Health IT Standards Committee

A Public Advisory Body on Health Information Technology to the National Coordinator for Health IT

Implementation, Certification, and Testing (ICT) Workgroup

Summary of Workgroup Comments on the Interoperability Roadmap

March 18, 2015

Liz Johnson, co-chair
Cris Ross, co-chair

Current Membership

Name	Organization
Cris Ross, co-chair	**Mayo**
Liz Johnson, co-chair	**Tenet Healthcare Corporation**
Sarah Corley	Next Gen
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Kyle Meadors	Drummond Group Inc.
Rick Moore	National Committee for Quality Assurance
Andrey Ostrovsky	Care at Hand
Danny Rosenthal	Inova Health System
John Travis	Cerner Corp.
Steve Waldren	American Academy of Family Physicians
Zabrina Gonzaga	Lantana
Kevin Brady, Federal Ex officio	National Institute of Standards and Technology
Brett Andriesen, staff lead	Office of the National Coordinator for Health IT

Interoperability Roadmap Assigned Sections

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Charge Question	• In what ways can semantic interoperability be tested? (e.g., CCDA content semantics)

Category	2015-2017 Send, receive, find and use a common clinical data set	2018-2020 Expand interoperable health IT and users	2021-2024 Achieve nationwide LHS
I1. Testing Tools	1. ONC, NIST and other health IT stakeholders will provide testing tools necessary to support the criteria in ONC's certification program. 2. Health IT developers, SDOs and government will explore and accelerate a suite of testing tools that can be used by implementers post-implementation to ensure continued interoperability while health IT is in use. 3. SDOs begin to develop and maintain additional testing tools in support of more stringent testing of standards	4. ONC, NIST and other health IT stakeholders will provide updated testing tools in support of ONC's certification program. 5. Health IT Developers, SDOs and government will maintain a suite a testing tools. 6. Health IT developers will regularly use testing tools to maintain interoperability while health IT is in use.	7. ONC, NIST and other health IT stakeholders will provide updated testing tools in support of ONC's certification program. 8. Health IT developers. SDOs and government will maintain a suite of testing tools.

Interoperability Roadmap Assigned Sections

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Category	2015-2017 Send, receive, find and use a common clinical data set	2018-2020 Expand interoperable health IT and users	2021-2024 Achieve nationwide LHS
I2. Certification Programs	1. Health IT Developers, ACBs, ATLs and other stakeholders will analyze, identify gaps and provide feedback to ONC regarding certification criteria that should be added to the ONC HIT Certification Program. Specifically, criteria that would support ONC's desire to expand the scope of the certification program to support health IT used in a broader set of health care settings, such as criteria for long-term and post-acute care, home and community based services in non-institutional settings and behavioral health settings. Additionally, criteria related to accessibility and usability of health IT. 2. Other existing industry certification programs will continue to complement ONC's certification program to ensure that different aspects of health IT conform to the technical standards necessary for interoperability. 3. FACAs will make recommendations for standards and certification criteria for inclusion in ONC's certification program.	4. Health IT developers, ACBs, ATLs and other stakeholders will continue to provide feedback to ONC regarding certification criteria that could be added to the ONC HIT Certification Program in order to increase its impact on interoperability 5. ONC and other industry certification programs will focus on including more stringent testing such as scenario-based testing and post-implementation testing to ensure interoperability while health IT is in use.	6. ONC and other industry certification programs will continue to update criteria as needed in support of a learning health system's evolving needs, new standards and expanded program's scope to include health IT used in a broader set of health care settings.

Initial Findings

- Section I1 – Testing Tools
  - CCDA Simplification has occurred between Release 1 and Release 2. See additional detail in appendix slides.
  - Practical, effective, industry-run tools are needed for post-certification testing in support of interoperability, and evolution of vocabularies, technologies and processes between regulatory cycles.
  - “Regular Use” of testing tools needs further definition
  - Explore potential for “deeming” rather than certification for improved efficiency where services are already in place and widely used (e.g. ePrescribing)

Next Steps

- Section I2 – Certification Programs
  - On agenda for next WG meeting

APPENDIX: Recommendations for Constraining CCDA

Implementation, Certification and Testing Workgroup

March 18, 2015

Sarah Corley, MD
David Kates
John Travis

Recommendations for Constraining CCDA General Considerations

Category	Description/Concern	Recommendations
G1. General Operating Rules	a. The assignedAuthorID root and extension are not required in the CCDA but contains information which should be required for the data to be captured discretely. Capturing this information is useful for non-repudiation as well as data segmentation practices which may be required for the DS4P Initiative. b. The CCDA specification provides ambiguity with regards to how and when GUIDs and OIDS must be used. Some systems provide the id root and extension in certain CCDA sections but in others only include the root, containing a UUID. The CCDA specification allows this but some systems have complained because of the ambiguity throughout the document. This requirement should be clarified in the specification. c. There have been issues of use of vendor source OIDs or suffixes on some non-standard OID values for identifying the provider entity that impacts interoperability	a. Require that the assignedAuthorId be present for all medications, allergies, problems, procedures and immunizations. b. Require EHRs handle the allowable formatting requirements seen within the different sections of the CCDA with regards to the id root and extension information. c. Require consistency for how vendors express OIDs for identifying the provider entity when unique OIDs are required and not generic values.

Recommendations for Constraining CCDA General Considerations (cont.)

Category	Description/Concern	Recommendations
G2. Scope/Timeframe of CCDA	Inconsistent implementation of CCDA in terms of whether it describes care provided in a single encounter or a comprehensive longitudinal care summary and, in latter case, how far back historical information extends CCDA recipients have a hard time controlling the voluminous active, current data in addition to historical/non-active data. There a lack of specificity for start and stop dates	Define explicit options for CCDA for specific use cases (hospital discharge, office visit summary, referral). Establish "reasonable" business rules or guidance for constraining the volume of what is included as to historic data/non-active data for the structured data types in the MU Common Data Set or repeat observations of the same type of data (reducing the clutter or noise)
G3. Transitions of Care	Current CCDA template does not distinguish between different kinds of transitions of care (hospital discharge, referral, etc.)	Handle specific use cases for different kinds of transitions of care and do not homogenize them all **Note:** Need to be explicit about specific use cases so CEHRTs don't attempt to build one CCDA to satisfy multiple MU requirements.

Recommendations for Constraining CCDA General Considerations (cont.)

Category	Description/Concern	Recommendations
G4. Additional Comments	a. Consistency as to representing "no known" versus "no data" conditionality for each section b. Addressing issues of use of optional segments and data columns that affect the ability to incorporate received data when that use is not common or semantically shared c. What do to do about data versioning or corrections (my understanding is the CCDA is not really designed to handle that as you would find in v2 HL7 transactions)	

Recommendations for Constraining CCDA Common MU Data Set

Category	Description/Concern	Recommendations
MU1. Demographics (Name, Sex, DOB)	Minimum demographic data requirements for purposes of patient matching	Address use of non-required fields that may be "required" by some vendors for patient matching
MU2. Patient Attributes (Race, Ethnicity, Language)		
G4. Additional Comments	Needs more structured definition or guidance	- Clarify what roles should be included (may vary by use case) - Constrain by time

Recommendations for Constraining CCDA Common MU Data Set (cont.)

Category	Description/Concern	Recommendations
MU4. Medications	a. Multiple ways to represent PRN medications b. Multiple ways to express duration c. Prescribed by provider/organization or all (including reported) d. A dedicated entry should be added for the relationship designated to the SIG string. There is an instruction entry relationship which is not always be the same as the SIG. e. Add an entry relationship dedicated to status of med e.g. Active, No Longer Active etc. This entry was present in the HITSP C32 but is not present in the CCDA. f. Provide an ability to describe a range in how often to take a med (effective time element) e.g. “every 2-3 hours”. Currently you can only indicate “2 hours” or “3 hours” not a range.	- Constrain to a single approach - Establish clear guidelines for typical cases - Stipulate based on use case - Constrain to active medications only - Establish a new entry specifically for the medication SIG - Establish a new entry for the medication status - Enhance the time element to allow for a time range for medications
MU5. Medication allergies	a. Clean up commingling of terms for medication intolerances and environmental/substance allergies	- Constrain to active medication allergies only - Constrain environmental allergies to problem section - Develop separate section for active medication intolerances

Recommendations for Constraining CCDA Common MU Data Set (cont.)

Category	Description/Concern	Recommendations
MU6. Care Plan	a. Need additional details to specify care plan in a more structured manner (**Note:** enhancement v. constraint)	- Add tags for specifying activity, timing/frequency, responsible, etc.
MU7. Problems	a. Mix of chronic conditions, acute problems, and billing diagnoses from historic use of ICD9 with mapping in bulk b. Lack of clarity as to what should be included on a problem list c. Duplication with encounter diagnosis d. The CCDA problems section supports SNOMED, ICD-10 and ICD-9 but it seems that for MU compliance, only SNOMED and ICD-10 can be included. This may not be valid since some EHR's will have chronic issues entered as ICD-9 codes and should be included in this section. Either the MU requirements or CCDA specifications need clarification on exact usage.	- Constrain to active problem list - Do not duplicate content on both encounter diagnosis and problem section
MU8. Laboratory Tests and Values/Results	a. Need to constrain timeframe (current encounter v. longitudinal and scope – performed/reported, most recent results or all for time period, etc.) b. Different LOINC codes represent the same component reflecting either lab process or vendor choice of a representative LOINC when the lab fails to provide one	- Develop consensus mapping of LOINC codes where results can be trended - Constrain by time/# of results

Recommendations for Constraining CCDA Common MU Data Set (cont.)

Category	Description/Concern	Recommendations
MU9. Procedures	a. Performed by provider/organization or all (including reported) b. E&M visit CPT codes should not be commingled with actual procedures	- Constrain to a single approach - Establish clear guidelines for typical cases - Constrain to non visit, actual procedure CPT codes - Constrain to a set time period for frequently performed procedures
MU10. Smoking status	a. Need to consider all forms of tobacco use b. Do alternative nicotine delivery systems such as an e-cigarette get reported here?	- Constrain to most recent data only
MU11. Vital signs	a. Potential for too many results leading to extremely long documents	- Constrain to a set period of time perhaps based on use cases or hospital vs. ambulatory

Recommendations for Constraining CCDA Criterion-Specific Sections

Category	Description/Concern	Recommendations
C1. Provider Name & Office Contact Info (Ambulatory)		
C2. Reason for Referral (Ambulatory)	Some vendor implementations of CCDAs have been extended to include information that had traditionally been included in HL7 V2 transactions (ORM or REF) that include relevant diagnoses, service type, etc.	Include structured fields for referral use case
C3. Encounter Diagnoses	Should this be the first billing diagnosis or all diagnoses used for billing for that encounter?	- Clarify expectation of one or many - Constrain to a set period of time

Recommendations for Constraining CCDA Criterion-Specific Sections (cont.)

Category	Description/Concern	Recommendations
C4. Cognitive Status	a. Need more clarity on how this is defined b. Need providers to assign status based on consensus definition	- Stakeholders need to develop consensus definitions - Constrain to most recent
C5. Functional Status	a. Need more clarity on how this is defined b. Need providers to assign status based on consensus definition	Stakeholders need to develop consensus definitions Constrain to most recent
C6. Discharge Instructions (Inpatient Only)	Lack of uniform content and structure Need to separate into meds, labs, procedures, referrals, appointments, instructions…	Need to specify components included Need structure defined Constrain to most recent
C7. Immunizations	Historical vaccine data may be inaccurate Requirement for complete dates when dates might not be known for historical vaccines	Consider different requirements for historical immunization data Consider constraining to most recent for flu shots

Recommendations for Constraining CCDA Additional (eXtra) Sections

Category	Description/Concern	Recommendations
X1. Advance Directives	a. Inconsistent terminologies b. Different vendors represent information differently which can cause confusion. c. Need support for sharing actual signed document d. Conflicting directives might exist that require clarification on what current wishes are	- Incorporate POLST terminology
X2. Encounters	How is this different from encounter diagnoses?	Constrain to most recent
X3. Assessments	How is this different from encounter diagnoses?	Constrain to most recent
X4. Functional and Cognitive Status	a. Need more clarity on how this is defined. Lacks much structure and is ambiguous as to how to represent it – and yet, in the 2014 Criteria Edition test method for Transition of Care, the test data sets represent it as codified data (specifically SNOMED CT) b. Need providers to assign status based on consensus definition	- Stakeholders need to develop consensus definitions and clearer definition/structure to represent required data consistently - Constrain to most recent

Recommendations for Constraining CCDA Additional (eXtra) Sections (cont.)

Category	Description/Concern	Recommendations
X5. Medical Equipment		
X6. Payers		Constrain to current payers
X7. Assessment and Plan	What format is this expected to take? There would need to be a structure defined for plan with the separate types identified (labs, radiology, procedures, follow up appointments, referrals, patient education, instructions)	Constrain to most recent
X8. Social History	Issues with confidentiality of data elements	Constrain to most recent

Recommendations for Constraining CCDA Additional (eXtra) Sections (cont.)

Category	Description/Concern	Recommendations
X9. History of Present Illness	Potential overlap of HPI/ROS	Constrain to most recent
X10. Chief Complaint	- Currently optional but it's a critical piece of information for any transfer or referral. - How is this different from reason for visit?	Constrain to most recent
X11. Reason for Visit	How is this different from chief complaint?	Constrain to most recent
X12. Review of Systems	Potential overlap of HPI/ROS	Constrain to most recent

Recommendations for Constraining CCDA Additional (eXtra) Sections (cont.)

Category	Description/Concern	Recommendations
X13. Physical Exam		Constrain to most recent
X14. General Status	What does this mean? Need better definition.	Constrain to most recent