and structure of the International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) and International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10- PCS), International Classification of Diseases for Oncology, 3rd edition. (ICD-O-3), Health Care Common Procedure Coding System (HCPCS), Current Procedural Terminology (CPT), Systemized Nomenclature of Medicine, Clinical Terms (SNOMED CT), Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-V-TR), and nursing vocabularies.
2. Describe the coding process.
3. Identify the technology used in the coding process (such as encoder, grouper, query process).

Course Outcome(s):

Apply privacy and security strategies to health information.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Analyze the respective requirements of the individual rights provided by the HIPAA Privacy and Security Rule.
2. Differentiate authorization and right of access.
3. Identify compliance requirements throughout the health information life cycle.
4. Identify threats to the security of data.
5. Identify methods to safeguard data from inappropriate access.

Course Outcome(s):

Apply health informatics concepts to the management of health information.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Distinguish among data elements, data sets, databases, indices, data mapping, and data warehousing.
2. Report health care data through graphical representations.
3. Describe research methodologies used in health care.
4. Describe the concepts of managing data.
5. Summarize standards for the exchange of health information.
6. Manage data within a database system.
7. Identify standards for exchange of health information.

Course Outcome(s):

Describe the registries used in hospitals according to purpose, methods of case definition and case finding, data collection methods, reporting and follow-up and pertinent laws and regulations affecting registry operations.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Distinguish between primary and secondary data and between patient-identifiable and aggregate data.
2. Identify the internal and external users of secondary data.
3. Compare the facility-specific indexes commonly found in hospitals.
4. Assess data quality issues in secondary records.
5. Distinguish between common facility-based and population-based registries including cancer registry and trauma registry.

Course Outcome(s):

Evaluate data dictionaries and data sets for compliance with governance standards.

Essential Learning Outcome Mapping:

Not Applicable: No Essential Learning Outcomes mapped. This course does not require application-level assignments that demonstrate mastery in any of the Essential Learning Outcomes.

Objective(s):

1. Describe components of and purpose of data dictionaries and data sets.
2. Distinguish the differences between data and information.
3. Define the term healthcare data sets and describe the purpose of several different data sets (such as Uniform Hospital Discharge Data Set (UHDDS), Uniform Ambulatory Care Data Set (UACDS), Data Element for Emergency Department Systems (DEEDS), Minimum Data Set (MDS), Outcome and Assessment Information Set (OASIS), Healthcare Effectiveness Data and Information Set (HEDIS), ORYX).
4. Explain the need for electronic data interchange standards.

Methods of Evaluation:

1. Class participation
2. Homework assignments
3. Midterm and/or Final examination
4. Quizzes

Course Content Outline:

1. Clinical terminologies, classifications, and code systems
    a. History and importance of clinical terminologies, classifications, and code systems
        i. SNOMED CT
        ii. CPT
        iii. ICD-10-CM
        iv. ICD-10-PCS
        v. ICF
        vi. ICD-O-3
        vii. DSM-5-TR
        viii. LOINC
        ix. HCPCS
2. Data management
    a. Data sources
    b. Data management
        i. Data elements, sets, databases, indices
        ii. Data mapping
        iii. Data warehousing
    c. Information governance
        i. Business intelligence
        ii. Enterprise information management
    d. Data governance
        i. Data stewardship
        ii. Data integrity
        iii. Data sharing
        iv. Data interchange standards

    e. Data quality
        i. AHIMA's data quality management model
        ii. Data collection tools
        iii. Clinical documentation integrity
    f. Data management and bylaws
    g. Data management technology
3. Secondary data sources
    a. Difference between primary and secondary data sources
    b. Purposes and users of secondary data sources
        i. Internal and external users
    c. Types of secondary data sources
        i. Indexes
            1. Disease, operation, and physician
        ii. Registries
            1. Cancer, trauma, birth defect, diabetes, implant, transplant, immunization, and others
    d. Healthcare Databases
        i. National and state administrative databases
4. Data privacy and confidentiality
    a. User and disclosure
    b. State laws – privacy
    c. HIPAA privacy / security rule and ARRA
        i. ONC
        ii. Covered entities, business associates, protected health information, de-identified information
        iii. Minimum necessary
        iv. Treatment, payment, and operations
        v. Individual rights
    d. HIPAA privacy rule documents
        i. Notice of privacy practice, consent, authorization
    e. Breach notification
    f. Requirements related to commercial uses, marketing, and sale of information and fundraising
    g. Enforcement of federal privacy legislation and rules
    h. Disclosure of health information
    i. Medical identity theft
    j. Patient advocacy
5. Data security
    a. Ensuring integrity and availability of data
    b. Data security threats
    c. Components of a security program
        i. Risk management programs
        ii. Access safeguards
        iii. Physical safeguards
        iv. Administrative safeguards
        v. Software application safeguards
        vi. Network safeguards
        vii. Disaster planning and recovery
    d. HIPAA security provisions
6. Health information systems
    a. The current state of health information systems
    b. Scope of health information systems
    c. Source systems
        i. Administrative and financial, clinical, specialty systems
        ii. Core clinical EHR systems
        iii. Supporting infrastructure
    d. Systems development life cycle
7. Healthcare information
    a. Role of data analytics in healthcare information
    b. Strategic uses of healthcare Information

c. Consumers and healthcare information
d. Health information exchange

Resources

Sayles, Nanette and Gordon, Leslie. *Health Information Management Technology: An Applied Approach*. 6th. Chicago: AHIMA, 2020.

Leming Zhou, PhD, DSc and Lesley Clark, ScD, MS. (2023) (2023) *Introduction to Healthcare Informatics*, Chicago: AHIMA.

Resources Other

1. American Health Information Management Association (AHIMA) Virtual Lab student enrollment.
2. *Advance for Health Information Professionals*. King of Prussia: Merion.
3. *Journal of the AHIMA*, Chicago: AHIMA.
4. *For the Record: A Weekly News Magazine for Medical Record Administrators and Technicians*. Spring City: Great Valley.
5. Other professional journals, newsletters and readings as assigned which are relevant to current practices.

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