



The Office of the National Coordinator for  
Health Information Technology

## Session #96: Standards and Technology Updates from ONC

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# Big Picture: The Federal Health IT Strategic Plan & the Interoperability Vision for the Future

## Federal Health IT Strategic Plan

### VISION

High-quality care, lower costs, healthy population, and engaged people

### MISSION

Improve the health and well-being of individuals and communities through the use of technology and health information that is accessible when and where it matters most



## Goal 4

### Objective A:

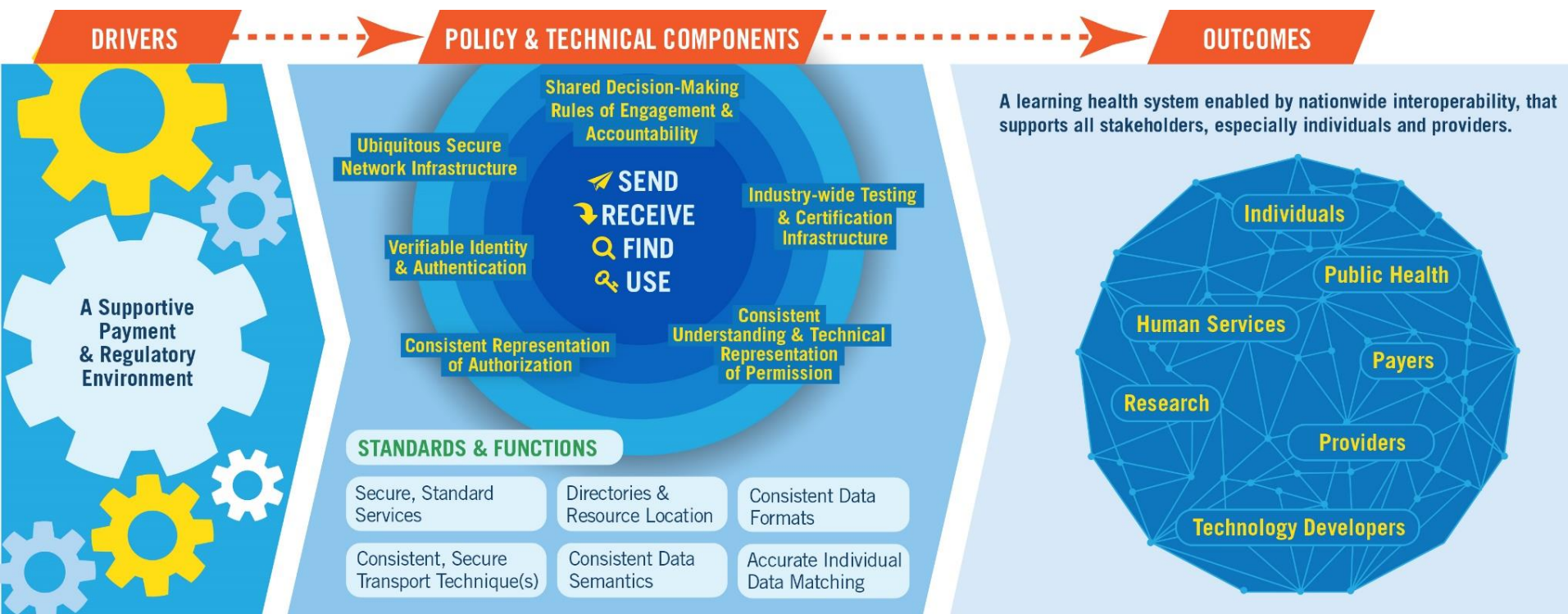
Implement the Shared Nationwide Interoperability Roadmap



## Roadmap's Overarching Goals

- **2015-2017:** Send, receive, find and use priority data domains to improve health care quality and outcomes.
- **2018-2020:** Expand data sources and users in the interoperable health IT ecosystem to improve health and lower cost.
- **2021-2024:** Achieve nationwide interoperability to enable a learning health system, with the person at the center of a system that can continuously improve care, public health, and science through real-time data access.

# Structure of the Roadmap



# The Office of Standards and Technology's Work – Overall

- **Three primary activities:**

- » Administer ONC Health IT Certification Program
- » Coordinate ONC's standards and technology activities through the ONC Tech Lab
- » Management support for the Federal Health Architecture

- **Actively manage:**

- » ONC Tech Lab confluence collaboration spaces
- » Interoperability Standards Advisory
- » Interoperability Proving Ground
- » Standards Implementation and Testing Environment
- » Certified Health IT Product List (as part of ONC HIT Certification Program)

# ONC Health IT Certification Program

- Ongoing guidance/collaboration with accreditors (ANSI & NVLAP)
- Ongoing oversight and support to ONC-ACBs<sup>1</sup> and ONC-ATLs<sup>2</sup>
- Simultaneous support for 2014 Edition and 2015 Edition testing, certification, post-certification surveillance
- Manage certification mailbox for incoming questions from the field & JIRA for ATLs/ACB
- 2015 Edition includes continuous maintenance of:
  - » 60+ Certification Companion Guides
  - » 60+ Test Procedures
  - » 6+ Electronic test tools
- Implementation of ONC certification regulations
- Operate the Certified Health IT Product List (CHPL)



# ONC TECH LAB



## Pilots

- High Impact Pilots
- Standard Exploration Awards
- Interoperable Med List Proof of Concept
- Interoperability Proving Ground
- DAF Pilots (PCOR)



## Standards Coordination

- ISA
- HL7 Co-op Agreement
- NCPDP Co-op Agreement
- Clinical Quality Framework (CQF)
- Data Access Framework (DAF)
- PDMP & Health IT Integration (PDMP)
- Structured Data Capture (SDC)
- eLTSS
- FHIR Medications
- FHIR Genomics
- 360x closed loop referrals
- Pt Matching/HEART
- Healthcare Directory TLC
- EU-US cooperation



## Testing & Utilities

- SITE
- 2015 Edition Testing
- C-CDA Scorecard
- Argonaut participation/FHIR
- Cypress CQM testing Coordination
- Interagency coordination (CDC & NIST)



## Innovation

- Challenge administration
- App Discovery Site Co-op Agreement
- EU-US cooperation



# Interoperability Standards Advisory



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## Interoperability Standards Advisory

[2017 ISA Reference Edition](#)

[View ISA as a Single Page](#)

[Recent ISA Updates](#)

[Introduction to the ISA](#)

[Section I: Vocabulary/Code Set/Terminology Standards and Implementation Specifications](#)

[Section II: Content/Structure Standards and Implementation Specifications](#)

[Section III: Standards and Implementation Specifications for Services](#)

[Section IV: Models and Profiles](#)

[Section V: Questions and Requests for Stakeholder Feedback](#)

[Appendix I - Sources of Security Standards and Security Patterns](#)

## Welcome to Interoperability Standards Advisory (ISA)



[Section I](#) | [Section II](#) | [Section III](#) | [Section IV](#)

- ▶ I-A: Allergies and Intolerances
- ▶ I-B: Encounter Diagnosis
- ▶ I-C: Family Health History
- ▶ I-D: Functional Status/Disability
- ▶ I-E: Health Care Providers
- ▶ I-F: Imaging (Diagnostics, Interventions and Procedures)
- ▶ I-G: Immunizations
- ▶ I-H: Industry and Occupation
- ▶ I-I: Lab Tests
- ▶ I-J: Medications
- ▶ I-K: Units of Measure
- ▶ I-L: Nursing
- ▶ I-M: Patient Clinical "Problems" (i.e., conditions)
- ▶ I-N: Preferred Language
- ▶ I-O: Procedures
- ▶ I-P: Race and Ethnicity
- ▶ I-Q: Research
- ▶ I-R: Sex at Birth, Sexual Orientation and Gender Identity
- ▶ I-S: Social Determinants
- ▶ I-T: Tobacco Use (Smoking Status)
- ▶ I-U: Unique Device Identification



## C-CDA R2.1 Scorecard For: 170.315\_b1\_toc\_amb\_ccd\_r21\_sample1\_v8.xml

Scorecard Grade:	B+	Your document scored a B+ compared to an industry average of D.
Scorecard Score:	88 / 100	Your document scored 88 out of 100 total possible points.
Scorecard Issues:	37	There are 37 specific scorecard issues in your document.
C-CDA IG Conformance Errors:	0	There are 0 C-CDA IG Conformance Errors in your document.
2015 Certification Feedback:	0	There are 0 2015 Certification Feedback results in your document.

Detailed grades and the number of issues for each of the sections of information present in your document are shown below. You can use it to quickly identify areas within the document that require the most attention. Click on each of the boxes to navigate to the appropriate part of the report that contains additional details on the identified issues.

Industry average is the average of all grades for C-CDAs that have been scored by the ONC Scorecard. It is computed on an on-going basis, since June 2016, when the Scorecard tool was first made available to users. Since then, 305 documents have been graded by the ONC Scorecard.

Miscellaneous: A+ (0)	Lab Results: A- (4)	Procedures: B- (1)
Patient: A+ (0)	Allergies: B+ (3)	Immunizations: B- (4)
Problems: A+ (6)	Vital Signs: B+ (9)	Encounters: C (5)
Social History: A- (1)	Medications: B- (4)	

# Innovative investments in FHIR-based work

- Consisted of 2 challenges totaling \$350,000 and 1 funding opportunity of \$275,000.
- Together these efforts collectively:
  - » Support the growing health IT app market.
  - » Promote innovation focused on person-centered health and user experience (UX).
  - » Drive us toward health technology that delivers the right information, at the right time for patients and providers.



## The Consumer Health Data Aggregator challenge –

awarded proven technologies that make it easier for consumers to access their health information.

<https://www.challenge.gov/challenge/consumer-health-data-aggregator-challenge/>

## The Provider UX challenge –

aimed to customize provider experience through the use of plug-and-play apps that meet the needs of providers as they deliver care.

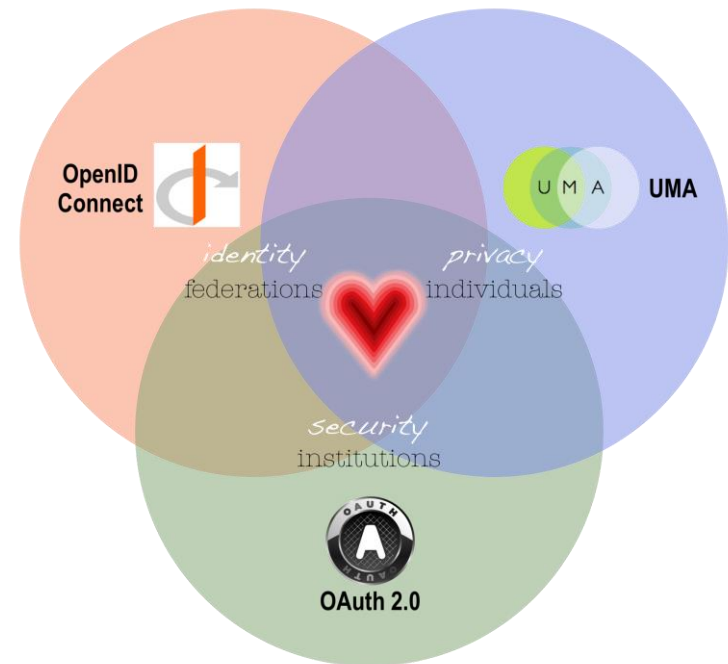
<https://www.challenge.gov/challenge/provider-user-experience-challenge/>

## The Discovery Infrastructure for Clinical Health IT Apps –

cooperative agreement with Boston Children’s Hospital that increases transparency, competition and information sharing around substitutable apps that leverage open, standardized APIs to integrate with providers’ EHRs.

# Move Health Data Forward Challenge

- Create an application programming interface (API) solutions that uses the implementation specifications created by the [HEART Workgroup](#) (Heart WG)
- Allow people to securely authorize the movement of their health data to destinations they choose.
- The [HEART WG](#) has created a set of privacy and security specifications using the following open standards:
  - » [OAUTH 2.0](#),
  - » [OpenID Connect](#), and
  - » [User Managed Access\(UMA\)](#).
- This multi-phased approach allows participants to assemble, implement and test their Solutions.
- Three phases with \$250,000 in total awards.
- Phase II winners will be announced approximately Feb 23, 2017.
- <https://www.challenge.gov/challenge/move-health-data-forward-challenge/>



## Improve Information Flow for Patients and Providers – HIP and SEA Awards

- 2 Cooperative Agreement Programs with **\$1.5 Million** in total Awards
  - » **High Impact Pilots** – 4 awards
  - » **Standards Exploration Awards** – 3 awards
- **Advance the use of common standards to improve:** comprehensive medication management, laboratory data exchange, and care coordination.
- **Winning selections were based on:** ability to address health IT challenges, scalability, potential impact, technical approach, innovation, creativity, unlock health data and potential of improving health.
- Awardees are expected to report results **September 15, 2017**

# HIP & SEA

## Funding Opportunity Announcement Framework

Priority Category	Sub Category	Impact Dimensions						
		Practice Efficiency	Safety	P&S	Clinical Quality	Patient Experience	Cost Efficiency	Interoperable Exchange
Comprehensive Medication Management	Drug Cost at Care						SEA	
	Opioid							
Laboratory Data Exchange	Full-Loop Labs							
Care Coordination	Care Plan							
	Closed-Loop Referral	HIP				HIP	HIP	
Self-Identified	N/A							
<b>Award Requirements</b>		HIP Awardees need to address 3 out of 7 Dimensions (\$100K-500K/award)						
		SEA Awardees need to address 1 out of 7 Dimensions (\$50K-100K/award)						
		Must first look to using standards in Interoperability Standards Advisory						
		Must complete pilot within 12 months						

# The Interoperability Proving Ground

- A single place to find HIT Interoperability projects.
- Maximize opportunities for collaboration, cooperation, and communication.
- Fostering a vibrant and innovative health IT ecosystem.
- If anyone has HIT interoperability pilots taking place, please list them here:  
<https://www.healthit.gov/techlab/ipg/>



## Interoperability Proving Ground

Welcome to the Interoperability Proving Ground!

The Interoperability Proving Ground (IPG) is an open, community platform where you can share, learn, and be inspired by interoperability projects occurring in the United States (and around the world).

Use the Active and Completed buttons to change the project view displayed below

Active

Completed

Click the map to see where interoperability projects are taking place



### Active Projects

[Add a Project](#) Show **25** entries Showing 1 to 25 of 253 entries Previous **1** 2 3 4 5 ... 11 Next [Export](#)

Project Name	Project Description	Tags
<input type="text" value="Start typing to search"/>	<input type="text" value="Start typing to search"/>	<input type="text" value="Start typing to search"/>
<a href="#">Argonaut Phase 2 Implementation &amp; Testing - Developing a Web Based Client</a>	This is a personal project to test the FHIR ( <a href="http://hl7.org/fhir/index.html">http://hl7.org/fhir/index.html</a> ) and Security standards ( <a href="http://fhir-docs.smarthealthit.org/argonaut-dev/authorization">http://fhir-docs.smarthealthit.org/argonaut-dev/authorization</a> ), that are currently being tested as part of the Argonaut Phase 2 Implementation & Testing Project ( <a href="https://github.com/argonautproject/implementation-program/wiki">https://github.com/argonautproject/implementation-program/wiki</a> ). The project is currently developing a web based client that connects securely (via SMART OAuth2 profiles) to various FHIR servers that are being deployed by participants...	AngularJS, FHIR, Java, OAuth2, SMART, Spring Boot
<a href="#">Active Care Relationship Service (ACRS) - MIHIN</a>	The Active Care Relationship Service (ACRS) enables organizations to identify patient-provider attributions (called active care relationships) associating a particular patient with health providers at that organization. For health providers, an active care relationship indicates a patient has been seen by a health provider within the past 24 months, or is considered part of the health providers active patient population they are responsible for managing. For payers, an active care relationship...	Michigan
<a href="#">Advance HIT Services Grant for Behavioral Health and LTPAC Communities - NHHIO</a>	As part of our Advance HIT grant from the ONC, this project focuses on improving and expanding the use of Direct secure messaging to improve care coordination for patients within the Behavioral Health and Long-Term Post-Acute Care facilities in New Hampshire. Peer Learning Networks were established in each area for like-minded individuals collaborate on implementing Direct and how to expand the use. Peer Learning Networks meet monthly to collaborate and develop practical solutions to HIE and lessons...	CCDA, DIRECT, Peer Learning Network, SNF, Transitions of Care, Behavioral Health, Discharge, Education, HIE, HISR, Home Health, Interoperability, LTPAC, ONC-led
<a href="#">Advancing Functional Interoperability through Standards for Health Information Management (HIM) Practices</a>	American Health Information Management Association (AHIMA) collaborates with the Integrating the Healthcare Enterprise (IHE) to develop a collaborative Informatics-based approach for translating health information management (HIM) practices into health information technology (HIT) standards. AHIMA Standards Task Force and IHE are focusing on two major efforts: 1. Standardize HIM business practices in collaboration with HIM professionals and HIT vendors 2. Guide the development and adoption of standards-based...	C-CDA, DAF, Functional Interoperability, Information Governance, HIM, ISO/TC215, EHR, FHIR, HIE, HL7, IHE, Interoperability, MDHT, Testing
<a href="#">AEGIS Touchstone : FHIR Testing Platform</a>	AEGIS Cloud based Testing Platform. Touchstone features multi-version support for HL7 FHIR leveraging Natural Language Processing (NLP) for FHIR Test Script Resources. Touchstone tests both from the Client and Server Side. Along with Conformance and Interoperability- and provides a starburst matrix illustrating percentage of Conformance/Compatibility to the specification.	FHIR
<a href="#">AEGIS WildFHIR Client and Server</a>	AEGIS reference implementation of Health Level Seven (HL7) Fast Healthcare Interoperability Resources (FHIR) is code named WildFHIR. WildFHIR supports Argonaut, DAF, and many other FHIR Resources. AEGIS uses this RI to ensure the Touchstone Test Script Resources are correctly implemented and that each Test Cases is 100% Quality Assurance Tested, both from the Client side and Server Side.	DAF, FHIR, HL7
<a href="#">Allscripts Developer Program (ADP)</a>	The Allscripts Developer Program (ADP) enables third-parties to build integrations quickly that enhance Allscripts electronic health record and population health solutions. Our open platform facilitates modern bi-directional application programming interfaces (APIs) including FHIR APIs that are transforming healthcare delivery. Developers can create a free account at <a href="http://developer.allscripts.com">developer.allscripts.com</a> to learn how our program works, explore sandboxes, sample code, documentation and gain access to resources...	EHR, FHIR, Functional Interoperability, HIT Vendor, Innovation, Interoperability, Open API, Patient Portal



# Stay Connected, Communicate, and Collaborate

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