Are We Advancing Meaningful Interoperability?

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Summer Institute in Nursing Informatics
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Overview

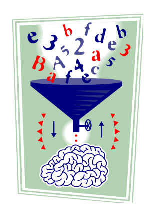
- This session will use a facilitated discussion to consider the impact of standards and interoperability on advancing future stages of Meaningful Use. The value of standardizing data to achieve information exchange and improve health outcomes will also be discussed.

Objectives

- Describe the impact of standards and interoperability on Meaningful Use
- Discuss the importance of health information exchange on the continuum of care
- Describe the role of data standards in improving health outcomes

What are Health Data Standards?

They are standards having to do with the structure and content of health information



Data + Context + Structure ➔ Information

Information + Rules + Analysis ➔ Knowledge

4

What is the Business Value of Health Data Standards?

- Data exchange standards provide a mechanism to validate deployed systems
- Enhance ability to automate interaction with external partners, decreasing cost
- Reduce manual intervention, increasing productivity and streamlining operations
- Improve the quality and efficiency of health care delivery
- Improve patient outcomes

5

HITECH Drives U.S. Standards Efforts

- Goal: Transform healthcare through the meaningful use of health data
- Data capture → data sharing → advanced clinical processes

→ ***Improved Outcomes***

- Requires organized structuring and effective use of information to support decision making

6

What is Interoperability?

- Interoperability means the ability of health information systems to work together within and across organizational boundaries in order to advance the health status of, and the effective delivery of healthcare for, individuals and communities. [1]

[1]HIMSS 2013 *Dictionary of Healthcare Information Technology Terms, Acronyms and Organizations*, 3rd Edition

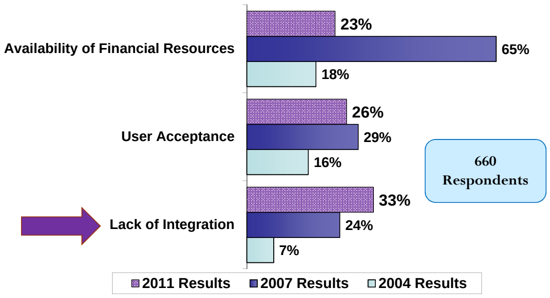
7

Current State

- More than 70% of surveyed clinicians identified lack of interoperability, lack of an information exchange infrastructure and the cost of setting up and maintaining interfaces and exchanges as a major barrier. [1]

[1]Bipartisan Policy Center 2012: Clinician Perspectives on Electronic Health Information Sharing for Transitions of Care

2011 Nursing Informatics Workforce Survey: Largest Barrier to Success



Data from the 2011 HIMSS Nursing Informatics Workforce Survey

What is the Value of Interoperable Data to Nurses?

- Plan for early interventions with appropriate resources based on patient acuity including nurse staffing (resource maximization)
- Support the practice of communicating and representing patient data so it is reusable
- Complete clinical information promotes safety and improved outcomes
- Continuity of care delivery

10

What is the Value of Interoperable Data to Nurses?

- Promotes safe transfers of care for improved outcomes
- Decreased risk of error during transfer of care
  - Data re-entry may increase chance of error
  - Inefficient use of staffing and acuity tools
- Improved quality of care, timely delivery
- Decreased costs by eliminating redundancy
- Improved work flow with timely, accessible clinical data
- Allows for clinician collaboration and early intervention

11

Questions and Discussion

ONC Standards & Interoperability Framework

- Uses a set of integrated functions, processes and tools that enable execution of specific value-creating initiatives
- Each initiative tackles a critical interoperability challenge through a rigorous process that includes:
  - Development of clinically-oriented user stories and robust use cases
  - Harmonization of interoperability specifications and implementation guidance
  - Provision of real-world experience and implementer support through new initiatives, workgroups and pilot projects
  - Mechanisms for feedback and testing of implementations

Meaningful Use and Interoperability

Structured Data

Stage 1

Core
- Problems – SNOMED CT
- Meds – Rx Norm
- Med Allergies
- Demographic Data
- Vital Signs
- Smoking Status – SNOMED CT

Menu
- Labs – LOINC
- Public Health – HL7

Stage 2

Core
- Stage 1 Core
- Labs – LOINC
- Public Health – HL7

Menu
- Family Health History
- Progress Notes

Sharing Summary of Care

Stage 1

Core
- 2013 Provide as an e-copy upon request
- 2014+ Make available online to patients

Menu
- Provide at 50% of transitions of care and referrals

Stage 2

Core
- Make available online to patients
- Provide at 50% of transitions of care and referrals

Standardized Electronic Exchange

Stage 1
- Prep for Stage 2

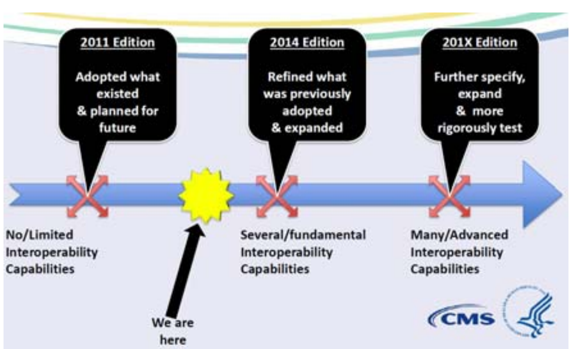
Stage 2
Core
- Send using one of the established standards for 10% of transitions of care and referrals
- Ensure ability to conduct an electronic exchange outside your organization and across developer lines

A Closer Look at Stage 2: Electronic Exchange

Stage 2 focuses on actual use cases of electronic information exchange:

- **Stage 2 requires that a provider send a summary of care record for more than 50% of transitions of care and referrals.**
- **The rule also requires that a provider electronically transmit a summary of care for more than 10% of transitions of care and referrals.**
- **At least one summary of care document sent electronically to recipient with different EHR vendor or to CMS test EHR.**

The Interoperability Spectrum



Interoperability Requirements: 2014 Edition EHR Certification Criteria

Purpose	Interoperability Standards Requirements	Single Standard?	More interoperable than 2011?
Electronic prescribing	Standardized e-prescription format, with standardized medication codes	Yes	Yes
Identify Patient Education	Standardized ability for providers to request education resources from 3rd party content providers	Yes	Yes
Transitions of care	• Standardized summary care record with standardized clinical terminologies • Uniform capability to transmit between systems	Yes	Yes
Incorp./ Transmission of Lab Tests	• Standardized interface requirement to receive and transmit lab data with standardized clinical terminologies	Yes	Yes

Interoperability Requirements: 2014 Edition EHR Certification Criteria

Purpose	Interoperability Standards Requirements	Single Standard?	More interoperable than 2011?
View, Download, Transmit to 3rd party	• Standardized summary care record with standardized clinical terminologies • Uniform transmission capability for patients	Yes	Yes
Clinical Summaries	Standardized summary care record with standardized clinical terminologies	Yes	Yes
Data Portability	Standardized summary care record with standardized clinical terminologies	Yes	Yes
Public Health reporting	• Standardized transmission to immunization registries • Standardized transmission of reportable lab results • Standardized transmission of syndromic surveillance data • Standardized transmission for cancer case reporting	Yes	Yes

Questions and Discussion

The Role of Data Standards in Improving Health Outcomes

Report on the Lessons from 12 Countries[1,2]

- Asked two key questions:

1. To what degree are a country's clinicians, government officials and health policy makers committed to creating and using a system of high-quality health data
2. To what extent is a national legal and IT infrastructure in place for collecting health outcome data and linking those data to issues of cost?

[1]Soderlund, N, Kent, J. Lawyer, P. et al (2012). Progress toward value-based health care: Lessons learned from 12 countries.

[2] Australia, Austria, Canada, Germany, Hungary, Japan, the Netherlands, New Zealand, Singapore, Sweden, United Kingdom, and United States.

Key Success Factors

- Clinician engagement: The greatest improvement comes when clinicians are responsible not only for collecting and interpreting data, but also leading improvement efforts.
- National Infrastructure: It looked for common standards for tracking diagnoses, treatments, outcomes, and costs at the patient level; a limited number of shared IT platforms; and a common legal framework regulating the use of patient data.[1]

[1]Soderlund, N, Kent, J. Lawyer, P. et al (2012). Progress toward value-based health care: Lessons learned from 12 countries.

Key Success Factors

- High-quality data: The most effective way to collect relevant data is through disease registries to promote more effective and cost-efficient care.
- Outcome-based incentives: Data-driven incentive measures should spur changes in the way clinicians practice, payers reimburse, and suppliers of drugs and medical devices develop and deliver products and services.[1]

[1]Soderlund, N, Kent, J. Lawyer, P. et al (2012). Progress toward value-based health care: Lessons learned from 12 countries.

Questions and Discussion

Advancing the Vision of a Transformed Health System

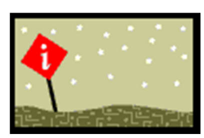
Informatics and health IT have the potential to reshape the healthcare delivery system, transitioning to:

A more coordinated structure where information can be easily and safely shared among patients, consumers and providers to enable improved outcomes, quality of care and lower costs.

2013 Nursing Knowledge: Big Data Research for Transforming Healthcare Conference
University of Minnesota

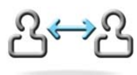
To Reach this Vision

- All providers, health systems, hospitals, patients and consumers must have access to real-time, accurate and actionable health information



Interoperability is Essential

- Infrastructure is still fragmented which contributes to inefficient, uncoordinated care
- Need to bridge gaps between entities, organizations, settings
- Need to understand the impact on patients, end-users
- Need comparable, consistent data
- Advances in EHR –> Patient Care Device –> EHR integration
- Moving to ICD10, Meaningful Use Stage 3



2014 Action Plan to Advance Data Standards and Interoperability

1. Promote the nursing involvement in the science of big data research and Quality Improvement.
2. Advance the NDNQI eMeasure work on pressure ulcers as recommendation for Phase 3 of Meaningful Use.
3. Engage nurses in Health IT policy, influencing standardized nursing data.
4. Promote harmonization and standardization of nursing data and models.
5. Develop and disseminate a framework and standards for integration of LOINC/SNOMED CT coding into EHRs for interoperability.
6. Transform nursing documentation into structured, coded terminology and usable workflow across the continuum of care.

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A Sign of Progress

On April 17, 2014 the Minnesota e-Health Advisory Board approved the following recommendations for the State of Minnesota:

- All health care settings should create a plan for implementing an ANA recognized nursing terminology within their EHR.
- Each setting type should achieve consensus on a standard terminology that best suits their needs and select that terminology for their EHR either individually or collectively as a group (e.g. EHR user group)
- Education should be provided and guidance be developed for selecting the nursing terminology standard that suits the needs for a specific setting.

A Sign of Progress

On April 17, 2014 the Minnesota e-Health Advisory Board approved the following recommendations for the State of Minnesota:

- When exchanging a Consolidated Continuity of Care Document (C-CDA) with another setting for problems and care plans, SNOMED-CT and LOINC should be used for exchange
- The Omaha System for exchange between public health or community-based settings for reporting of results should be used where appropriate (e.g. two public health agencies or a public health and home care agency that both use the Omaha System)
- Exchange between providers that do not use the Omaha System and a provider that does will require a common terminology for exchange which should be SNOMED-CT and LOINC

Questions and Discussion

Thank you!

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34