HIMSS Electronic Health Record Association

Consolidated CDA Version Migration and Cutover Findings and Recommendations

Presentation to HITSC - November 18th 2014

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2004 – 2014

Introduction

- The EHR Association (EHRA) is pleased to respond to the request coordinated by the Office of the National Coordinator for Health IT (ONC) to provide insights on the potential introduction of new C-CDA editions.

- As always, we appreciate the opportunity to collaborate with ONC in considering a practical approach to backward and forward compatibility challenges as the C-CDA specification evolves.

- EHRA members were provided with a set of questions and a test C-CDA. 70% or 26 members responded in September/October 2014.
  - Their responses were anonymized.

- From these responses, a number of takeaways are summarized in these slides.
  - It is clear that variants in EHR developer implementation approaches call for a very clear approach to this migration to ensure both forward and backward compatibility as new versions of C-CDA are being developed.
  - Addressing these asynchronous cutover issues is not specific to CDA but applies as well to V2 messages and FHIR.

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Survey Results (1-2)

1. **Will your system store and display a C-CDA document if the templateId isn't recognized?** (e.g., new Care Plan document or Transfer Summary document introduced in C-CDA R2 prior to your system supporting)

   79% of EHR will store; 66% of EHR will display

2. **How would your system respond to a C-CDA document that did not include any document level templateIds?**

   - **Would the document fail to be viewable?** Yes=*45%* *No=55%*
   - **Would the content be rejected?** Yes=*41%* No=*59%*
   - **Would it raise an alert?** Yes=*23%* No=*77%*

➔ The introduction of a new C-CDA version (with new template ID version) needs to be planned with existing products to make them flexible receivers and minimally support senders of new C-CDA version

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Survey Results - 3

3. **The element conveying the Template ID in C-CDA R1.1 is similar to the element in C-CDA R2.0 except for the addition of the "extension" attribute in C-CDA R2.0.** Would your system have any difficulty distinguishing the two elements ?

→A majority of the 26 EHRs would have a problem either distinguishing that the template IDs are different, or share the same root

→New programming will be required to support a new version in most cases, but it will not be difficult

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Survey Results - 4

4. **Would a document sent to your system that included both templateIds above be rejected?**

➔ **80% of the 26 EHRs would accept a C-CDA with two template IDs (one for C-CDA R1.1 and one for C-CDA R2.0)**

➔ **To reduce compatibility issues between two versions, we need to make C-CDA R2.0 backwards compatible. A unanimously supported statement:**

"We're many, many months into the C-CDA 2.0 ballot and reconciliation process, so spending another 1-2 months to revise C-CDA 2.0 into something that is backwards compatible with C-CDA R1.1 is well worth the long term gain to the entire industry."

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Survey Results - 5

5. **How would your system process a C-CDA 2.0 document that did NOT ALSO comply with the C-CDA 1.1 specification (i.e. the document did not include C-CDA 1.1 templateId)?**

➔ **80% of the 26 existing EHRs (built for C-CDA R1.1) would accept a C-CDA R2 and display it**

➔ **40% of the existing 26 EHRs that responded would have some difficulties processing it**

➔ **To reduce compatibility issues between two versions, we need to make C-CDA R2.0 backward compatible. A unanimously supported statement:**

"We're many, many months into the C-CDA 2.0 ballot and reconciliation process, so spending another 1-2 months to revise C-CDA 2.0 into something that is backwards compatible with C-CDA R1.1 is well worth the long term gain to the entire industry."

Survey Results - 6

6. **Assuming you currently support C-CDA 1.1 and now upgrade to support C-CDA 2.0:**
   - Would your system retain the capability to import CDA 1.1?
   - Would you only support C-CDA 2.0? If so, why will you not support C-CDA 1.1?
   - Would the functionality to reconcile problems/meds/allergies in C-CDA 2.0 be similar to what is provided for R1.1?
   - Would your system retain the capability to view CCR and C32, capability to import CCR/C32?

➔ **100% of the 26 new EHRs would accept both a C-CDA R1.1 and R2 and process/display both versions**

➔ **20 out of 26 EHRs would like to see that the support of C32/CCR remains limited to store and display when C-CDA R2.0 is introduced**

Survey Results - 7

7. If you were a vendor that has only implemented R2.0 and not R1.1. What level of effort would you expect to provide backwards compatibility support for R1.1?

➔ When comparing implementation costs to support on a new EHR system either:

1. Only C-CDA R2.0
2. Both C-CDA R1.1 and C-CDA R2.0

There is additional work to support both, but most implementers think it is not a major effort.

Survey Results - 8

8. **In order to improve interoperability between a Sender who is C-CDA R2.0 compliant and a Receiver who is C-CDA R1.1 compliant, do you think sending 2 versions of documents (a C-CDA R1.1 version and a second one conformant to C-CDA 2.0) is a viable approach?**

➔ **19 of 26 EHR implementers consider that sending and receiving the same content in two versions (a C-CDA R1.1 and a C-CDA R2) to be a bad idea**

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Next Steps

- **Analyze current C-CDA R2 draft and ensure that all sections common with C-CDA R1.1 are backward compatible**
  - Some added attributes may be ignored by an R1.1 implementation and tied to stable template IDs)
- **Analyze current C-CDA R2 draft and ensure that all sections introduced (absent from C-CDA R1.1) are added so that they may be ignored by a R1.1 implementation**
- **Plan for a clear strategy to use template IDs to indicate backward compatibility of sections/documents**
  - Use by receiving EHR would require an EHR version update between 2014 Edition and Edition in which C-CDA R2.0 would be included. Need to develop backward compatibility tests

➔ **EHRA recommends that ONC engage HL7 and EHR implementers in analyzing C-CDA R 2.0 and minimizing version cutover challenges with a robust backward compatibility strategy**