Getting to Know e-HIM Coding Systems: Settings and Disciplines Offer Myriad of Documentation Systems for EHR Use

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Electronic health record (EHR) systems require encoded data to function, even if the "codes" captured are the words on this page or ASCII text on a computer screen. Today healthcare professionals of all disciplines work with electronic tools. Patient care systems have evolved just as rapidly as other technologies. Therefore, the data standards and encoding systems used to capture documentation within EHRs are expected to increase in diversity and usefulness.

HIM professionals should be aware of these emerging standards from a variety of clinical disciplines involved with direct patient care to better understand and be able to support all components of electronic health records. This article provides an overview of selected e-HIM and documentation systems used in the capture and storage of patient care data.

Nursing Classifications

Nurses are major EHR users since they provide care around the clock to hospitalized patients and support patient care in ambulatory facilities as well as community settings (e.g., home health, behavioral health, public health, and schools). As such, they use a number of different classification systems.

These systems include the International Classification of Nursing Practice (ICNP), the Clinical Care Classification (CCC), and the Omaha System. No single system provides a universal solution to information needs. In order to facilitate the goal of ICNP as a unified nursing language system, a project is under way to map the CCC to the ICNP version 1.0. This work will facilitate evaluation and ongoing development of both terminologies and allow ICNP to compare data using CCC codes with data from other standard nursing terminologies.

The Omaha System got its name from the city where it was developed. Practicing clinicians from the Visiting Nurse Association of Omaha created an open source collaborative project that today is a comprehensive practice and documentation tool widely used. See the related article "The Omaha System: Coded Data That Describe Patient Care".

The NANDA classification (previously called the North American Nursing Diagnosis Association classification) encodes a patient's reaction to diseases rather than classifying the conditions of disease and disorders. Other classifications include the Nursing Interventions Classification (NIC) and Nursing Outcomes Classification (NOC). NIC has many uses for direct patient care, including documentation and communication across care settings. NOC is a standardized classification of outcomes used in all settings.

The American Nurses Association has a "recognition" program for a Unified Nursing Language System administered through the Nursing Information and Data Systems Evaluation Center (NIDSEC). This program develops and disseminates standards pertaining to information systems that support the documentation of nursing practice and evaluates voluntarily submitted information systems against these standards.

Post-Acute Care Systems

HIM professionals who work in post-acute care should become familiar with the International Classification of Functioning Disability and Health (ICF). This coding system describes how patients live with their health conditions. ICF is a useful tool for providing standard language needed in health sectors such as public health and health planning. Since the classification is from the World Health Organization Family of International Classifications (WHO-FIC), it nicely complements the International Classification of Diseases (ICD).

ICD provides mortality codes (ICD-10) and morbidity (ICD-9-CM in the United States), while ICF provides codes for health status. There is increasing interest in the use of ICF for expression of a scientific basis for health conditions, so the HIM community should not be surprised if this system becomes part of the data systems routinely used in electronic systems in the future.

Other emerging projects in post-acute care include the introduction of MDS 3.0 (Minimum Data Set) and the demonstration project for Continuity of Assessment Record and Evaluation (CARE). For behavioral health settings the Diagnostic and Statistical Manual of Mental Disorders, fourth edition, text revision (DSM-IV), is a classification system that provides codes for behavioral health. Although each diagnosis in this classification is assigned a valid ICD-9-CM code, some disorders require further specification than ICD-9-CM provides. The developers of DSM-IV and ICD-10 worked together, which resulted in chapter 5, "Mental and Behavioral Disorders (F01-F99)."

Up-and-Coming Encoding System

Logical Observation Identifiers Names and Codes (LOINC) is an encoding system that is referenced often. There are two versions: clinical LOINC and lab LOINC. In conjunction with standards organization Health Level Seven, the clinical LOINC committee has developed a document title-naming nomenclature based on a five-axis model.

These axes include the kind of document (e.g., clinical, administrative, consent); subject matter domain (e.g., internal medicine, physical therapy); type of service (e.g., procedure, consult, discharge summarization); author/role (e.g., physician, nurse, attending); and location (e.g., clinic, critical care unit, nursing home).

Clinical LOINC codes are also available for coding physical examination findings, specific findings of diagnostic procedures and data elements used in patient assessment instruments.

Lab LOINC has been recognized by the secretary of Health and Human Services as an interoperability standard for use within the HITSP interoperability specifications. A map has been developed between LOINC and CPT to facilitate data processing between the systems.

Lab LOINC is also an emerging EHR component. The EHR-Lab Interoperability and Connectivity Standards (ELINCS) is an implementation guide to develop a national standard for the delivery of real-time laboratory results from a lab's information system to an EHR. This work enables standardized lab results reporting between clinical laboratories and clinician office EHR systems. Free software is available to help laboratories and EHR vendors validate their implementations of the ELINCS v1.1 laboratory results specification.

LOINC has been named a Consolidated Health Informatics standard and is part of the Federal Health Architecture.

Encoded data systems are common in the e-HIM environment and greatly expand the ability to manage and store clinical data to support patient care provided by multidisciplinary teams. These evidence-based tools enable data sharing and facilitate data retrieval for research and quality measurement.

HIM professionals play a very important role in the use of data standards for documentation improvement and ongoing support for data integrity as health services are encoded for secondary use, transmission, reporting, and storage.

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