**Ambulatory Interoperability - 2007 Final Criteria - March 16, 2007**
INTEROPERABILITY For 2007 Certification of Ambulatory EHRs
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| IA-1.01 | II | Laboratory | Receive general laboratory results (includes ability to replace preliminary results with final results and the ability to process a corrected result) | Either HL7 v2.4 or HL7 v2.5.1, LOINC | N | | | The test files are designed so that products implementing either the HL7 v2.4 or HL7 v2.5.1 standard will be found compliant. The test identifier will be encoded in LOINC, and will be drawn from among 52 common test codes. Refer to *2007 CCHIT Laboratory Interoperability Test Instructions and Applicant Form* for the list of these codes and more information on the interoperability test procedure. |
| IA-1.02 | | | Receive microbiology laboratory results | HITSP IS-01 EHR-Lab, HL7 v2.5, ELINCS v2.1 LOINC, SNOMED | | N | | Organisms will be coded using SNOMED, Sensitivity testing will be coded using LOINC |
| IA-1.03 | | | Respond to a query to share laboratory results | HITSP IS-01 EHR-Lab, HL7 CDA R2 IHE XDS-Lab | | N | | Part of ONC EHR-Lab Use Case<br><br>Will work with Ambulatory Functionality WG to align functionality criteria and interoperability roadmap dates in preparation for next round of public comments. |
| IA-1.04 | | | Send an order for a laboratory test | HL7 v2.5 / Implementation guide not available yet / improvements or alternatives to LOINC required for test ordering | | | N | Further work is need on defining the ordering messages and codes for ordering tests, should include an EHR generated order number for tracking |
| IA-1.05 | | | Send a query to check status of a test order | Implementation guide not available | | | N | Part of a function for closing the orders loop as part of quality improvement. Also need to be able to detect orders not matched with results. |
| IA-2.01 | II | Imaging | Receive imaging reports and view images, includes ECG and other images as well as radiology | IHE XDS-I Cross-Enterprise Image Information Sharing integration profile | | N | | |
| IA-2.02 | | | Send a query to other providers to share imaging results | IHE XDS-I Cross-Enterprise Image Information Sharing integration profile | | N | | see also line IA 5.6 send a query to a registry for documents |
| IA-2.03 | | | Respond to a query to share imaging results with other providers | IHE XDS-I Cross-Enterprise Image Information Sharing integration profile | | N | | |
| IA-2.04 | | | Order radiology tests | HL7 v2.5 | | | N | Final standards to be selected in 2008 |
| IA-2.05 | | | Schedule radiology tests | IHE XDS-I Procedure Scheduled | | | N | Final standards to be selected in 2008 |

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| IA-3.01 | II | Medications | Send an electronic prescription to pharmacy | NCPDP Script 8.1 (NEWRX) | N | | | Will be aligned with Medicare Part D final regulations |
| IA-3.02 | | | Respond to a request for a refill sent from a pharmacy | NCPDP Script 8.1 (REFREQ, REFRES) | N | | | Transaction is now wide spread use so that systems that send new prescriptions need to be ready to respond to requests for refills. |
| IA-3.03 | | | Send a cancel prescription message to a pharmacy | NCPDP Script 8.1 (CANRX, CANRES) | | N | | Sent by the prescriber to cancel a prescription that was sent previously |
| IA-3.04 | | | Respond to a request for a prescription change from a pharmacy | NCPDP Script 8.1 (RXCHG, CHGRES) | | N | | Sent by the pharmacy to request that the prescriber make changes to a prescription before it is filled. |
| IA-3.05 | | | Send electronic prescription to pharmacy including structured and coded SIG instructions | NCPDP Script 11.1 not available yet | | | N | Standard has been written but has not been finalized, balloted, or implemented. Will work with Ambulatory Functionality WG to align functionality criteria and interoperability roadmap dates in preparation for next round of public comments. |
| IA-3.06 | | | Send a query to verify prescription drug insurance eligibility and coverage | X12 270/271/ CORE Phase I Rules | | N | | An essential first step prior to sending a query for medication history or formulary information directed at prescription drug coverage. |
| IA-3.07 | | | Access and view formulary information from pharmacy or PBM | NCPDP Formulary and Benefit Standard Implementation Guide v1.0 | | N | | Usually preceded by a query for insurance eligibility to verify potential source of data. |
| IA-3.08 | | | Send a query for medication history to PBM or pharmacy to access and view medication list from EHR | NCPDP Script 8.1 (RXHREQ, RXHRES) / NDC codes | | N | | Part of ONC CE-PHR Use Case, used effectively during Medicare Part D pilots. |
| IA-3.09 | | | Receive medication fulfillment history | NCPDP Script 8.12 (RXFILL) | | N | | Sent by pharmacy after medication has been dispensed to the patient, not currently in wide spread use but is a priority for providers |
| IA-3.10 | | | Access and view a medication history from a PHR | HITSP IS-03 CE-PHR Interoperability Specification<br>HL7-ASTM CCD, IHE XDS-XPHR, ASTM CCR | | N | | Part of ONC CE-PHR Use Case, may use PHR standards such as HL7/CCD and ASTM CCR instead of NCPDP standards. Will probably use RxNORM medication codes that are more appropriate for consumers and providers than the NDC codes used by pharmacies. |

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| IA-3.11 | | | Respond to a query for medication history send by a PHR | HITSP IS-03 CE-PHR Interoperability Specification | | N | | Part of ONC CE-PHR Use Case, may use PHR standards such as HL7/CCD and ASTM CCR instead of NCPDP standards, final standards to be specified by HITSP. |
| IA-4.01 | II | Immunizations | Send a report of patient immunizations to an immunization registry | TBD | | | N | State immunization registries are not using uniform national standards at this time<br>The cvx and mvx vocabularies constitute an option for representing immunizations, but have not been addressed by HITSP at this time.<br>Working Group will evaluate standards and options for future versions of HL7. |
| IA-4.02 | | | Send a query to retrieve immunization to an immunization registry and import immunization record into the EHR | TBD | | | N | State immunization registries are not using uniform national standards at this time<br>The cvx and mvx vocabularies constitute an option for representing immunizations, but have not been addressed by HITSP at this time.<br>Working Group will evaluate standards and options immunizations. |
| IA-4.03 | | | Import immunization history from a PHR | HL7-ASTM CCD, IHE XDS-XPHR | | | N | May be part of ONC Use Cases for 2007, represents an alternative to obtaining this data from State immunization registries |
| IA-5.01 | II | Clinical Documentation | Register documents with document registry | IHE Cross-Enterprise Document Sharing (XDS) integration profile | | | N | The ability to register documents in a registry or a repository will be part of the NHIN and final architecture has not been selected. |
| IA-5.02 | | | Send a query a document registry for documents | IHE Cross-Enterprise Document Sharing (XDS) integration profile | | | N | This criteria is for the query request. This function deals only with the document registry and repository and the references to specific documents have been removed. When the criteria are finalized, any document constraints that are required by the network standards will be identified. |

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| IA-5.03 | | | Send documents to repository | IHE Cross-Enterprise Document Sharing (XDS) integration profile | | | N | This criteria is for sending documents to the repository. The function of sending documents to a repository may be independent of the specific types of documents that will be identified by the network standards. Use of HITSP harmonized standards is expected and it is too early to set those standards at this time. |
| IA-5.04 | | | Respond to a query to provide a document that was previously registered in a repository | IHE Cross-Enterprise Document Sharing (XDS) integration profile | | | N | This function refers only to the ability to provide a document that has been registered in response to a query. The ability to create documents and medical summaries are discussed in other lines below. |
| IA-5.05 | | | Create and Send electronic documentation of a visit such as a consult letter to a referring physicians | HL7 CDA R2 | | N | | Will include narrative data |
| IA-5.06 | | | Import a clinical document such as a hospital discharge summary, a letter from a consultant, or an imaging report | HL7 CDA R2 | | N | | Will include narrative data |
| IA-5.07 | | | Send Medical Summary to refer or transfer clinical care of patient | HL7-ASTM CCD, ASTM CCR | | N | | Used for structured data. Use of CCR will require available translation to CCD. |
| IA-5.08 | | | Receive Medical Summary and import into EHR for consult or transfer of clinical care | HL7-ASTM CCD, ASTM CCR | | N | | May use direct communication or a regional network |
| IA-5.09 | | | Send data to PHR | HL7-ASTM CCD, IHE XDS-XPHR, ASTM CCR, HITSP IS-03 Consumer Empowerment | | N | | Use of CCR will require available translation to CCD, Use of XPHR is for interim use per HITSP IS-03 |
| IA-5.10 | | | Receive data from PHR and import into EHR | HL7-ASTM CCD, IHE XDS-XPHR, ASTM CCR, HITSP IS-03 Consumer Empowerment | | N | | Use of CCR will require available translation to CCD, Use of XPHR is for interim use per HITSP IS-03 |
| IA-5.11 | | | Receive registration summary from patient and import into EHR | HL7-ASTM CCD, IHE XDS-XPHR, ASTM CCR, HITSP IS-03 Consumer Empowerment | | N | | Use of CCR will require available translation to CCD, Use of XPHR is for interim use per HITSP IS-03 |
| IA-6.01 | II | **Chronic Disease Management / Patient Communication** | Secure electronic messaging with patients | Standards to be selected | | N | | Part of AHIC Chronic Care Breakthrough, standards and implementation guides have not been selected yet |

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| IA-6.02 | | | Import home physiologic monitoring data from patients | Standards to be selected | | | N | Part of AHIC Chronic Care Breakthrough, standards and implementation guides have not been selected yet |
| IA-7.01 | II | Secondary Uses of Clinical Data | Send patient specific Public Health Disease Report for a reportable disease | CDC Disease registries, Public Health Information Network (PHIN) | | | N | Electronic replacement for traditional reportable disease notifications to health departments, may become part of bio-surveillance in the future. |
| IA-7.02 | | | Send anonymous utilization and laboratory bio-surveillance data to public health agencies | HITSP IS-02 Biosurveillance Use Case Interoperability Specification;  clinical content to be selected by the bio-surveillance data committee | | N | | ONC Bio-surveillance Use Case |
| IA-7.03 | | | Quality Improvement reporting | TBD | | | N | Standards and implementation guides are not available yet and will be evaluated by the Work Group. An AHIC Quality Workgroup is being formed to address this. |
| IA-8.01 | II | Administrative and Financial Data | Query and receive electronic medical insurance eligibility information | X12 270/271/ CORE Phase I Rules | | | N | Separated this requirement from IA-3.6 to avoid duplication of criteria. |
| IA-8.02 | | | Send a query to coordinate patient identification | IHE PIX profile, IHE PDQ | | | N | Patient identification coordination will be part of network certification scheduled to begin in 2009 and is required as part of the document transport criteria. |
| IA-8.03 | | | Practice Management System Communication, Revenue Cycle Related Transactions | X12, HL7, and related standards and codes | | | N | CCHIT requires more input on stakeholder priorities and feasibility of certifying a standard interface between all EHR systems and all practice management systems and billing systems |
| IA-8.04 | | | Receive patient registration data from a practice management system | HL7 2.4 Patient Administration, X12N 4010 | | N | | Transfer of registration and patient identification data between practice management systems and EHR is very desirable. Although earlier certification is desirable, without implementation guides, certification cannot happen. |

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| IA-8.05 | | | Receive scheduling information from a scheduling system | HL7 2.4 Scheduling | | N | | Transfer of data between a practice management scheduling system and an EHR is highly desirable and is essential for some EHR operations. Although earlier certification is desirable, without implementation guides, certification cannot happen. |
| IA-8.06 | | | Send a query from the EHR to a scheduling system to schedule and appointment | Standards to be selected | | | N | The ability to schedule an appointment during a patient encounter will require new standards |
| IA-8.07 | | | Receive electronic authorization for referral from payor | X12 278 - Health Care Services Review: Referral Certification and Authorization - Dental, Professional, Institutional; | | | N | Only a handful of insurers are supporting this today. |
| IA-9.01 | II | Clinical Trials | Respond to query to Identify patients eligible for a clinical trial | NCI CABIG, CDISC | | | N | Clinical trial will send eligibility criteria, EHR will identify patients for review by practice and respond with a count of potentially eligible patients and an intent to participate or not participate in the trial |
| IA-9.02 | | | Send data to register a patient in a clinical trial | NCI CABIG, CDISC | | | N | will include informed consent |
| IA-9.03 | | | Receive clinical trial protocol and templates for data collection | NCI CABIG, CDISC | | | N | will include clinical trial protocol and data collection templates |
| IA-9.04 | | | Send data report to a clinical trial | NCI CABIG, CDISC | | | N | will require digital signature to assure authentication, integrity, and non-repudiation |

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References:

HL7: (Health Level 7 - including  v2.4; v3.5.1; CDA R2). http://www.hl7.org.

LOINC (Logical Observation Identifiers Names and Codes), Regenstrief Institute. http://www.regenstrief.org/medinformatics/loinc/

HITSP: (Health Information Technology Standards Panel – including IS-01 (EHR – Lab); IS-02 (Biosurveillence); IS-03 (CE-PHR).)  http://www.ansi.org/hitsp/

IHE: (Integrated Health Enterprise - including XDS-Lab; XSD-I; XDS-XPHR; PDQ; PIX).  http://www.ihe.net/

SNOMED (Systematized Nomenclature of Medicine –College of American Pathologists).  http://www.snomed.org

ELINCS: (EHR-Lab Interoperability and Connectivity Specification - including v2.1), California HealthCare Foundation.  http://www.chcf.org/topics/chronicdisease/index.cfm?itemID=108868

NCPDP:  (National Council for Prescription Drug Programs - including Script v8.1, Formulary and Benefit Standard Implementation Guide v1.0).  http://www.ncpdp.org/

NDC: (The National Drug Code Directory – US Federal Food and Drug Administration) http://www.fda.gov/cder/ndc/

HL7-ASTM CCD: (HL7/ASTM Implementation Guide for CDA Release 2 – Continuity of Care Document) -
http://www.hl7.org/documentcenter/ballots/2007JAN/downloads/CDAR2_IMPL_CCD_I2_2007JAN.zip :

NCI CaBIG: (The National Cancer Institute - Cancer Biomedical Informatics Grid), https://cabig.nci.nih.gov/overview

CDISC: (Clinical Data Interchange Standards Consortium), http://www.cdisc.org/standards