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Sustainable Health Systems: Using Metadata Registries with Nursing Terminology

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Abstract

Health data and information sharing using a metadata registry promotes cross-system and cross-organization descriptions of common units of health data and allows nurses, health administrators, and hospital systems to make significant strides towards sustaining health system information systems. Metadata registries contribute to patient safety, efficient and successful electronic health record system implementation, and lower of healthcare costs in electronic health record system implementations by avoiding multiple data translations and mapping, data duplication and messaging errors.

Keywords:

Clinical Care Classification; terminology, nursing, metadata, registry, CCC, health systems

Introduction

The online metadata registry with an organization's strategic plan allows healthcare organizations to share data in a common format with descriptions of common units of health data and demonstrate actual resources, cost, patient management and outcomes. Metadata information in the United States Health Information Knowledgebase (USHIK) contains the Clinical Care Classification System (CCC) developed by Saba and Colleagues which encompass assessments, diagnoses, interventions, actions, and the actual and expected outcomes for describing, communicating and evaluating interdisciplinary practice within the electronic documentation of nursing practice.

Materials and methods

In healthcare organizations, with disparate data elements collected for many departments in different presentation formats on various electronic system screens, the ability to provide efficient patient management information that is sustainable in a health system requires standardized data elements. Data standardization increases the cross-system and cross-organization comparison of clinical

information. In an electronic health record (EHR) and in Computerized Provider Order Entry (CPOE) systems; the selection of a common data format, e.g. metadata is the vital component.

As of October 2006, the Health Information Technology Standards Panel (HITSP) sponsored by the American National Standards Institute (ANSI) with funding from

The Office of the National Coordinator for Health Information Technology, United States Department of Health and Human Services mandated by Executive Order 13335 compliance with Health Information Technology Standards Panel standards that includes an initial Nursing Terminology: Clinical Care Classification system; a nursing terminology available in the United States Health Information Knowledgebase (USHIK) (www.ushik.org). In the United States Health Information Knowledgebase public and private organizations have access to Standard Development Organizations data elements about what nurses' chart and manage.

Results

A metadata registry harmonizes information formats even though data needs change. A controlled clinical vocabulary, e.g. the Clinical Care Classification system (CCC) is the key to measuring outcomes, improving patient safety, reducing error rates, and lowering cost. Technology puts nursing at the bedside and nursing terminology promotes evidence-based medicine and sustainable health systems.

Conclusion

A metadata registry allows an organization to review specific disease management practice guidelines by location and decreases the variations in disease screening; 2) allows the comparisons of the process of care delivery and promotes the transformation of a health information system into a unit management information system; 3) consolidates redundant health data and standardizes data elements and attributes with each organization; and 4) supports the 'Magnet' concept of the American Nurses Association for data driven organizations. The United States Health Information Knowledgebase is excellent source to use within multi-hospital systems to compare and harmonize interventions, results and outcomes. USHIK enables the browsing, comparison, synchronization and harmonization of facts about health data in a uniform query and interface environment that allows nurses to identify and manage multiple data elements in an electronic health record.

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