



Sequoia Project Content Testing Program Overview

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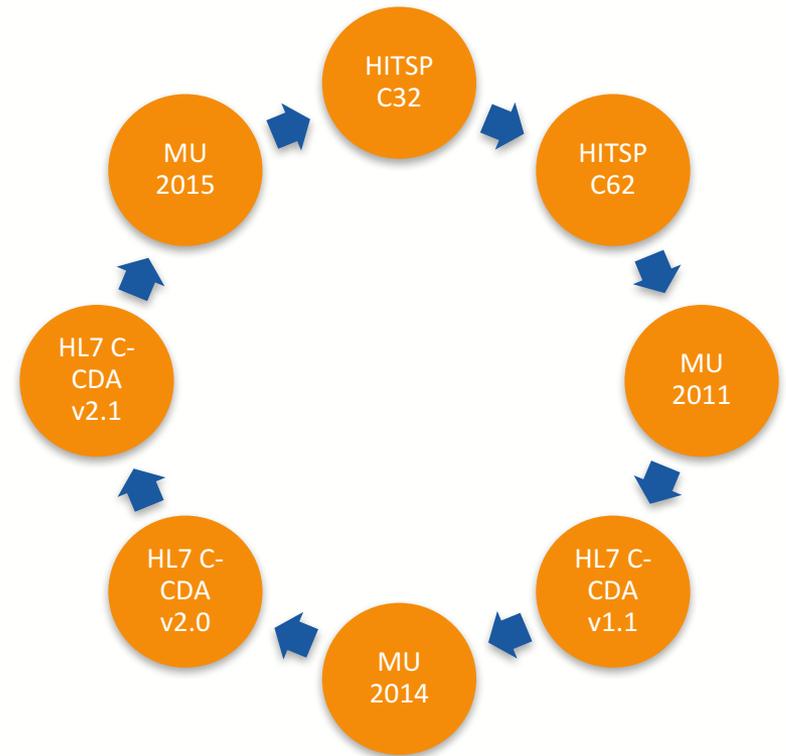
Director Testing Programs

eHealth Exchange™

An initiative of **the sequoia**
project

eHealth Exchange Content Testing Evolution

- No Content Testing Required: If Participant or Vendor's architecture is certified for MU 2011 edition or 2014 edition
- If not MU certified: Required to test one or more of the following:
 - [The Basic C32 \(ONC 2011 Edition\)](#)
 - [The Bridge C32](#)
 - [The Consolidated CDA \(C-CDA\) \(ONC 2014 Edition\)](#)
- In June 2015, Coordinating Committee approves launch of Testing Workgroup with initial focus on Content Testing



Testing Workgroup (TWG) Background & Overview

1. Testing Workgroup approved by the eHealth Exchange Coordinating Committee (CC) on 6/16/2015
2. Testing Workgroup Launched 6/30/2015 – 2 co-chairs
3. Testing Workgroup Charter Approved 7/21/2015
4. Content Test Tooling Resources Inventory & Demonstration completed by 10/31/2015
5. Draft Enhanced Content Testing Documentation Published 11/5/2015
6. Industry Content Testing Tools Evaluation and Scoring Completed 1/5/2016
7. Public Comments resolved and Enhanced Content Testing Documentation Re-Published April 11, 2016
8. Content Testing Pilot April – June 2016
 - <https://ehealth-exchange-testing.wikispaces.com/eHealth+Exchange+Testing+Home#Home>

Industry-wide Content Pain Points



Optionality:

More than one way to do things and inconsistent implementations across vendors



Terminology:

Inconsistent terminology usage



Specification Ambiguity

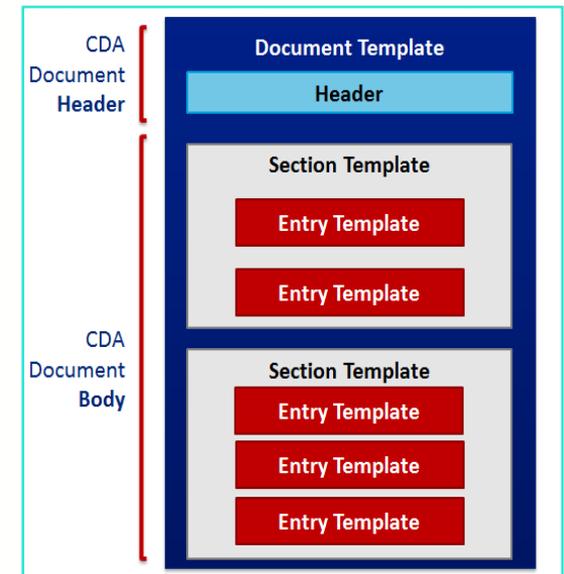


Complexity:

The C-CDA standard is difficult to understand and consume and is lacking in clearly documented examples

What is the Enhanced Content Testing Program?

- Focused on HITSP C32/CCD, HL7 Consolidated CDA (C-CDA) R1.1 and R2.1
 - Chapters 1-4 provide informative excerpts for conformance
- Enhanced Testable Assertions (Chapter 5)
- Meaningful Use (MU) requirements/Transitions of Care (Chapters 6 & 7)
- Enhanced test cases and procedures (Chapter 8)
- Designed to enable interoperability and assure specification compliance
- Implementation-hardened by years of operations and documented pain points that continue to be coordinated with HL7 for inclusion in future documentation:
 - HL7 Implementation Guides/Companion Guides
 - Chapter 3
 - [Improved Scorecard Rubrics](#)
 - (Quantitative Scoring Criteria)
 - [HL7 C-CDA Companion Guide for MU Guidance for R2.1](#)
 - [Relevant & Pertinent Documentation Publication](#)
 - [Examples Task Force Repository](#)

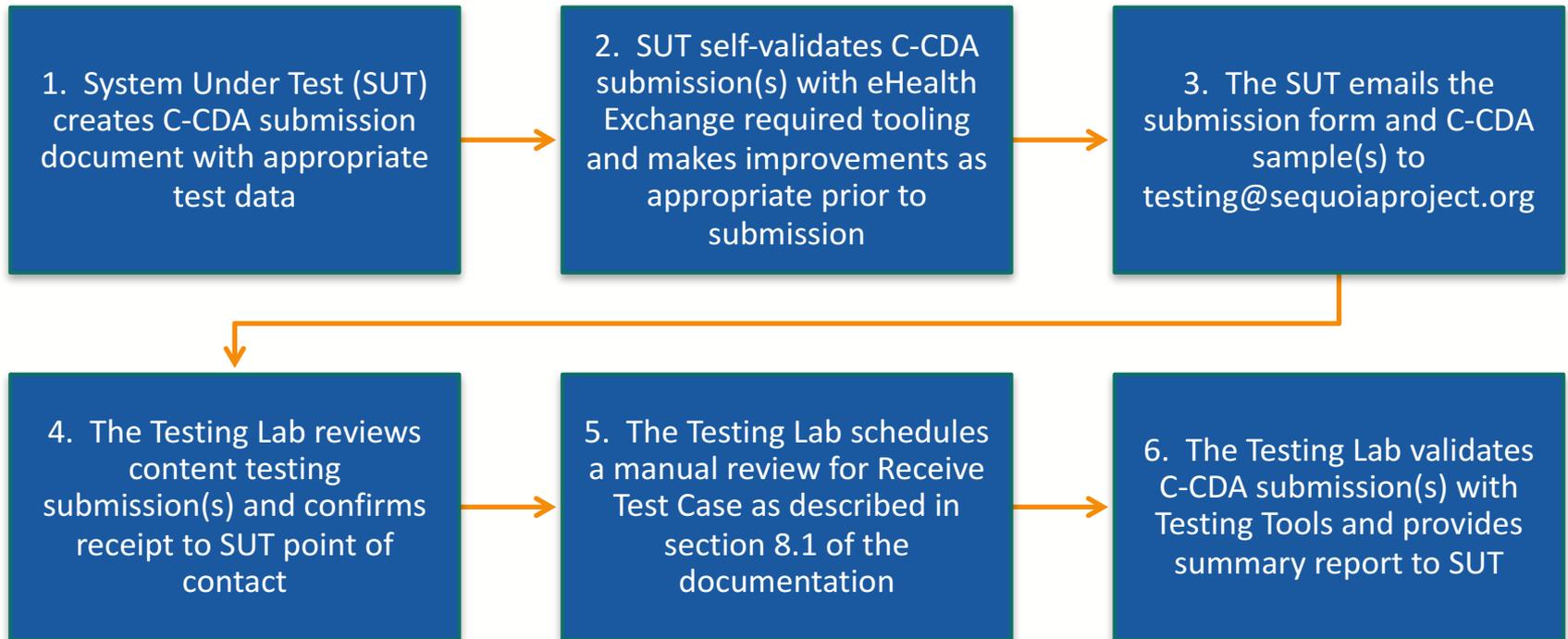


Enhanced Content Testing Documentation Package

- <https://ehealth-exchange-testing.wikispaces.com/Documentation+for+Comment>
 1. 2016_11_15_Sequoia_C-CDA_Content_Test_Cases.pdf
 2. eHealth_Exchange_Content_Testing_Survey_Submission_Form_V2.0.pdf
 3. 2017_eHEX_Content_Test_Data_CREATE.pdf
 4. RECEIVE Test Files
 - MU_HITSP_C32C83_4Sections_RobustEntries_NoErrors.xml
 - 170.315_b5_ccds_amb_ccd_r11_sample2_v1.xml
 - 170.315_b5_ccds_amb_ccd_r21_sample1_v1.xml



Content Testing Process



Submit HL7 C-CDA CCD sample(s) and [submission form](mailto:testing@sequoiaproject.org) to testing@sequoiaproject.org

Content Testing Tooling



ART DÉCOR/GAZELLE OBJECTS CHECKER

- Hosted by IHE Services as part of the IHE International Scheme Testing
- Tooling was piloted in April 2015 and is ISO 17025 Compliant for Conformity Assessment
- Covers only the HITSP C32/CCD, HL7 C-CDA CCD R1.1 and R2.1 versions
- Found to report on warnings and errors not found by other testing tooling

DIAMETER HEALTH



- Focused on using C-CDA documents
- CCD Analyzer tool has 280+ rules that score C-CDA for semantic and clinical completeness and syntax
- Emphasis beyond simple schema/schematron rules available in in the NIST ETT tool
- This tool is proprietary and ONC has an open source Scorecard option available

SITE: STANDARDS IMPLEMENTATION & TESTING ENVIRONMENT – C-CDA SANDBOX

- A centralized collection of tools and resources
- Assists the developers and implementers of Health Information Technology standards to achieve interoperability
- Consolidated CDA (C-CDA) Sandbox will be evaluated
- C-CDA Scorecard



Enhanced Content Testing - Milestones

| Milestone Descriptions | Target Date | Status |
|---|----------------------|-------------|
| Participant Input <ul style="list-style-type: none"> • Post documentation to eHEX wiki • Review updates with Spec Factory | 11/15/16 11/17/16 | In Process |
| Present to CC for review/approval | 11/15/16 | In Process |
| Informational Call (Review documentation) | 12/02/16 | Not Started |
| Publish Enhanced Documentation for 30 days | 12/02/16 | Not Started |
| 30+ day Objection Period Ends | 01/09/17 | Not Started |
| Target Effective Date | 01/10/2017 | Not Started |
| Industry Tooling Assessment/Implementation | January 2017 | Not Started |
| Testing Workgroup Feedback to HL7/ONC | Ongoing | Ongoing |

Content Testing Future Timeline

- Public Comment of Updated Documentation through December 2016
- Testing Tooling to be chosen for Production Content Testing by January 2017
- Production Content Testing to begin January 2017
 - All New participants will be required to test Content
 - Existing Production Participants will have 12 months to test content
 - Errors Encountered with Initial testing will have to be corrected within 18 months of initial testing report

Questions?