HL7 and Meaningful Use

HIMSS Las Vegas
February 23, 2012

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Meaningful Use – What Does It Mean?

- HITECH rewards the “Meaningful Use” of health IT to “best inform clinical decision at the point of care” and not the purchase of health IT

- “Meaningful User” is defined by Congress:
  - Uses certified EHR technology;
  - In a meaningful manner (eg e-prescribing);
  - To exchange health information to improve quality of care;
  - To report selected clinical quality measures to CMS
Major Components Require Standards

- Key components
  - Tracking key patient-level clinical information in order to give health providers clear visibility into the health status of their patient populations
  - Applying clinical decision support designed by health care providers to help improve adherence to evidence-based best practices
Major Components Require Standards

■ Key components

- Executing electronic health care transactions
  (prescriptions, receipt of drug formulary information,
  eligibility checking, lab results, basic patient summary data)
  e.g. exchange of data with key stakeholders

- Reporting a focused set of meaningful care outcomes
  and evidence-based process metrics (for example, the
  percentage of patients with hypertension whose blood
  pressure is under control), which will be required by
  virtually any conceivable new value-based payment
  regimes
Implementation - Incentives

Incentives available to providers who use a certified EHR to improve the overall quality of healthcare delivered by demonstrating achievement of a series of objectives, including but not limited to:

- Entering orders, medications, etc in CPOE
- Maintaining problem lists in ICD9-CM or SNOMED CT® coding
- Maintain active medication list and electronic prescribing
- Recording vital signs, smoking status
- Receive and display lab results encoded with LOINC® codes
Implementation - Incentives

- Generate patient lists based on specific conditions and generate patient reminders
- Provide patients with electronic copy and electronic access to their record and discharge instructions
- Generate a clinical summary for each visit
- Exchange clinical data with other providers
- Protect the information, encrypt it and record disclosures
### Meaningful Use Information Standards

- Standards Organized into Four Categories

<table>
<thead>
<tr>
<th>Content Exchange</th>
<th>Vocabulary</th>
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</thead>
<tbody>
<tr>
<td>Standards used to share clinical information:</td>
<td>Standardized nomenclatures &amp; code sets for:</td>
</tr>
<tr>
<td>- clinical summaries</td>
<td>- clinical problems and procedures</td>
</tr>
<tr>
<td>- prescriptions</td>
<td>- medications</td>
</tr>
<tr>
<td>- structured electronic documents</td>
<td>- allergies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transport</th>
<th>Privacy and Security</th>
</tr>
</thead>
<tbody>
<tr>
<td>To establish a communication protocol between systems that is</td>
<td>Standards that support:</td>
</tr>
<tr>
<td>- common</td>
<td>- authentication</td>
</tr>
<tr>
<td>- predictable</td>
<td>- access control</td>
</tr>
<tr>
<td>- secure</td>
<td>- transmission security</td>
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</tbody>
</table>
HL7 Standards are Foundational to Meaningful Use

- **HL7 V2.x**
  - Version 2.5.1 for the submission of lab results to public health agencies
  - Version 2.3.1 or Version 2.5.1 for submitting information to public health agencies for surveillance or reporting (excluding adverse event reporting)
  - Version 2.3.1 or Version 2.5.1 for submitting information to immunization registries as the content exchange standard and the CDC maintained HL7 standard code CVX—Vaccines Administered as the vocabulary standard
  - Version 2.5.1 Implementation Guide for Electronic Laboratory Reporting to Public Health when HL7 Version 2.5.1 is used for reporting lab results to public health agencies

- **HL7 CDA:CCD**
  - Continuity of Care Document (CCD), an HL7 Version 3 artifact, one of two options for content exchange standards for the patient summary record
  - ONC Sponsored CDA Implementation Guide Consolidation Project
Standards Categories Support Health Outcomes Policy Priorities

Improving quality, safety, efficiency, and reducing health disparities:
- CPOE is used for at least 80% of all orders
- Medication reconciliation for at least 80% of relevant encounters
- Improve care coordination

Engage patients and families in their healthcare:
- Improve population and public health
- Conduct or review a security risk analysis per 45 CFR 164.308

Ensure adequate privacy and security protections for personal health information:
- At least 80% of all patients who request an electronic copy of their health information are provided it within 48 hours
- One test of certified EHR technology’s capacity to submit electronic data to immunization registries
S&I Framework

- ONC Standards and Interoperability Framework
  - CDA Consolidation Project
  - Transitions of Care Project
  - Laboratory Result Initiative
  - Public Health Reporting
  - Query Health
The ONC S&I Framework

CDA Consolidation Project

- Joint initiative between HL7, IHE and ONC
  - Brings together specifications from
    - Health Level Seven
    - Integrating the Healthcare Enterprise (IHE)
    - ANSI/HITSP
  - Resolves ambiguity across specifications
  - Tool Driven Implementation Guide Creation
ONC CDA Transitions of Care Project

- **Exchange of Key Clinical Information**
  - Discharge Summaries
  - Discharge Instructions
  - Referral Summaries
  - Consultation Notes

- **Outputs**
  - Use Case and Functional Requirements
  - Clinical Information Model
  - Standards Selection
  - Pilots and Implementations
Laboratory Result Interface Initiative

- Mission is to drive down the costs and time to implement results interfaces between labs and ambulatory primary care providers
  - Focused on Laboratory result reporting to Ambulatory EHR’s
  - Take actions now that will impact Meaningful Use Stage 2 and enable adoption of the lab results interface
  - Adoption of the Ambulatory Lab Result Implementation Guide for Stage 2
Public Health Reporting

- Create implementation guides for communication between clinical care and public health
  - Maternal Child Health, EHDI, Vital Records
  - Communicable Diseases, Case Reporting
  - Chronic Disease, Immunization, Injury
  - Occupational Safety, Adverse Events, Surveillance

Query Health

- Distribute Queries

  - Quality Measures, Disease Outbreaks, Comparative Effectiveness Research, Treatment Efficacy, Monitoring Health Trends
  - Ensure local control, privacy and security of data
Meaningful Use
Quality Reporting

Stage 1 Meaningful Use criteria

- 1) Capturing health information in a coded format,
- 2) Using the information to track key clinical conditions;
- 3) Communicating captured information for care coordination purposes; and
- 4) Reporting of clinical quality measures and public health information
Meaningful Use
Quality Reporting

Stage 2 Criteria will be defined, and will expand on Stage 1

- Focus on disease management, clinical decision support, medication management, support for patient access to their health information, transitions in care, quality measurement, research, and bi-directional communication with public health agencies
- May apply to both the inpatient and outpatient hospital settings
Meaningful Use
Quality Reporting

- Stage 3 Criteria will be defined by the end of 2013
  - Focus on achieving improvements in quality, safety and efficiency, focusing on decision support for national high priority conditions, patient access to self-management tools, access to comprehensive patient data and improving population health outcomes
# Core Measures

**Preventive Care And Screening: Tobacco**

- Use: 75% (213/284)

**Adult Weight Screening And Follow-Up**

- 65+: 48% (34/70)
- 18-64: 20% (58/277)

**Hypertension: Blood Pressure Measurement**

- 82% (23/28)

**Childhood Immunization Status**

- DTAP: 90% (30/33)

# Alternate Measures

**Heart Conditions**

**Cancer**

**Miscellaneous**

**Women's Health**

**Diabetes**

**Asthma**
Quality Reporting Document Architecture

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      1.4.1 Historical QRDA Documents

Quality Reporting Document Architecture Project

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Project Overview

The Quality Reporting Document Architecture (QRDA) project is developing a standard for communicating health care quality measurement information. The standard will conform to the requirements of the Health Level Seven (HL7) Clinical Document Architecture Release 2.0 (CDA).

The project began in 2007 with a private collaboration supported by the Alliance for Pediatric Quality (Alliance) – a joint effort of the American Academy of Pediatrics, The American Board of Pediatrics, Child Health Corporation of America, and the National Association of Children's Hospitals and Related Institutions. The report on that Phase I effort can be found here: QRDA Phase 1 Report.

The Phase II effort was an HL7 project supported by the Child Health Corporation of America (CHCA) and co-sponsored by the Structured Documents and Child Health Work Groups. The Phase II effort produced the QRDA Category I Draft Standard for Trial Use (DSTU), published in April 2009. QRDA Category II and III report formats were balloted for comment only. The QRDA DSTU can be found here: HL7 Implementation Guide for CDA Release 2.
Experience from the Field

- Large Provider Perspective
  - Have internal IT team and certified EHR system
  - Short timelines
  - Getting beyond the $$$
  - Communication, Coordination, Commitment

- Small Provider Perspective
  - Lack of IT support, internal staff capacity
  - Takes “more time”…I can write faster
  - “It doesn’t effect me”
  - Wow, didn’t realize the benefits
Meaningful Use – 3 Stage Implementation

- Meaningful use implemented in 3 Stages
- All “Eligible Providers” and “Eligible Hospitals” must achieve meaningful use by 2015 or face sanctions

2011 - 2014
Stage 1
Capture Data in Coded Format

2013 - 2014
Stage 2
Expand Exchange of Information in Structured Format

2015
Stage 3
Focus on Clinical Decision Support for High Priority Conditions, Patient Management, and Access to Comprehensive Data
The Future – What is Proposed for Stage 2 & 3

- ONC plans to release its proposed rule for standards and certification criteria for stage 2 of meaningful use today

- EHR and PHR exchanging information via an HIE platform (EHR to PHR initially)

- ONC to focus on vocabulary centered on lab reporting, care transitions, public health reporting and quality measures
The Future – Alignment of Meaningful Use and Accountable Care Organizations (ACOs)

- ACOs help better coordinate care, lower costs
  - The new program established on January 1, 2012
  - Create incentives for health care providers to work together to treat an individual patient across care settings
  - Reward ACOs that lower health care costs while meeting performance standards on quality of care
To share in savings, ACOs would meet quality standards in five key areas:

- Patient/caregiver care experiences
- Care coordination
- Patient safety
- Preventive health
- At-risk population/elderly health
The Future – Alignment of Meaningful Use and Accountable Care Organizations (ACOs)

- After Year 2 of the ACO, 50 percent of PCPs must be Meaningful Users
  - Healthcare providers will need EHR, HIE and other tools
  - Share patients’ data, distribute decision support, communicate securely, and coordinate care
  - Many of the quality measures overlap with Meaningful Use criteria
# HL7 Standards - Master Grid

Members can access standards for free and non members can **buy the standards** from HL7 or ANSI. Business use of the HL7 standards requires a paid organizational membership in HL7 Inc. HL7 encompasses the complete life cycle of a standards specification including the development, adoption, market recognition, utilization, and adherence.

**Click a Standard to link to more detail.**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Category</th>
<th>Type</th>
<th>Steward WG</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDA® Release 2</td>
<td>The HL7 Version 3 Clinical Document Architecture (CDA®) is a document markup standard that specifies the structure and semantics of “clinical documents” for the purpose of exchange between healthcare providers and patients. It defines a clinical document...</td>
<td>HHSFR</td>
<td>Normative</td>
<td>Structured Documents</td>
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<tr>
<td>HL7 Messaging Standard Version 2.3.1</td>
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<tr>
<td>HL7 Messaging Standard Version 2.5.1</td>
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<tr>
<td>HL7 Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health, Release 1 (US Realm)</td>
<td>The Version 2.5.1 Implementation Guide: Electronic Laboratory Reporting to Public Health (US Realm), Release 1 describes the transmission of laboratory-reportable findings to appropriate local, state, territorial and federal health agencies using the message. In particular, this guide...</td>
<td></td>
<td>Informative</td>
<td>Public Health and Emergency Response</td>
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<td>The Version 2.5.1 Implementation Guide: Orders and Observations: Interoperable Laboratory Result Reporting to EHR (US Realm), Release 1 provides guidance on how to apply the Version 2.5.1 standard to the exchange of laboratory results from the testing source between providers and ot...</td>
<td></td>
<td>Informative</td>
<td>Orders and Observations</td>
</tr>
<tr>
<td>HL7/ASTM Implementation Guide for CDA Release 2 - Continuity of Care Document (CCD®) Release 1</td>
<td>The Continuity of Care Document (CCD®) is a joint effort of HL7 International and ASTM. CCD fosters interoperability of clinical data by allowing physicians to send electronic medical information to other providers without loss of meaning and enabling improvement of patient care. CCD is...</td>
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