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UNITED STATES HEALTH INFORMATION KNOWLEDGEBASE

Sustainable Health Systems: Using Metadata Registries with Nursing Terminology

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United States Health Information Knowledgebase

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A metadata registry is a place to keep facts about characteristics of data that are necessary to clearly describe, inventory, analyze, and classify data.

A metadata registry supports data sharing with cross-system and cross-organization descriptions of common units of data.

A metadata registry promotes a common understanding of shared data by unit of data meaning, representation and identification.

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Comparison Matrix Aids in Harmonizing Data Elements

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Comparison Matrix

Organization:	CMS	NCPDP	X12
Data Element ID:	0060-92-764-5622.65902.v000	0060-02-166-0014.60872.v0	0060-07-329-4837.25320.v0
Data Element Name:	Gender	Gender Code	Gender Code
Definition:	1 = Male; 2 = Female; 3 = Unknown/not stated as recommended by the Uniform Hospital Discharge Data Set and the Uniform Ambulatory Care Data Set.	For eligibility, and identifying the gender of the individual member.	A code indicating the gender of the patient or insured.
Context:	NCVHS Core Health Data Elements	NCPDP Data Dictionary	X12N Health Care Data Element Dictionary
Registration Status:	Incomplete	Incomplete	Incomplete
Status Date:	2002-07-08	2001-11-27	2001-10-17
Comments:			This data element utilizes a sub domain of the X12 data element domain that is based on the its use in a Transaction Set. Please refer to the Transaction Set Implementation Guide for the specific sub domain utilized.
Data Collection Methods:			
Data Type:	N	x(1)	ID
Minimum Size:	1	1	2
Maximum Size:	1	1	2
Representational Layout:	Not Provided	Not Provided	Not Provided
Representational Form:	Not Provided	Not Provided	Not Provided
Unit of Measure:	Not Provided	Not Provided	Not Provided
Precision:	0	0	0
Minimum Range:			
Maximum Range:			
Data Domain:	1 Male 2 Female 3 Unknown/not stated	M Male F Female U Unknown	F Female M Male U Unknown

Value of Lessons Learned to Nurses and Nursing Standards Development Organizations

- Standards have multiple means of versioning (e.g. major / minor numbering, re-release with corrections) and multiple versions available at any one point in time
- Workload entailed in loading different identified items varies widely due to the different levels of standardization
- A large amount of effort required in grooming the metadata to fit into the standard format as most exciting metadata does not exist in any kind of standard format
- Once in USHIK - standards data can be used many times

Value of Lessons Learned to Nurses and Nursing Standards Development Organizations

- New standards versions do not identify a delta (difference) between the versions, so a metadata difference analysis must be determined

- Many points for data errors with a tremendous quality assessment responsibilities to analyze the standard, determining the differences between versions, format the metadata, and enter the health information technology standard data elements

- Metadata analysis reveals standards may require change to correct errors:
  - Changes may be in the structure of the standard
  - Changes may have a cascading affect that may change data meanings
  - Changes must be reviewed to determine if data element still meets the needs of the Nursing Community of Interest

Relationship of Health Metadata Registries

UMLS: National Library of Medicine Unified Medical Language System (UMLS) project develops and distributes multi-purpose, electronic "Knowledge Sources" and associated lexical programs for system developers. Researchers will find the UMLS products useful in investigating knowledge representation and retrieval questions.”

Used to: Research terms and phases to use in developing definitions for data element concepts or data elements.

USHIK “The United States Health Information Knowledgebase (USHIK) provides and maintains a metadata registry of health information data element definitions, values and information models that enable browsing, comparison, synchronization and harmonization within an uniform query and interface environment.”

Used to: Publish data elements or designate the group of standards that meet functional requirements and that registration organizations want public and private organizations to use for the adoption of health information technology standards

Next Steps

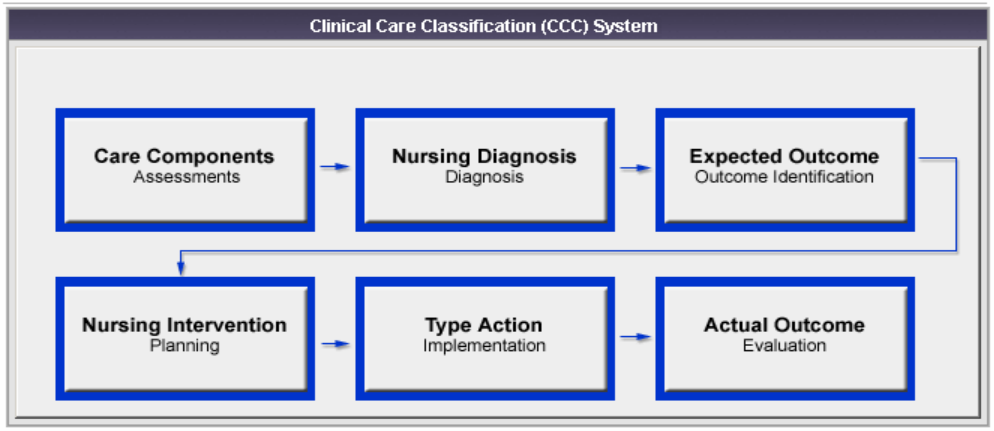
- *Eliminate a barrier to health data interoperability by matrix comparison of nursing data elements for the Customer – Centered Electronic Health Record*

- Educate on the United States Health Information Knowledgebase (USHIK) health metadata standards

- *Maintains the USHIK document registry of all historical documents of record behind a data analysis (metadata of terms & definitions)*

The Clinical Care Classification (CCC) System (Nursing Taxonomy)

Reference Framework



The Health Informatics Standards Board (HISB) advises USHIK. The HISB home web page is: http://www.ansi.org/hisb/.
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Care Components

Clinical Care Classification (CCC) Care Patterns

- Health Behavioral (3)
- Functional (5)
- Physiological (9)
- Psychological (4)

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Physiological	
Description:	A cluster of elements that represents a unique pattern of clinical care nursing practice related to Physiology
Model sub views associated with this model view	Bowel Elimination/Gastric (B) Cardiac (C) Metabolic (I) Physical Regulation (K) Respiratory (L) Skin Integrity (R) Tissue Perfusion (S) Urinary Elimination (T)
Concepts associated with this model view	
Data Elements associated with this model view or concept (count follows letter)	[A(0)] [B(0)] [C(0)] [D(0)] [E(0)] [F(0)] [G(0)] [H(0)] [I(0)] [J(0)] [K(0)] [L(0)] [M(0)] [N(0)] [O(0)] [P(0)] [Q(0)] [R(0)] [S(0)] [T(0)] [U(0)] [V(0)] [W(0)] [X(0)] [Y(0)] [Z(0)] [Others(0)] [All(0)]

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Search Results

Data Elements for Model Respiratory (L)

Data Element		Matrix	USHIK ID	Type	Status
L26.0 - Respiration alteration		☐	Sabacare.75181.v1	Data Element	Incomplete
L26.1 - Airway clearance impairment		☐	Sabacare.75184.v1	Data Element	Incomplete
L26.2 - Breathing pattern impairment		☐	Sabacare.75186.v1	Data Element	Incomplete
L26.3 - Gas exchange impairment		☐	Sabacare.75187.v1	Data Element	Incomplete

Run Matrix Report On Selected Items | Select All Items On This Page | Clear All Items On This Page

Add To Matrix Report Saved List | Clear Saved List | Run Matrix Report From Saved List

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