Connecting Health Information Technology Standards to the Point-of-Care: The IHE Method

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In the digital age there is a fundamental difference in the generation, distribution and consumption of data, information, and knowledge.
Objectives

- Differentiate quality nursing care from non-quality care
- Recognize currently nurses do not have cross-enterprise nor intra-enterprise interoperability documentation as part of their electronic workflow
- Discover how nursing could have interoperable documentation
What is Nursing Care?

Treating the human response to:

- Illness and disease
- Medical care and treatment
- Surgery and recovery
- Medicinal products such as medications and other products that can be prescribed for illness and disease
Nursing Documentation

- Health Assessment
  - Vital signs and measurements, including Pain
  - Heart and lung sounds and other body sounds
  - Internal and external patient fluid management
  - Activities of daily living

- Educate the patient and family
  - Disease, medication and treatment management
  - Life style changes and disease prevention
  - Safety in health and illness
  - Pain management
Why Standardized Terminology?

- **Describes all aspects of nursing care**
  - Reflects the knowledge and skills that are essential to nursing practice in a semantic way

- **Provides consistent concepts**
  - Describe assessments, interventions and outcomes of their actions

- **Facilitates critical thinking** at the point of care

- **Provides a reduction of error** by providing alerts for critical observations and interventions

- **Evaluates the impact** of nursing care
An established initiative improving the quality, safety, efficiency, and effectiveness of care by agreeing on standardized ways to implement existing standards, and inventing the processes for making it happen.

http://www.ihe.net
The Plan

- **Goal**: Move nursing data between care settings across time

- **Year 1**: Move data from ambulatory care into acute care and back to ambulatory care electronically without regard for vendor application.

- **Year 2**: Move data from ambulatory care to acute care, though all acute care, in hospital care transfers and back to ambulatory care without regard for vendor application.
Three Use Case’s

- A diabetic nursing home patient is transferring from the LTC environment to an in-patient acute care hospital based on deteriorating functional status assessments.

- A normally active, older adult in an assisted living community has an accidental fall requiring admission to an acute care facility.

- A recently widowed 75 year old woman is admitted to an adult inpatient floor of a behavior health hospital for depression post suicide attempt.
Hand Off/Transfer of Care: Use Case # 1

- Daily Assessment & call to provider
- Hand off to Transport
- Assessment in the Transport
- Hand off Transport to Acute Care
- Assessment on admission to Acute care/Med-Surg Unit
- Daily Assessments on Unit
- Hand off and Assessment to Transport
- Hand off to LTC
- Daily Assessment
Scale Characteristics

Qualities reviewed in scales

- Scales chosen are evidence-based with strong reliability and validity.
- Widely accepted cross-enterprise or required/recommended by accrediting agencies

Content Scales

- Numeric Rating Scale (NRS-11) for Pain
- Braden Scale for Predicting Pressure Sore Risk©
- Geriatric Depression Scale (GDS)
- Minimum Data Set – Section G
Physical Functional and Structural Problems

- Activities of Daily Living self performance
- Activities of Daily Living (ADL) support provided
- Test for balance
- Limitation for Range of Motion
- Modes of locomotion
- Modes of transfer
- Task Segmentation
- Rehabilitation potential
- Change in ADL function
Geriatric Depression Scale

**Subjective Questions:** (Examples listed)
- Are you basically satisfied with life?
- Do you feel that your life is empty?
- Do you often get bored?
- Are you hopeful about the future?
- Do you often feel helpless?

**Yes / No answers that may have a number score**

**Numbers are totaled**

**Totals are used to find where the patient is in a range, Normal, Mild or Severe Depression**
# Braden Scale for Predicting Pressure Sore Risk

## Vertical Axis:
- Sensory perception
- Moisture
- Activity
- Mobility
- Nutrition
- Friction and Shear

## Horizontal Axis
- Very limited (x2), Very moist, chairfast, very probably inadequate, potential problem
- Slightly limited (x2), occasionally moist, walks occasionally, adequate, no apparent problem
- No impairment
- Completely, constantly, bedfast, very poor, problem
Numeric Rating Scale for Pain

- Agonizing
- Horrible
- Dreadful
- Uncomfortable
- Annoying
- None

Unbearable Distress

No Distress

Task ________________________________

Date _______________ Start _______ End _______
Standards for Technical Use

- IHE Integration Profiles (XDS-MS)
- Continuity of Care Record (CCR)
- Continuity of Care Document (CCD)
- Clinical Document Architecture (CDA)
- HL7 Care Record Summary
- Logical Observation Identifiers Names and Codes (LOINC)
- Systematized Nomenclature of Medicine Clinical Terms (SNOMED-CT)
- BPPH consents

In context of Continuity of Care Document, the functional status is the patient’s status at the time the document was created. Medical Summary or XPHR Extract will contain FSA if available.
A healthcare “document” is a composite of structured and coded health information, both narrative and tabular, that describes acts, observations and services for the purpose of exchange.

Templates from CCR

Templates from IHE Content Modules & HL7 Implementation Guides

CDA

ASTM/HL7 CCD
### Building on the Foundation

- **CDA**: foundation standard enabling the definition of templates for a broad range of healthcare documents.
- **CCD**: collection of templates, including **CCR** that represent the core data elements for healthcare summary documents.

#### A CCD Based Document
- **Narrative & Tabular**
- **Chief Complaint**
- **Discharge Diagnosis**
- **Mode of Transport**

#### A CDA Based Document
- **Insurance**
- **Meds**
- **Problems**
- **Allergies**

**Template content from CCR**

**A CDA Based Document compatible with CCD**
Interoperability Outcomes

- Early intervention minimizes complications and reduces length of stay.

- Ensure all pertinent data will be available immediately prior/at the time of transfer without concern about lost data.

- Complete clinical information promotes safety, adequate after-care, improved outcomes and patient satisfaction.

- Receipt of data prior to transfer allows receiving facility to plan for appropriate staffing resources based on patient acuity, and early critical thinking for admitting nurse. (Resource maximization)

- Continuity of interdisciplinary plan of care promotes early discharge and increased patient satisfaction.
Advancing the Agenda for Patient Care

- Understand and embrace this initiative
- Get involved with Profile development
- Respond to public comment opportunities
- Attend educational workshops
- Attend the HIMSS08 Interoperability Showcase
- Include IHE Integration Profiles in your RFP’s
- Participate in IHE Committees
IHE Needs Nurses! Even if you could participate part of the time, IHE would be HAPPY!

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Questions