



U.S. Department of Health and Human Services  
Assistant Secretary for Planning and Evaluation  
Office of Disability, Aging and Long-Term Care Policy



# **OPPORTUNITIES FOR ENGAGING LONG-TERM AND POST-ACUTE CARE PROVIDERS IN HEALTH INFORMATION EXCHANGE ACTIVITIES:**

## **EXCHANGING INTEROPERABLE PATIENT ASSESSMENT INFORMATION**

### **APPENDIX H: STANDARDS DEVELOPMENT AND ADOPTION RECOMMENDATIONS**

December 2011

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# OVERVIEW

This appendix provides recommendations for advancing and accelerating the use of health IT and EHRs in the LTPAC industry based on interviews with expert informants (Appendix A: Stakeholder Interview), and on existing standards and known gaps. This section also discusses the relationship of existing and potential national policy strategies in relation to the recommendations.

## RECOMMENDATIONS FOR STANDARDS DEVELOPMENT

The expert informant interviews identified several standards gaps in need of strengthening and refinement: functional status, cognitive status, and advance directives.

### Functional Status and Cognitive Status

CCD has a section for representation of a patient's functional status and cognitive status. This section provides high-level guidance but there is no detailed modeling of functional or cognitive status represented in CCD. Without detailed modeling standardized there will be considerable variability in the way different modelers represent the concepts in CDA. What is needed is to further constrain and ballot the representations of pertinent functional and cognitive status concepts in CCD.

Using existing CCD templates, SDOs need to work with domain experts to develop granular templates that adequately express functional and cognitive status in the elderly population. Policy makers will need to be made aware of these templates as they are developed so that they can be reviewed and their use encouraged. These templates should be able to be used in any type of CDA document. Their design should be consistent with HITSP C32/C83 template requirements that have been cited in the meaningful use final rule. If there are conflicts with HITSP C32/C83 templates, they should be addressed through a formal process such as the S&I Framework to establish an updated national standard.

### Advance Directives

The need to communicate a patient's or family's desires and a clinician's orders for a patient's end-of-life choice is especially critical in the age group represented in LTPAC settings. CCD has a section for defining a patient's advance directives and for referencing supporting documentation such as legal documents containing these directives. CCD defines in this section how to represent data at a high level such as CPR and resuscitation status, and the existence of living wills and health care proxies. Referenced documents, if available, can be included in the CCD exchange package.

The CCD Advance Directive section is not a complete advance directive document. An advance directive CDA document conformance specification has not been created, although any type of document (e.g., a PDF file) may be referenced from a CCD. What is needed is to further constrain and ballot the representation of advanced directive concepts both as a separate document for communication and to represent the key concepts in a CCD.

The Meaningful Use Final Rule criteria 170.306 require that a complete certified EHR be capable of recording that a patient has an advanced directive document.

## **OASIS CDA Implementation Guide Evaluation**

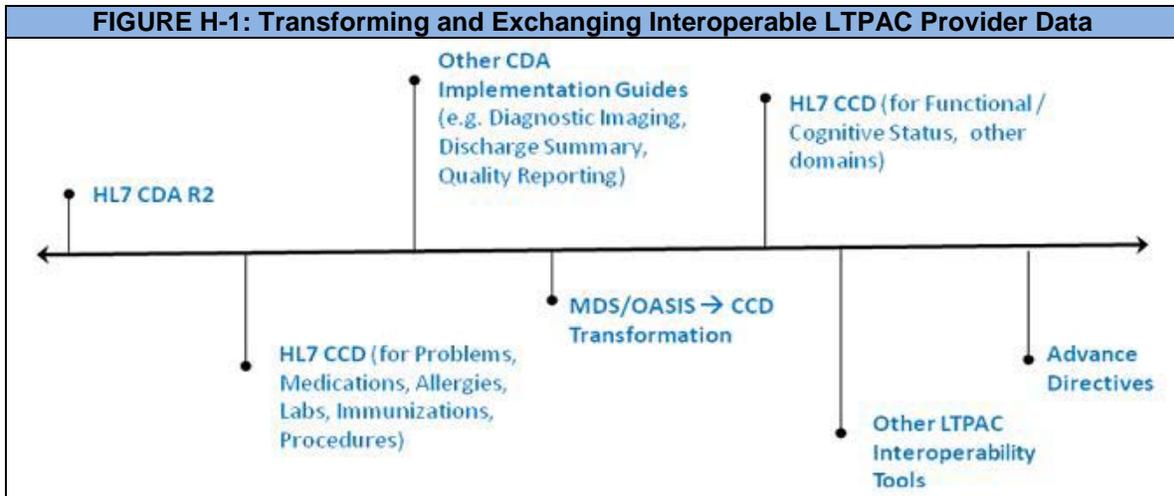
Currently a Questionnaire Assessment CDA Implementation Guide (IG) exists with an example specified for the MDS. HL7 Structured Documents committee should evaluate the IG and determine whether it can be applied to OASIS or should be updated to reflect guidance on developing a CDA representation of the OASIS-C Assessment form.

## **CCD for Patient Assessment Summary**

As LTPAC organizations exchange MDS and OASIS data, the need to extract a subset of assessment items into a clinically relevant summary (Patient Assessment Summary) will make the content more consumable to physicians and other clinicians. A single standard for the content of a Patient Assessment Summary of the MDS and a Patient Assessment Summary of the OASIS is needed. If it is not developed, different LTPAC providers, vendors, health information exchange organizations and others will develop their own requirements making standardized implementation difficult.

## **RECOMMENDATIONS FOR STANDARDS ADOPTION**

The following figure lays out a roadmap for the LTPAC vendor or implementer to adopt HIT standards. While no Meaningful Use criteria today apply to LTPAC, it is reasonable to assume that future stages of meaningful use will extend health information exchange activities to LTPAC providers. For interoperable exchange to happen, many standards defined for the meaningful use program will ultimately be applied to LTPAC providers and vendors. The recommendations in **Figure H-1** parallel the type of strategy one would implement if working to achieve EHR certification. Therefore, we recommend a strategy beginning with the most broadly applicable standard that not only addresses today's requirements, but also positions the LTPAC setting for new criteria in the coming years.



**Recommended standard adoption roadmap includes:**

1. **HL7 CDA R2:** As the base standard for a growing number of interoperability solutions, including HL7 CCD, the HL7 CDA R2 provides a base foundation. Simple, minimally conformant CDA documents include key demographic data, and rich clinical narrative, which will become progressively more structured as one progresses along the roadmap.
2. **MDS/OASIS → CCD Transformation:** Harvesting data from MDS and OASIS and including that data in the CCD will enrich the CCD, making it more valuable in several scenarios, such as a transfer of care. The MDS often has clinically relevant data elements not otherwise captured -- such as regarding functional and cognitive status.
3. **HL7 CCD (for select domains):** Problems, medications, allergies, labs, immunizations, and procedures are key data elements needed for a wide variety of use cases -- transfer of care, quality reporting, decision support, and more. Structured representation for some of these domains is already required for ambulatory and hospital-based meaningful use certification. A patient assessment summary for MDS and OASIS should be prioritized to support immediate use of assessment content in a health information exchange environment.
4. **Other CDA Implementation Guides:** A basis in CDA R2, along with adoption of key CCD data elements, eases the ability to adopt other CDA Implementation Guides, which often reuse the CCD templates. Diagnostic imaging, discharge summary, and quality reporting documents are just a few of the many common clinical documents that can be implemented in a CDA R2 format.
5. **HL7 CCD (for other domains):** Other domains such as functional and cognitive status are called out above as significant gaps from a LTPAC perspective. As these gaps are standardized, corresponding CCD recommendations will emerge.

6. **Other LTPAC Interoperability Tools:** Other tools enable a broad array of functionalities, ranging from transformation between CDA and CMS XML format for MDS and OASIS, semi-automated construction of the CDA representation of the MDS and OASIS, etc.
7. **Advance Directives:** Other domains such as Advance Directives are called out above as significant gaps from a LTPAC perspective. Advance Directives are shown at the end of the roadmap only because of the time that will be required to fully standardize the representation.

# OPPORTUNITIES FOR ENGAGING LONG-TERM AND POST-ACUTE CARE PROVIDERS IN HEALTH INFORMATION EXCHANGE ACTIVITIES: EXCHANGING INTEROPERABLE PATIENT ASSESSMENT INFORMATION

## Files Available for This Report

<b>Main Report</b>	[54 PDF pages] <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng.pdf</a>
<b>APPENDIX A:</b> Stakeholder Interview Summary	[13 PDF pages] <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-A.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-A.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-A.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-A.pdf</a>
<b>APPENDIX B:</b> Background Report on Intellectual Property Issues and the Dissemination of Standardized Federally-Required Patient Assessments	[89 PDF pages] <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-B.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-B.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-B.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-B.pdf</a>
<b>APPENDIX C:</b> Rosetta Stone Mapping Guidelines and Heuristics	[19 PDF pages] <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-C.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-C.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-C.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-C.pdf</a>
<b>APPENDIX D:</b> Rosetta Stone MDS and OASIS and Value Sets for MDS Full Appendix	[518 PDF pages] <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D.pdf</a>
Toolkit Overview, Model of Use, Model of Meaning, and Supporting EHR Observation [135 PDF pages]	<a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D1.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D1.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D1.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D1.pdf</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D1.xlsx">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D1.xlsx</a>
MDS Value Sets (Separate Excel files accessible through links within HTMLs and PDFs) [381 PDF pages]	
<i>Alzheimer's Disease through Cirrhosis</i> [184 PDF pages]	<a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2a.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2a.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2a.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2a.pdf</a>
<i>Coronary Artery Disease through Wound Infection</i> [197 PDF pages]	<a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2b.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2b.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2b.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-D2b.pdf</a>
<b>APPENDIX E:</b> Rosetta Stone OASIS	[71 PDF pages] <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-E.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-E.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-E.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-E.pdf</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-E.xlsx">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-E.xlsx</a>
<b>APPENDIX F:</b> Current Standards Landscape for Exchanging Interoperable Patient Assessment Information	[9 PDF pages] <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-F.htm">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-F.htm</a> <a href="http://aspe.hhs.gov/daltcp/reports/2011/StratEng-F.pdf">http://aspe.hhs.gov/daltcp/reports/2011/StratEng-F.pdf</a>

**APPENDIX G:** LTPAC Interoperability Toolkit for Exchanging Interoperable Patient Assessment Instruments [9 PDF pages]  
Overview <http://aspe.hhs.gov/daltcp/reports/2011/StratEng-G.htm>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-G.pdf>

Several attachments are listed separately at the end of this Appendix.

**APPENDIX H:** Standards Development and Adoption Recommendations [6 PDF pages]  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-H.htm>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-H.pdf>

**APPENDIX I:** Functional Status Standardization Recommendations [13 PDF pages]  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-I.htm>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-I.pdf>

**APPENDIX J:** Overview of Patient Assessment Summary [23 PDF pages]  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-J.htm>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-J.pdf>

**APPENDIX K:** Rosetta Stone MDS Summary [162 PDF pages]  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-K.htm>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-K.pdf>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-K.xlsx>

**APPENDIX L:** Rosetta Stone OASIS Summary [127 PDF pages]  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-L.htm>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-L.pdf>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-L.xlsx>

**APPENDIX M:** Terms and Acronyms [6 PDF pages]  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-M.htm>  
<http://aspe.hhs.gov/daltcp/reports/2011/StratEng-M.pdf>

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