Office of the National Coordinator for Health Information Technology

# ONC Health IT Certification Program Developer Roundtable

October 25, 2023

# Please Note:

- The materials contained in this presentation are based on the provisions contained in 45 C.F.R. Parts 170 and 171. While every effort has been made to ensure the accuracy of this restatement of those provisions, this presentation is not a legal document. The official program requirements are contained in the relevant laws and regulations. Please note that other Federal, state and local laws may also apply.

- This communication is produced and disseminated at U.S. taxpayer expense.

# Today's Speakers

1. Robert Anthony, Director, Certification and Testing
2. Shawn Spurlock, Public Health Analyst, Program Administration
3. Ashley Hain, Acting Branch Chief, Tools and Testing
4. Scott Bohon, Public Health Analyst, Tools and Testing
5. Jiuyi Hua, IT Specialist, Tools and Testing
6. Erin Little, Public Health Analyst, Tools and Testing
7. Keith Carlson, Health IT Specialist, Tools and Testing
8. John Bender, Public Health Analyst, Tools and Testing

# Agenda

1. Opening Remarks
2. ONC Health IT Certification Program Updates
3. § 170.315(b)(10) Electronic Health Information Export
4. CHPL: CMS EHR Certification ID Updates
5. ONC Tooling 101

# ONC Health IT Certification Program Updates

Shawn Spurlock, Public Health Analyst, Program Administration

# 2023 SVAP Timeline

- 2023 SVAP Public Comment Period
  - Opened: February 21, 2023
  - Closed: May 22, 2023
- 2023 SVAP Announcement
  - July 12, 2023
- 2023 SVAP Effective
  - September 11, 2023
- 2024 SVAP Public Comment Period
  - Opens: February 2024
  - Closes May 2024 (90 days)

**SVAP Annual Process**
https://www.healthit.gov/SVAP

# Standards Version Advancement Process (SVAP)

The SVAP allows health IT developers participating in ONC's Health IT Certification Program to voluntarily update their Health IT Modules to use approved newer versions of standards than are adopted in regulation so long as certain conditions are met.

## Why Is This Important?

- Provides flexibility to approve newer versions of adopted standards without rulemaking.
- Institutes a predictable and timely approach within the Certification Program to keep pace with the industry's standards development efforts.
- Supports interoperability in the real world as updated versions of standards reflect insights gained from real-world implementation and use.

**ONC established the voluntary SVAP flexibility as part of the "Real World Testing" Condition and Maintenance of Certification requirement of the 21st Century Cures Act.**

# Real World Testing Deadlines

- Real World Testing is a process by which Health IT developers demonstrate interoperability and functionality of their Certified Health IT in real world settings and scenarios, rather than in a controlled test environment with an ONC-Authorized Testing Lab (ONC-ATL).
  - 2024 Real World Testing Plans are due December 15, 2023
  - 2023 Real World Testing Results are due March 15, 2024

# Attestation Period Closing

The attestations submission window opened October 1, 2023, and remains open for Certified Health IT developers to submit their attestations through **October 31, 2023**.

Certified Health IT developers will submit their attestations to ONC-Authorized Certification Bodies (ONC-ACBs) for review using the Certified Health IT Product List (CHPL). For any questions about Attestations requirements or CHPL registration, please visit the Attestations Resource Guide or contact your ONC-ACB directly.

# ONC's 2023 Annual Meeting

**We're back!** For the first time since 2020, ONC will be hosting our Annual Meeting in-person in Washington, DC for two days of conversation, learning, and networking. Join us to hear about the key issues at the intersection of health care, public health, policymaking, and technology through a variety of keynote speakers, including National Coordinator Micky Tripathi, and main stage & breakout sessions.

**December 14-15, 2023**

For more information, including registration, please visit www.oncannualmeeting.com

# § 170.315(b)(10) EHI Export

- The 2015 Cures Update includes the § 170.315(b)(10) EHI export criterion that replaces the 2015 Edition § 170.315(b)(6) Date export criterion

- Replacing § 170.315(b)(6) with § 170.315(b)(10) enables:
  - Providers to export all EHI stored in a Certified Health IT product for a single patient or for an entire patient population
  - Individual patient access to EHI

- Required to be certified and **made available to end users** by December 31, 2023

# § 170.315(b)(10) Electronic Health Information (EHI) Export

Robert Anthony, Director, Certification and Testing

# Who Is Required to Be Certified to § 170.315(b)(10)?

- The Assurances Maintenance of Certification requires Certified Health IT that electronically stores EHI to certify to the Cures Update § 170.315(b)(10) EHI Export criterion.

- What about:
  - Certified Health IT that is part of a larger product that stores EHI?
  - Certified Health IT that uses relied upon software (RUS) to export EHI?
  - Certified Health IT that leverages 3rd party EHI storage?

- What should developers submit to their ONC-ACB if they feel as if § 170.315(b)(10) does not apply to them?

- *Can a developer just direct customers to a 3rd-party solution and not have to certify to* § 170.315(b)(10) *themselves?*

- *Do customers have to accept the (b)(10) update and/or use it?*

# What Is EHI?

- Electronic Health Information (EHI) refers to “electronic protected health information” (ePHI) to the extent that it would be included in a designated record set as defined in 45 CFR 164.501

- EHI does not include:
  - Psychotherapy notes
  - Information compiled in a reasonable anticipation or, for use in, a civil, criminal, or administrative action/ proceeding.

- *“Does [X data need] to be included in the EHI Export?”*
  - Ask yourself these 2 questions:
    - Is it stored by the product of which the Certified Health IT Module is a part?
    - Would it qualify under the EHI definition above?
- Can information outside of the EHI definition be included in the EHI Export?
  - The ONC Health IT Certification Program does not place requirements on the EHI that can be exported under the § 170.315(b)(10) functionality beyond what is defined in regulation as EHI.

# § 170.315(b)(10) & Information Blocking

- Do hospitals or providers need to have § 170.315(b)(10) functionality in place to comply with Information Blocking requirements?
  - § 170.315(b)(10) is not explicitly designed to fulfill Information Blocking requirements.
  - § 170.315(b)(10) is a developer requirement, not a provider requirement.
  - ONC regulations only place requirements on developers to make the functionality available to its end users. There are no ONC regulatory requirements on end users or providers related to the use of the functionality.

# § 170.315(b)(10) Resources

For more information regarding the § 170.315(b)(10) EHI export criterion, please refer to the following resources:

1. § 170.315(b)(10) EHI Export Factsheet
2. §170.315(b)(10) Certification Companion Guide
3. Blog: Getting Ready for EHI Export: A Quick Guide

# CHPL: CMS EHR Certification ID Updates

# CHPL: CMS EHR Certification ID Updates

## Only 2015 Cures Update listings can be used to generate CMS IDs, and they will include a “15C” syntax within the ID

- With the introduction of the 2015 Edition Cures Update, ONC started issuing CMS EHR Certification ID’s of "15C" to identify EHRs are certified to the 2015 Edition Cures Update for CMS Programs. The CMS Quality Payment Program's Promoting Interoperability Performance Category, Promoting Interoperability Program, and Inpatient Quality Reporting Program submission period is closed for the last reporting period (2022) that accepted 2015 Edition Certified Products with the "15E" syntax.
- Effective for reporting periods starting in 2023, the IQR Program, Promoting Interoperability Program, and Quality Payment Programs Promoting Interoperability Performance Category require the use of 2015 Edition Cures Update certified technology. Because CMS reporting programs will only accept 2015 Edition Cures Update certified technology, ONC's CHPL will only generate CMS EHR Certification IDs with the "15C" syntax. 2015 Edition and hybrid Certification IDs are no longer permitted by CMS.
- For questions regard the CMS policy, please contact the Inpatient Value, Incentives, and Quality Reporting Outreach and Education Support Contractor at https://cmsqualitysupport.servicenowservices.com/qnet_qa for eligible hospital eCQM and Hybrid measures.

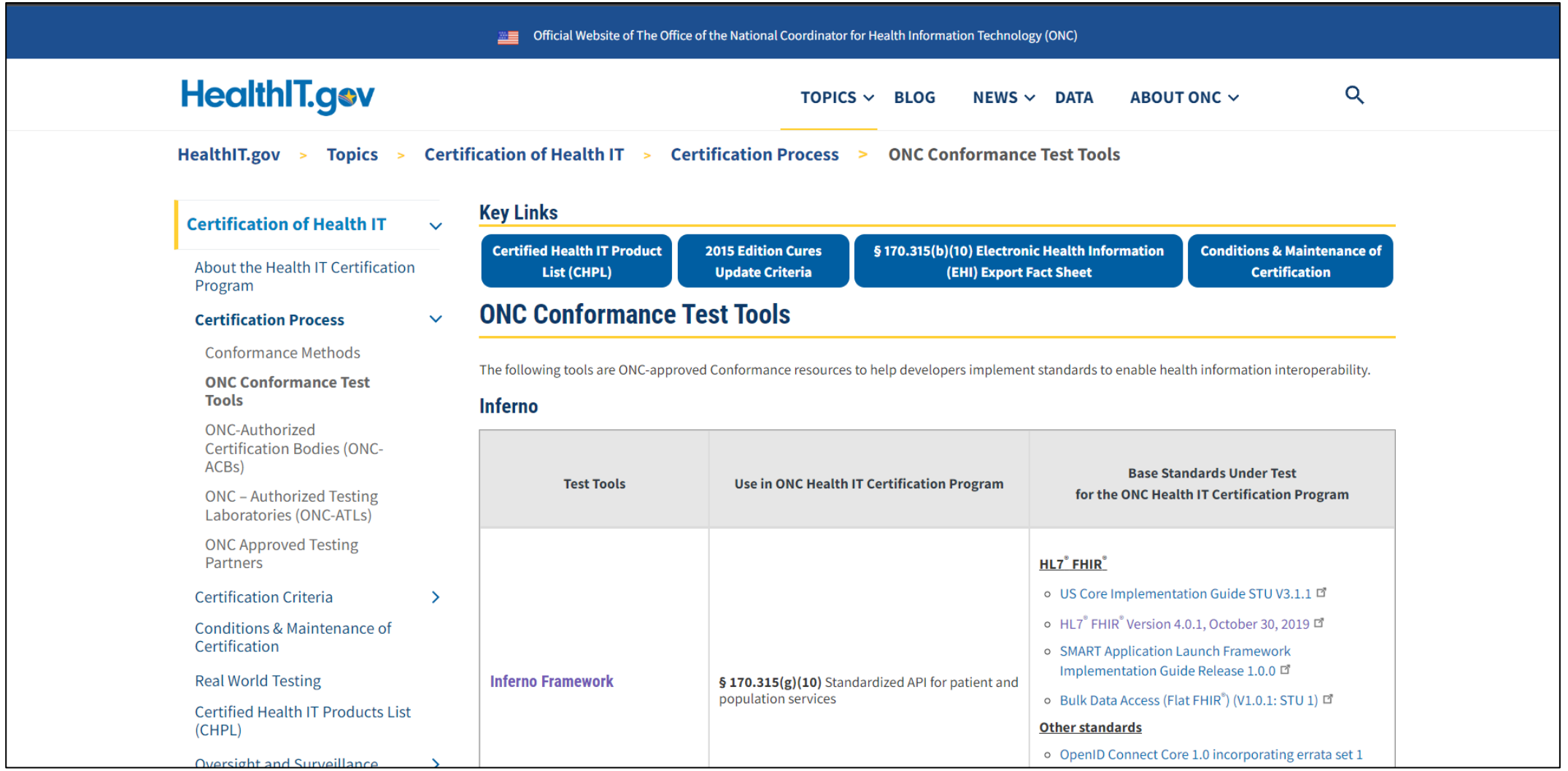
# ONC Tooling 101

Tools and Testing Branch

# Agenda: ONC Certification Program Tooling 101

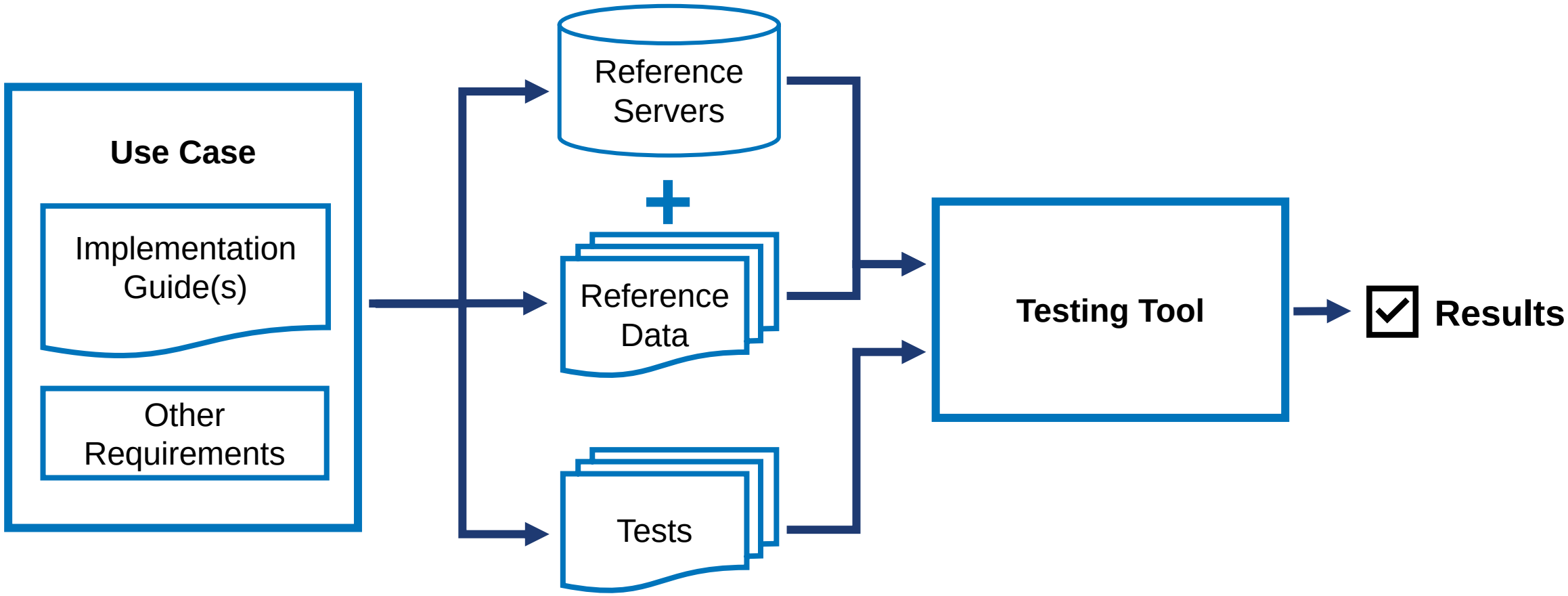
- Overview
- HL7 FHIR Testing
- SITE / Edge Testing
- Electronic Prescribing Testing
- Clinical Quality Measures (CQMs) Testing
- Public Health Testing

# ONC Conformance Test Tools page




https://www.healthit.gov/topic/certification-ehrs/onc-conformance-test-tools

# ONC Certification Testing Workflow




**Step 1**:
Define Requirements

**Step 2**:
Establish baseline artifacts

**Step 3**:
Test system

**Step 4**:
Verify conformance

# HL7 FHIR Tooling

Scott Bohon, Public Health Analyst

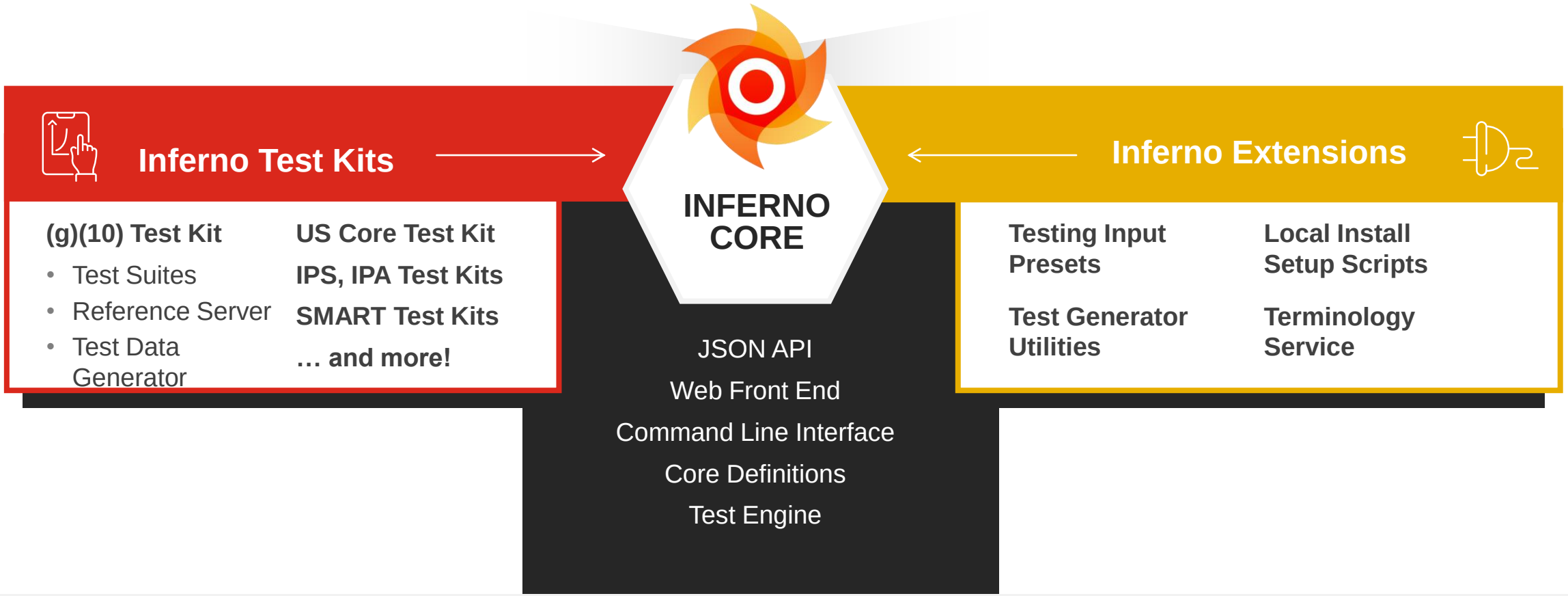
# FHIR Testing Tools

- FHIR APIs are required as part of certification to the § 170.315(g)(10) "Standardized API for patient and population services" criterion
- **Inferno**
  - Supports ONC Certification Program and FHIR community testing
  - Open-source code, with documentation available for writing your own tests
  - Uses the Ruby programming language for executing tests

- **AEGIS Touchstone**
  - Supports variety of FHIR implementation guides
  - Used in an Alternative Test Method for API testing in the ONC Certification Program
  - Executes tests via FHIR "TestScript" resource plus extensions

# INFERNO

Helping developers implement the FHIR standard consistently.




**Additional Resources**

US Core Synthea Generator | Template Reference Server | Template Test Kit | FHIR Validator | Lantern

# Inferno Examples: (g)(10) Test Kit Standards Selection

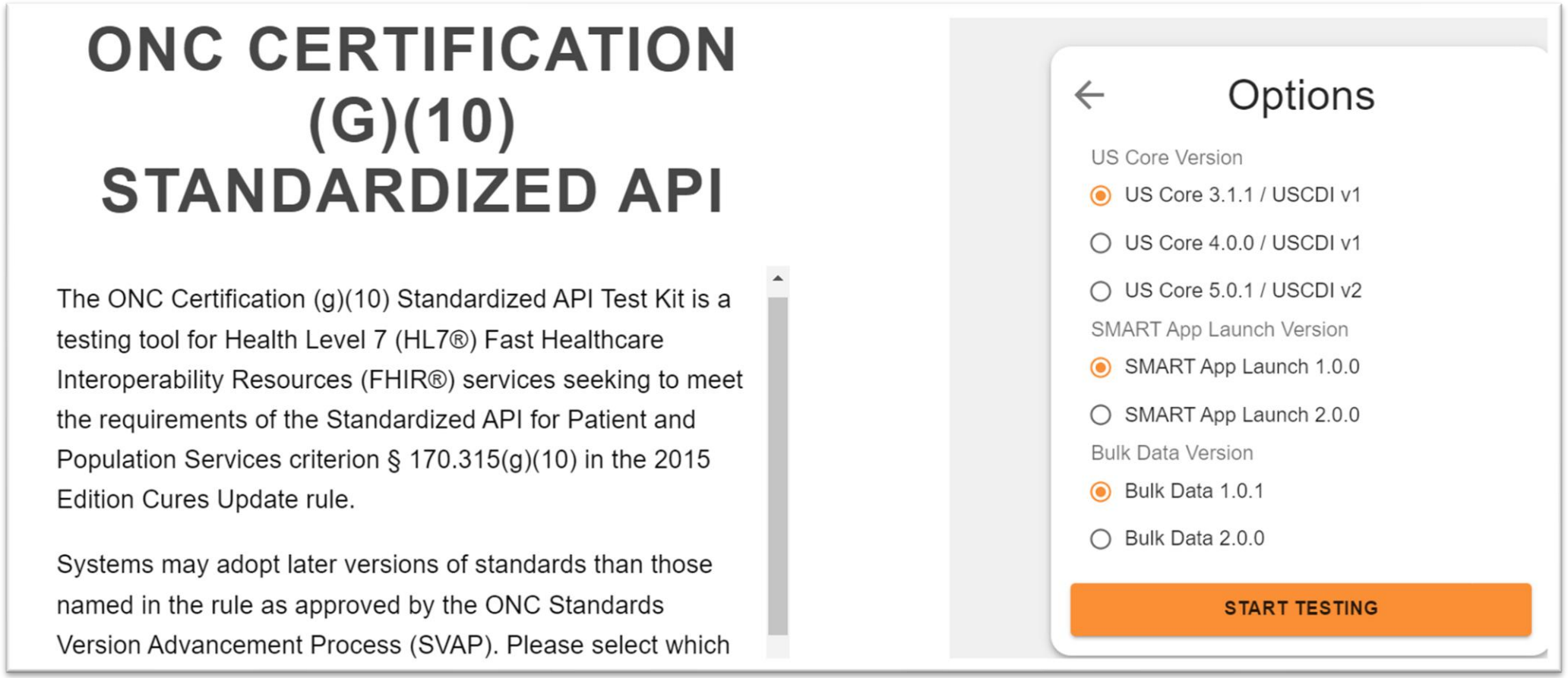



*Figure: This screen shows standards combinations available for certification testing in the Inferno test kit for the § 170.315(g)(10) criterion.*

# Inferno Examples: (g)(10) Test Kit Test Interface

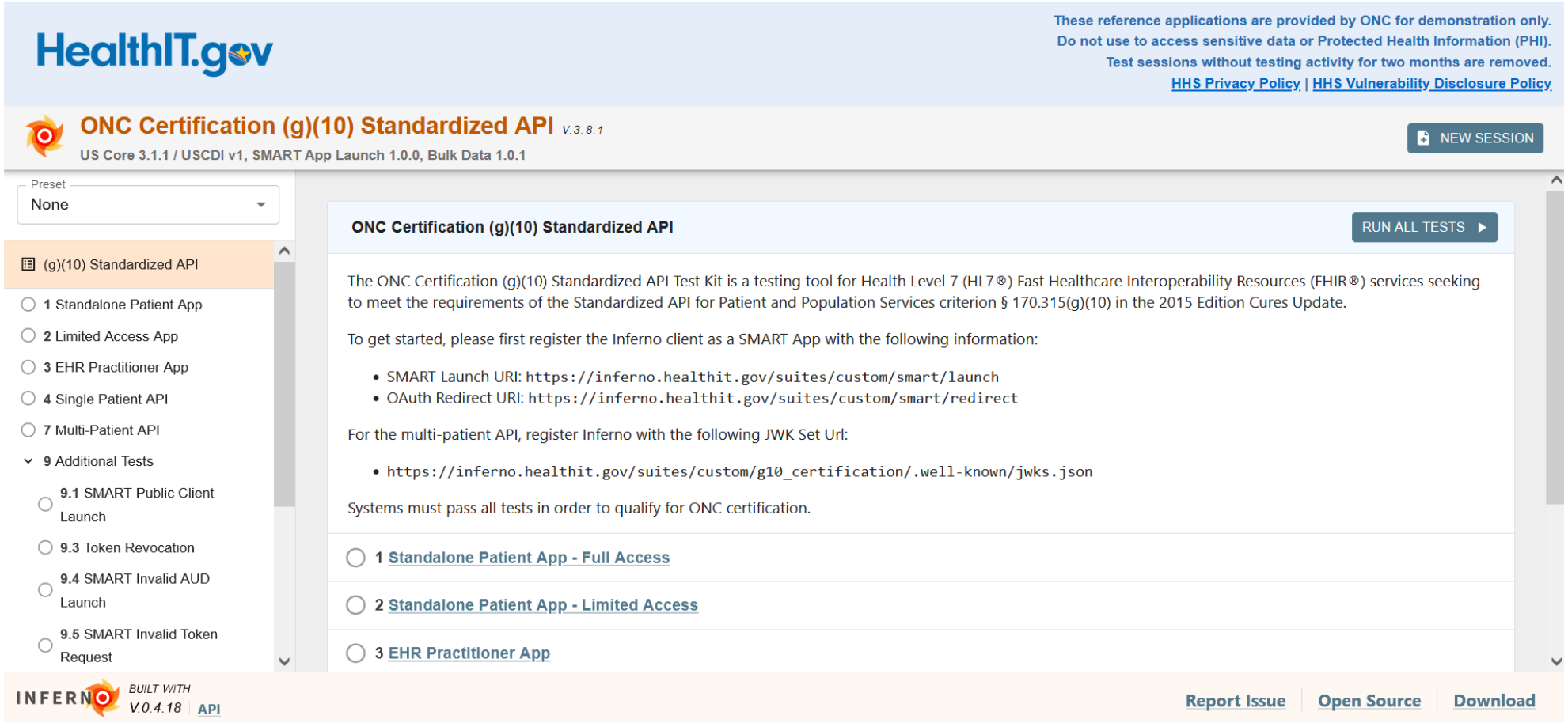



*Figure: This screen shows the testing interface for the Inferno test kit for the § 170.315(g)(10) criterion.*

# FHIR Testing Links

- ONC hosted instance of Inferno for FHIR testing
  - Inferno.HealthIT.gov
- ONC GitHub for Certification Program FHIR testing code
  - ONC Certification (g)(10) Standardized API Tests (github.com)
- Inferno Framework GitHub for general FHIR testing code
  - Inferno Health API Testing Framework (github.com)
- Inferno Documentation for writing FHIR tests
  - Inferno Framework Documentation
- Touchstone Platform for FHIR testing
  - The Touchstone Platform for HL7® FHIR® – AEGIS.net, Inc.
- Alternative Test Method for § 170.315(g)(10) criterion
  - Drummond G10+ FHIR® API powered by Touchstone tool

# SITE / Edge Testing

Jiuyi Hua, IT Specialist
Erin Little, Public Health Analyst

# SITE/ETT

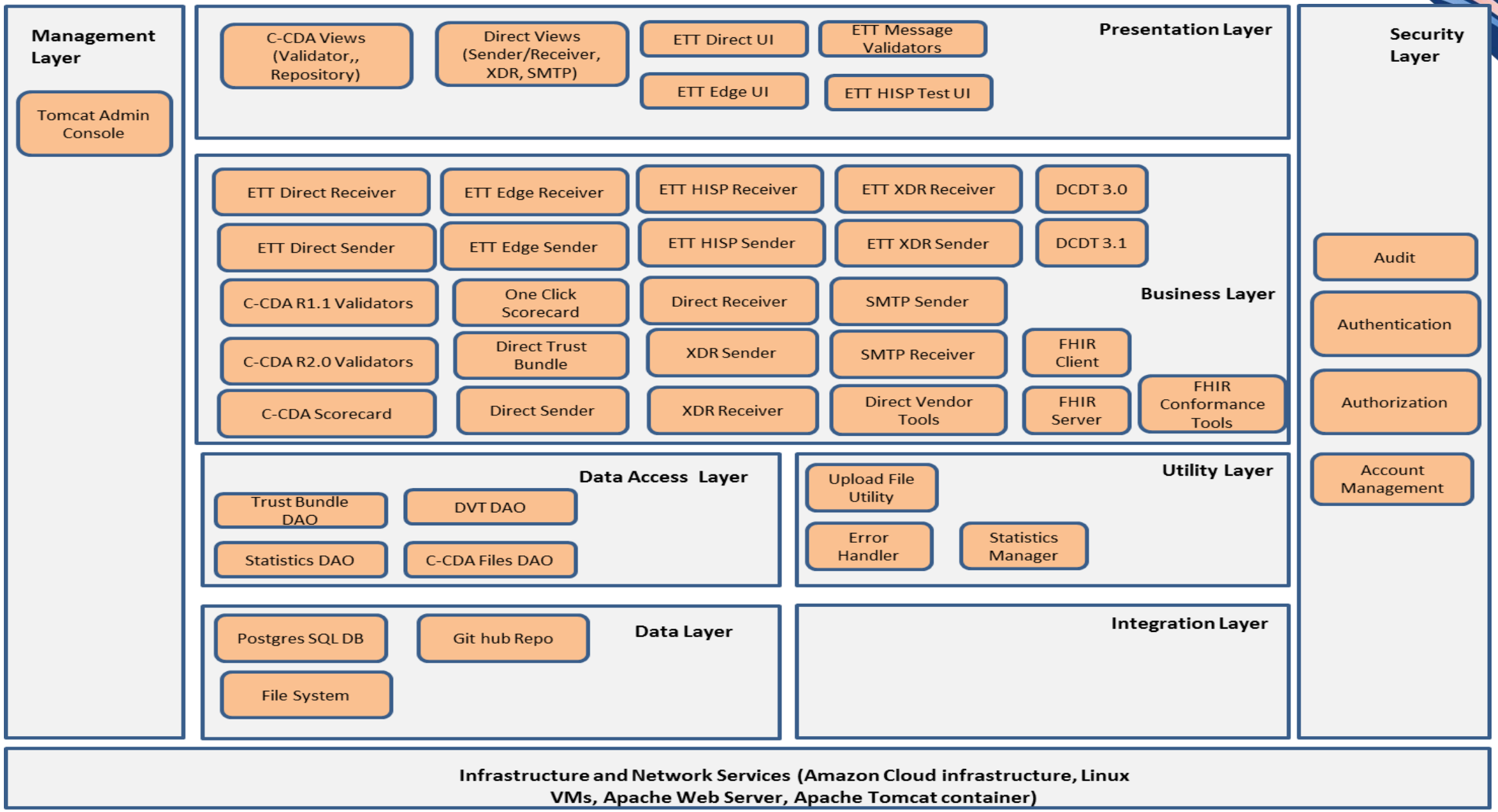
## SITE

- Standard and Interoperability support. Organized in a collection of sandboxes that provide test tools, sample data, resources, services and useful links. https://site.healthit.gov/home

## ETT

- Set of testing tools. Testing utilities created to validate the requirements of the 2015 Edition and the 2015 Edition Cures Update Health IT Certification Program.

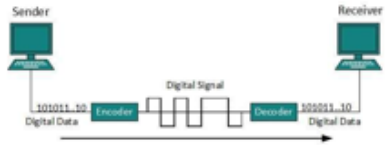
# SITE Architecture



# The h Criteria = Transport Protocols

- 2015 Edition health IT certification criterion § 170.315 h regulates ***Health Data Transport Methods and Protocols***

## h(1) Direct Project, HISP



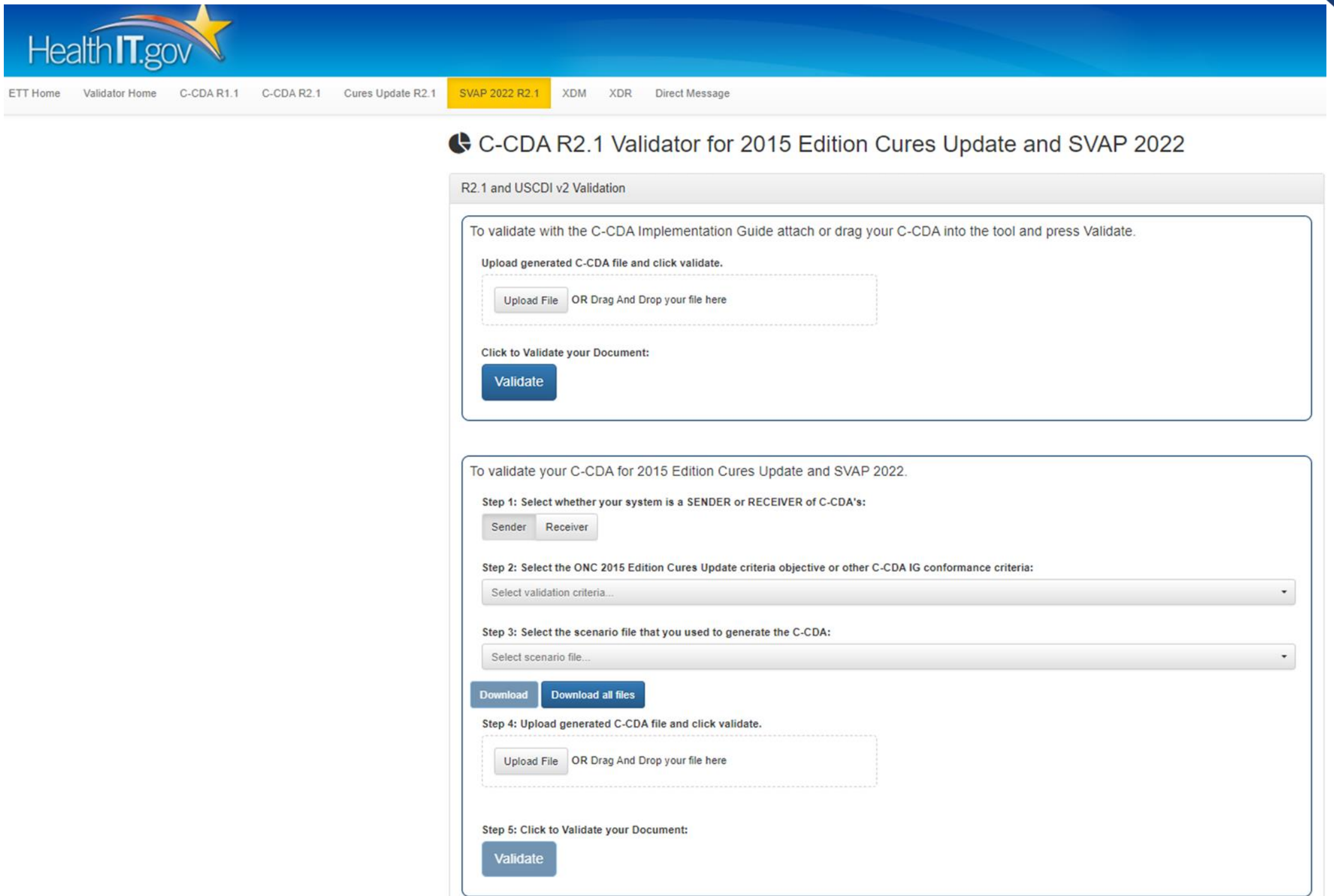

- Secure Messaging
- HIPPA Compliant
- Interoperable
- Nationwide clinic data exchange

## h(2) Direct, Edge Protocol, XDS

- XDM – MIME message type – Email + WWW
- IHE XRD Permit direct message interchange between EHRs, PHR, other Health IT system

# Message Validators

- Validators test conformance of artifacts to industry standards and specific criteria, and include:
  - C-CDA
  - XDM
  - XDR
  - Direct Message
- There are context-free validators for general testing and validators for the criteria of the 2015 Edition
- https://ett.healthit.gov/ett/#/validators


HealthIT.gov
ETT Home
Validator Home
C-CDA R1.1
C-CDA R2.1
Cures Update R2.1
SVAP 2022 R2.1
XDM
XDR
Direct Message
C-CDA R2.1 Validator for 2015 Edition Cures Update and SVAP 2022
R2.1 and USCDI v2 Validation
To validate with the C-CDA Implementation Guide attach or drag your C-CDA into the tool and press Validate.
Upload generated C-CDA file and click validate.
Upload File
OR Drag And Drop your file here
Click to Validate your Document:
Validate
To validate your C-CDA for 2015 Edition Cures Update and SVAP 2022.
Step 1: Select whether your system is a SENDER or RECEIVER of C-CDA's:
Sender
Receiver
Step 2: Select the ONC 2015 Edition Cures Update criteria objective or other C-CDA IG conformance criteria:
Select validation criteria...
Step 3: Select the scenario file that you used to generate the C-CDA:
Select scenario file...
Download
Download all files
Step 4: Upload generated C-CDA file and click validate.
Upload File
OR Drag And Drop your file here
Step 5: Click to Validate your Document:
Validate

To validate your C-CDA for 2015 Edition Cures Update and SVAP 2022.

**Step 1: Select whether your system is a SENDER or RECEIVER of C-CDA's:**

Sender | Receiver

**Step 2: Select the ONC 2015 Edition Cures Update criteria objective or other C-CDA IG conformance criteria:**

Select validation criteria...

- 170.315_b1_ToC_Amb
- 170.315_b1_ToC_Inp
- 170.315_b2_CIRI_Amb
- 170.315_b2_CIRI_Inp
- 170.315_b7_DS4P_Amb
- 170.315_b7_DS4P_Inp
- 170.315_b9_CP_Amb

Upload File OR Drag And Drop your file here

**Step 5: Click to Validate your Document:**

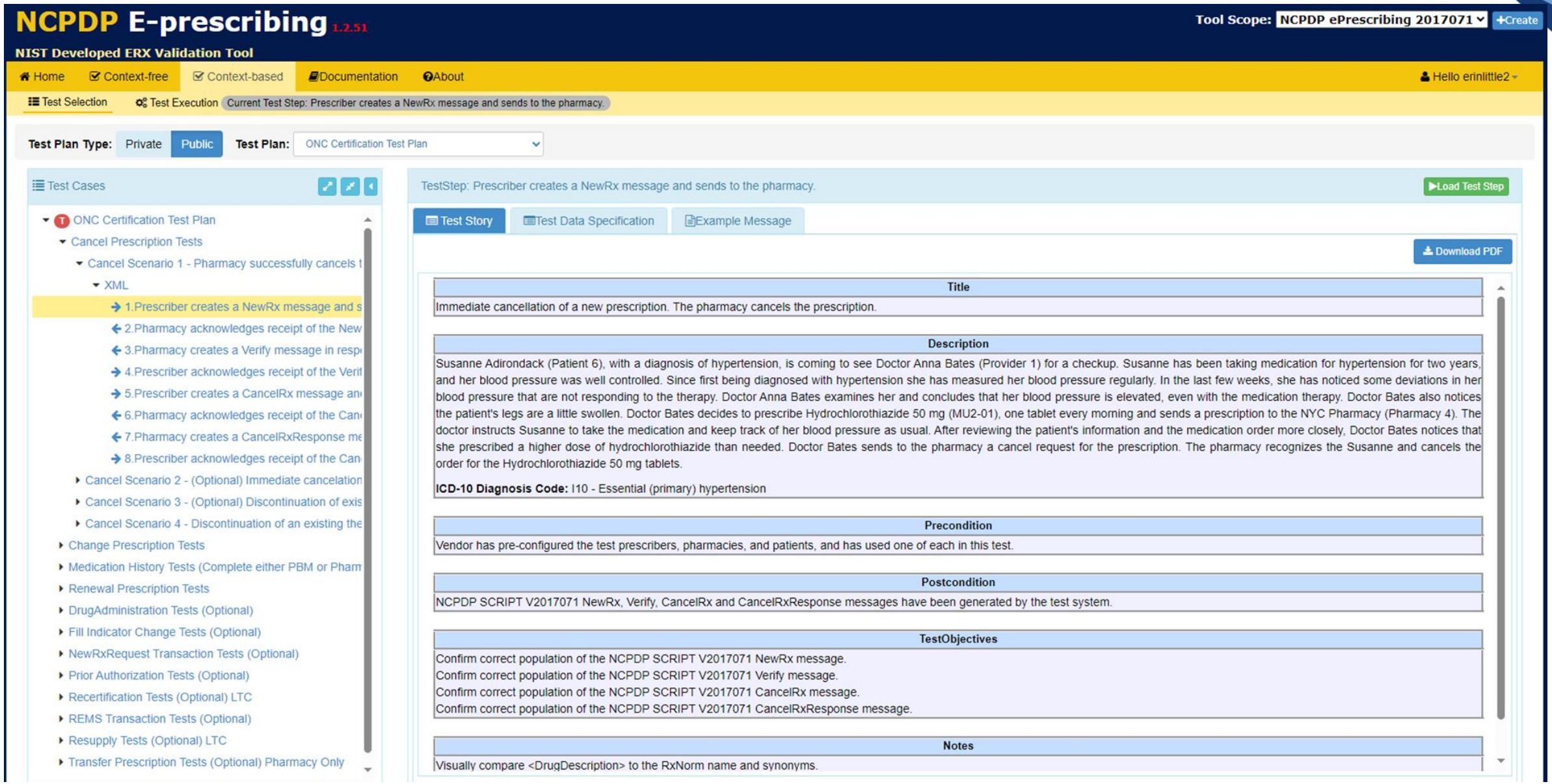
Validate

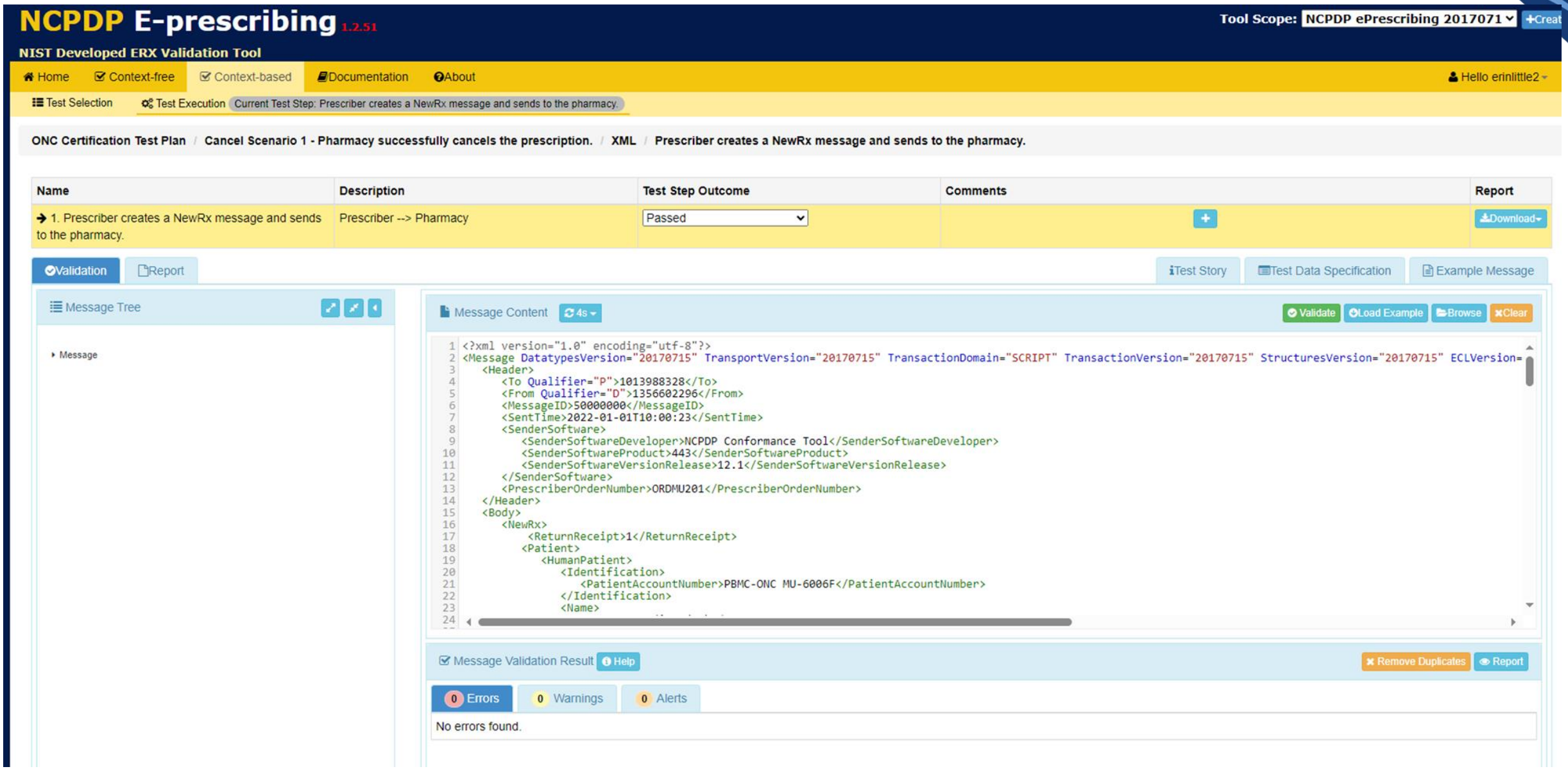
# Electronic Prescribing Testing

Erin Little, Public Health Analyst

# Electronic Prescribing (eRx) Testing

- Certification criteria: § 170.315(b)(3) Electronic prescribing
- Testing tool developed by the National Institute of Standards and Technology (NIST) and currently managed by the National Council for Prescription Drugs Programs (NCPDP)
  - ONC-Approved Testing Partner
- NCPDP SCRIPT Standard 2017071
  - Developed for transmitting prescription information electronically between prescribers, pharmacies, payers, and other entities
- NCPDP eRx testing suite supports transport, messaging and functional testing
- tools.ncpdp.org/erx/#/home


NCPDP E-prescribing 1.2.51
NIST Developed ERX Validation Tool
Tool Scope: NCPDP ePrescribing 2017071
+Create
Home
Context-free
Context-based
Documentation
About
Hello erinlittle2
Test Selection
Test Execution
Current Test Step: Prescriber creates a NewRx message and sends to the pharmacy.
Test Plan Type: Private Public
Test Plan: ONC Certification Test Plan
Test Cases
ONC Certification Test Plan
Cancel Prescription Tests
Cancel Scenario 1 - Pharmacy successfully cancels t
XML
1.Prescriber creates a NewRx message and s
2.Pharmacy acknowledges receipt of the New
3.Pharmacy creates a Verify message in resp
4.Prescriber acknowledges receipt of the Verif
5.Prescriber creates a CancelRx message an
6.Pharmacy acknowledges receipt of the Can
7.Pharmacy creates a CancelRxResponse me
8.Prescriber acknowledges receipt of the Can
Cancel Scenario 2 - (Optional) Immediate cancelation
Cancel Scenario 3 - (Optional) Discontinuation of exis
Cancel Scenario 4 - Discontinuation of an existing the
Change Prescription Tests
Medication History Tests (Complete either PBM or Pharm
Renewal Prescription Tests
DrugAdministration Tests (Optional)
Fill Indicator Change Tests (Optional)
NewRxRequest Transaction Tests (Optional)
Prior Authorization Tests (Optional)
Recertification Tests (Optional) LTC
REMS Transaction Tests (Optional)
Resupply Tests (Optional) LTC
Transfer Prescription Tests (Optional) Pharmacy Only
TestStep: Prescriber creates a NewRx message and sends to the pharmacy.
Load Test Step
Test Story
Test Data Specification
Example Message
Download PDF
Title
Immediate cancellation of a new prescription. The pharmacy cancels the prescription.
Description
Susanne Adirondack (Patient 6), with a diagnosis of hypertension, is coming to see Doctor Anna Bates (Provider 1) for a checkup. Susanne has been taking medication for hypertension for two years, and her blood pressure was well controlled. Since first being diagnosed with hypertension she has measured her blood pressure regularly. In the last few weeks, she has noticed some deviations in her blood pressure that are not responding to the therapy. Doctor Anna Bates examines her and concludes that her blood pressure is elevated, even with the medication therapy. Doctor Bates also notices the patient's legs are a little swollen. Doctor Bates decides to prescribe Hydrochlorothiazide 50 mg (MU2-01), one tablet every morning and sends a prescription to the NYC Pharmacy (Pharmacy 4). The doctor instructs Susanne to take the medication and keep track of her blood pressure as usual. After reviewing the patient's information and the medication order more closely, Doctor Bates notices that she prescribed a higher dose of hydrochlorothiazide than needed. Doctor Bates sends to the pharmacy a cancel request for the prescription. The pharmacy recognizes the Susanne and cancels the order for the Hydrochlorothiazide 50 mg tablets.
ICD-10 Diagnosis Code: I10 - Essential (primary) hypertension
Precondition
Vendor has pre-configured the test prescribers, pharmacies, and patients, and has used one of each in this test.
Postcondition
NCPDP SCRIPT V2017071 NewRx, Verify, CancelRx and CancelRxResponse messages have been generated by the test system.
TestObjectives
Confirm correct population of the NCPDP SCRIPT V2017071 NewRx message.
Confirm correct population of the NCPDP SCRIPT V2017071 Verify message.
Confirm correct population of the NCPDP SCRIPT V2017071 CancelRx message.
Confirm correct population of the NCPDP SCRIPT V2017071 CancelRxResponse message.
Notes
Visually compare <DrugDescription> to the RxNorm name and synonyms.


NCPDP E-prescribing 1.2.51
NIST Developed ERX Validation Tool
Tool Scope: NCPDP ePrescribing 2017071
Home
Context-free
Context-based
Documentation
About
Hello erinlittle2
Test Selection
Test Execution
Current Test Step: Prescriber creates a NewRx message and sends to the pharmacy.
ONC Certification Test Plan / Cancel Scenario 1 - Pharmacy successfully cancels the prescription. / XML / Prescriber creates a NewRx message and sends to the pharmacy.
Name
Description
Test Step Outcome
Comments
Report
1. Prescriber creates a NewRx message and sends to the pharmacy.
Prescriber --> Pharmacy
Passed
Download
Validation
Report
Test Story
Test Data Specification
Example Message
Message Tree
Message
Message Content
4s
Validate
Load Example
Browse
Clear
<?xml version="1.0" encoding="utf-8"?>
<Message DatatypesVersion="20170715" TransportVersion="20170715" TransactionDomain="SCRIPT" TransactionVersion="20170715" StructuresVersion="20170715" ECLVersion=
<Header>
<To Qualifier="P">1013988328</To>
<From Qualifier="D">1356602296</From>
<MessageID>50000000</MessageID>
<SentTime>2022-01-01T10:00:23</SentTime>
<SenderSoftware>
<SenderSoftwareDeveloper>NCPDP Conformance Tool</SenderSoftwareDeveloper>
<SenderSoftwareProduct>443</SenderSoftwareProduct>
<SenderSoftwareVersionRelease>12.1</SenderSoftwareVersionRelease>
</SenderSoftware>
<PrescriberOrderNumber>ORDMU201</PrescriberOrderNumber>
</Header>
<Body>
<NewRx>
<ReturnReceipt>1</ReturnReceipt>
<Patient>
<HumanPatient>
<Identification>
<PatientAccountNumber>PBMC-ONC MU-6006F</PatientAccountNumber>
</Identification>
<Name>
Message Validation Result
Help
Remove Duplicates
Report
0 Errors
0 Warnings
0 Alerts
No errors found.

# Electronic Clinical Quality Measures (eCQMs) Testing

Keith Carlson, Health IT Specialist

# eCQM certification and testing

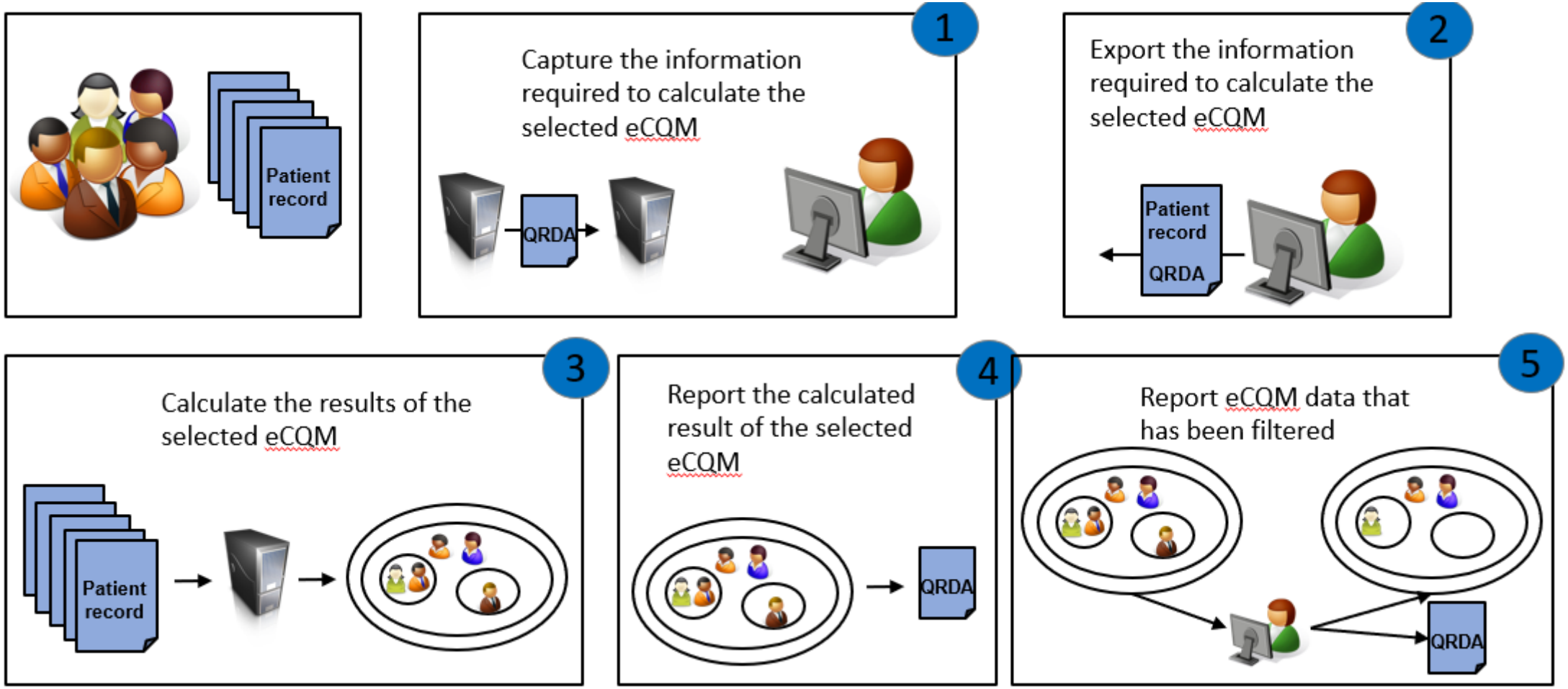
- ONC (c) criteria specify import, export, record, report, filter and calculate capabilities for eCQMs used by CMS's Quality Reporting Programs
- eCQMs exist in a fluid environment
  - eCQMs are updated in a yearly cycle to address
    - Changes in clinical practices
    - The addition and removal of codes
    - Bugs in measure logic
    - New and retired measures
    - eCQM standard updates
- Each year, certified systems need to update their systems to comply with the updates to eCQMs and standards
  - Even though recertification is not required, vendors retest their systems to new eCQMs

# Cypress

- A testing tool
  - Validates Electronic Health Record (EHR) system's ability to correctly calculate electronic Clinical Quality Measures (eCQMs).
- The official testing tool for the 2015 Edition Cures Update
  - Supported by the Office of the National Coordinator for Health IT (ONC).
- An open-source project
  - Freely available for use or adoption by the Health IT community including EHR vendors and testing labs.

# What Does Cypress Test?

Given a set of patients and eCQMs, Cypress tests the ability of an EHR to:



# How is Cypress made available?

- Cypress is developed as Open Source
  - Source code is made freely available and may be redistributed and modified
- Cypress releases are distributed as a:
  - Virtual Machine
    - A fully enclosed version which can be installed as-is on an organization's network
  - Amazon Machine Imagine
    - A virtual machine that can be run on Amazon's Elastic Compute Cloud
  - Demo Server
    - Publicly available instances of Cypress
      - https://cypress.healthit.gov/
      - https://cypressvalidator.healthit.gov/
    - Distribution model allows for EHR's vendors to install and use Cypress locally within their organization's firewalls to prior to certification

# Public Health Testing

Johnny Bender, Public Health Analyst

# Public health context

- **Seven public health criteria**
  - 170.315(f)(1) Transmission to immunization registries
  - 170.315(f)(2) Transmission to public health agencies — syndromic surveillance
  - 170.315(f)(3) Transmission to public health agencies — reportable laboratory tests and value/results
  - 170.315(f)(4) Transmission to cancer registries
  - 170.315(f)(5) Transmission to public health agencies – electronic case reporting
  - 170.315(f)(6) Transmission to public health agencies – antimicrobial use and resistance reporting
  - 170.315(f)(7) Transmission to public health agencies – health care surveys

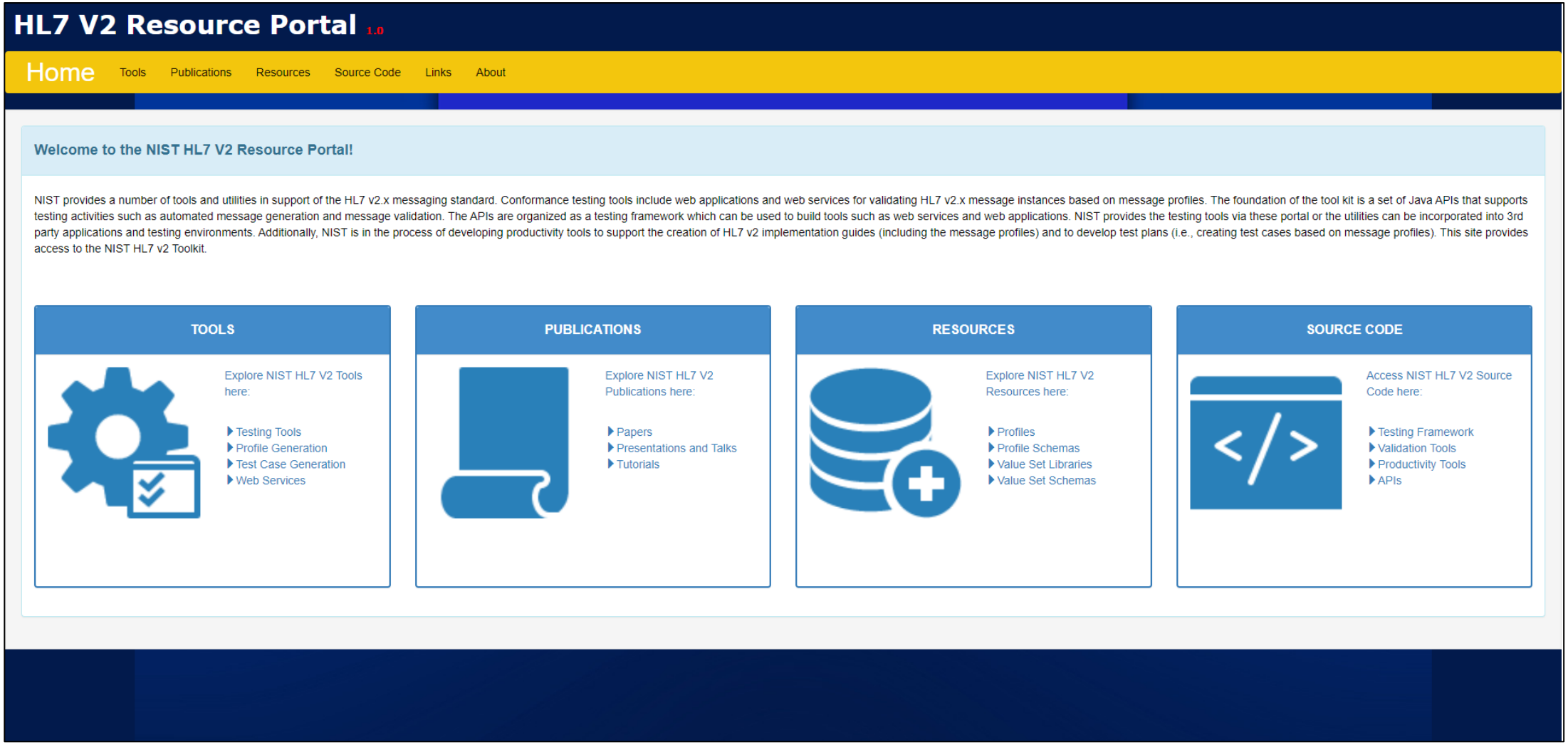
- **Additional information**
  - Primarily supports public health reporting for state and federal programs
  - Based in HL7 v2 and CDA
  - All criteria have software-based testing methods besides (f)(5)
  - Most criteria testing leverage the NIST suite of testing tools

# Public Health Testing: HL7 v2

- **NIST HL7 V2 Resource Portal**
  - Provided by National Institute of Standards and Technology (NIST)
  - Several tools and utilities to support the HL7 v2.x messaging standards
    - Including some tools leveraged by the ONC Certification Program

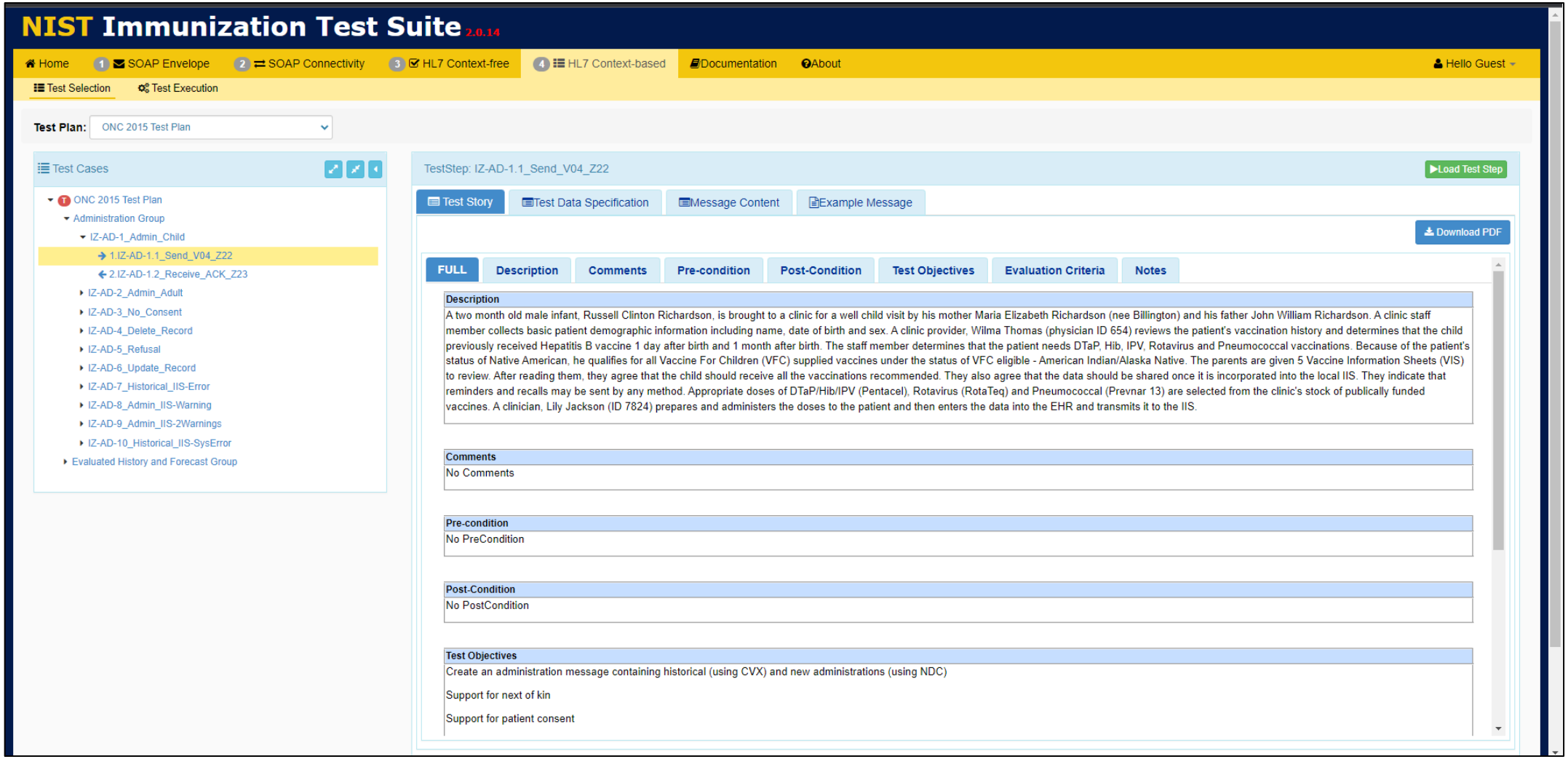
- **HL7 v2 Tools used in the ONC Certification Program**
  - 170.315(f)(1) Transmission to immunization registries
    - Test Method: **HL7v2 Immunization Test Suite** (ONC steward; NIST)
    - Alternate Test Method: Immunization Integration Program (IIP) (IIP steward; NIST)
  - 170.315(f)(2) Transmission to public health agencies — syndromic surveillance
    - Test Method: **HL7v2 Syndromic Surveillance Test Suite** (ONC steward; NIST)
  - 170.315(f)(3) Transmission to public health agencies — reportable laboratory tests and value/results
    - Test Method: **HL7v2 Electronic Laboratory Reporting** (ONC steward; NIST)

# NIST HL7 V2 Resource Portal



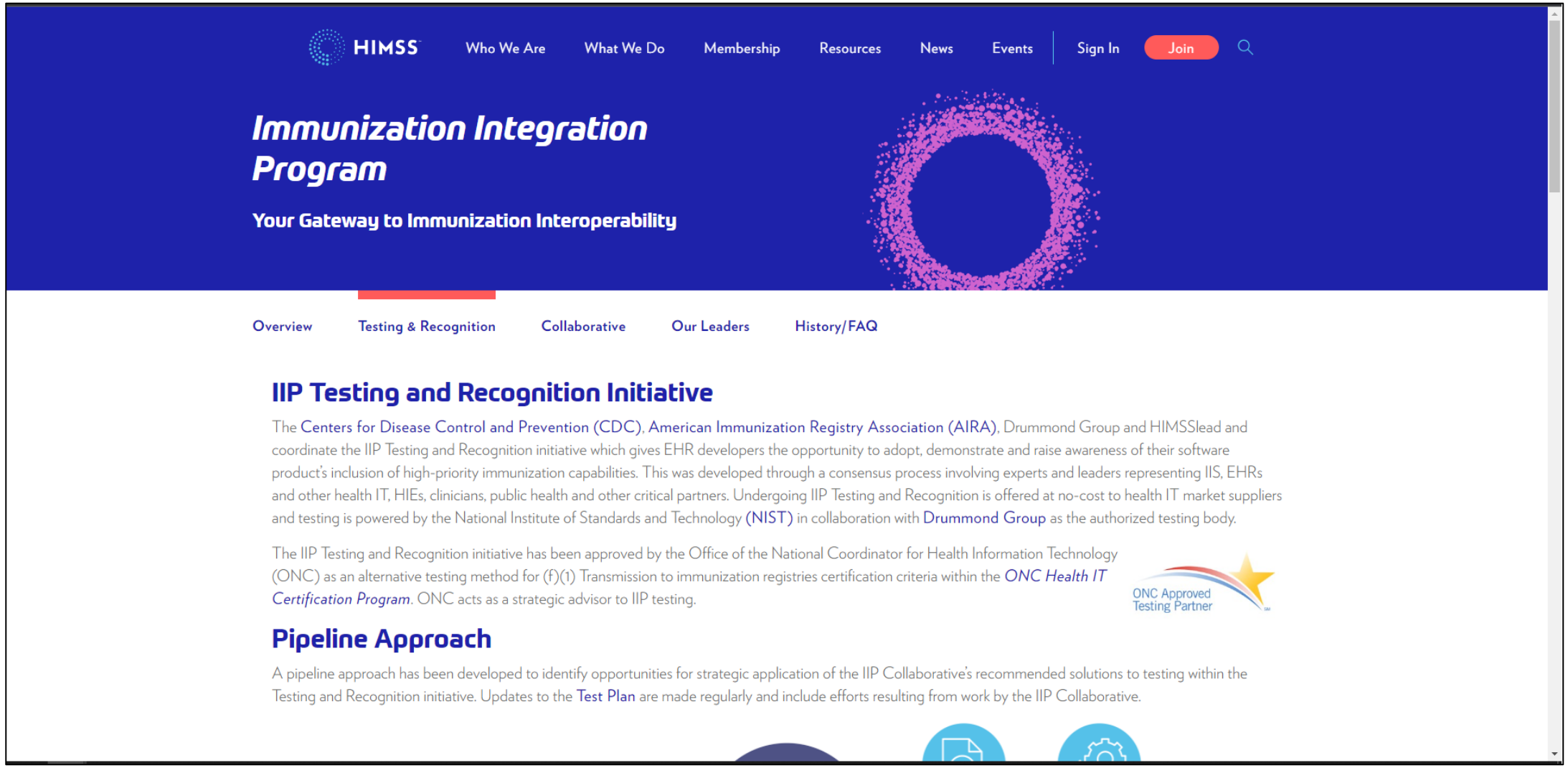

https://hl7v2tools.nist.gov/portal/#/

# § 170.315(f)(1) Test Method: HL7v2 Immunization Test Suite




https://hl7v2-iz-r1-5-testing.nist.gov/iztool/#/home

# § 170.315(f)(1) Alt Test Method: Immunization Integration Program



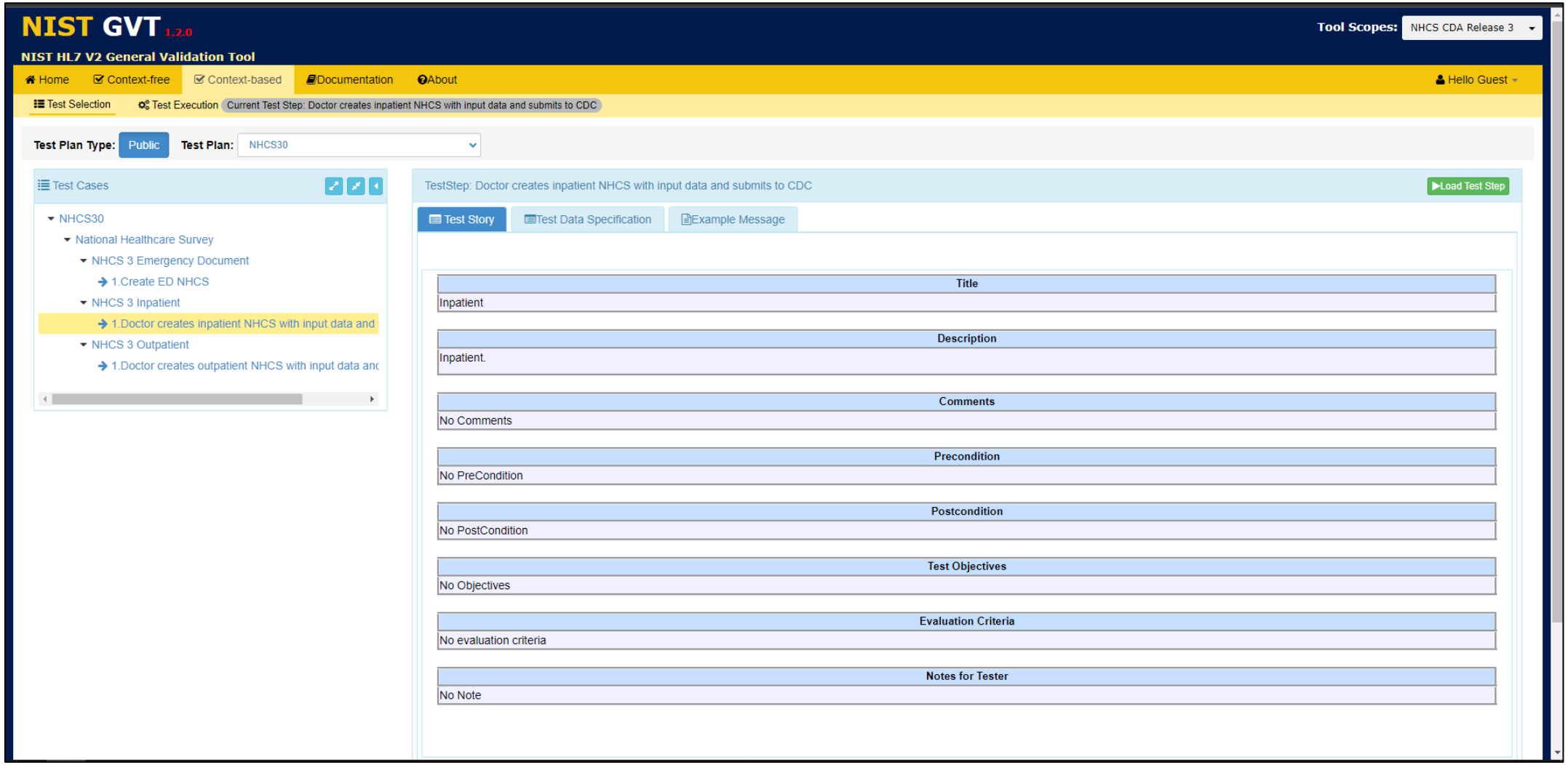

https://www.himss.org/what-we-do-initiatives/immunization-integration-program

# Public Health Testing: HL7 CDA

- **NIST General Validation Tool**
  - Provided by National Institute of Standards and Technology (NIST)
  - Testing development framework for HL7v2 and HL7 CDA

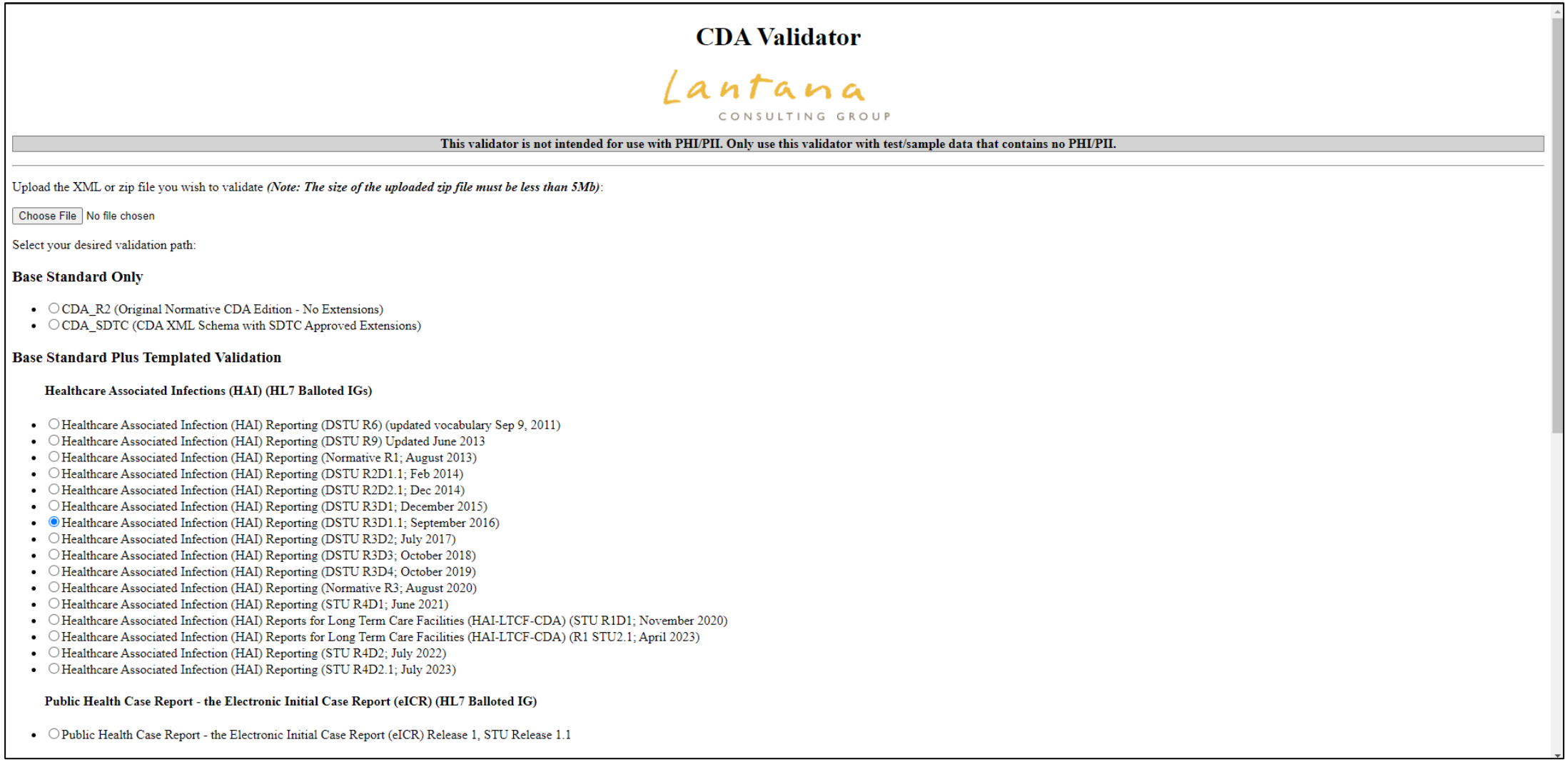
- **HL7 CDA Tools used in the ONC Certification Program**
  - 170.315(f)(4) Transmission to cancer registries
    - Test Method: **NIST HL7® CDA Cancer Registry Reporting Validation Too**l (ONC steward; NIST)
  - 170.315(f)(6) Transmission to public health agencies – antimicrobial use and resistance reporting
    - Test Method: **Healthcare Associated Infections CDA Validator** (CDC steward; Lantana Consulting)
  - 170.315(f)(7) Transmission to public health agencies – health care surveys
    - Test Method: **NIST HL7® CDA National Health Care Surveys Validator** (ONC steward; NIST)
    - SVAP Test Method: **NIST General Validation Tool** (ONC steward; NIST)

# § 170.315(f)(4) SVAP Test Method: NIST General Validation Tool - NCHS CDA R3




https://hl7v2-gvt.nist.gov/gvt/#/home

# § 170.315(f)(6) Test Method: Lantana Consulting Group CDA Validator



CDA Validator

Lantana CONSULTING GROUP

**This validator is not intended for use with PHI/PII. Only use this validator with test/sample data that contains no PHI/PII.**

Upload the XML or zip file you wish to validate ***(Note: The size of the uploaded zip file must be less than 5Mb)***:

Choose File No file chosen

Select your desired validation path:

**Base Standard Only**

- ○ CDA_R2 (Original Normative CDA Edition - No Extensions)
- ○ CDA_SDTC (CDA XML Schema with SDTC Approved Extensions)

**Base Standard Plus Templated Validation**

**Healthcare Associated Infections (HAI) (HL7 Balloted IGs)**

- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R6) (updated vocabulary Sep 9, 2011)
- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R9) Updated June 2013
- ○ Healthcare Associated Infection (HAI) Reporting (Normative R1; August 2013)
- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R2D1.1; Feb 2014)
- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R2D2.1; Dec 2014)
- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R3D1; December 2015)
- ◉ Healthcare Associated Infection (HAI) Reporting (DSTU R3D1.1; September 2016)
- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R3D2; July 2017)
- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R3D3; October 2018)
- ○ Healthcare Associated Infection (HAI) Reporting (DSTU R3D4; October 2019)
- ○ Healthcare Associated Infection (HAI) Reporting (Normative R3; August 2020)
- ○ Healthcare Associated Infection (HAI) Reporting (STU R4D1; June 2021)
- ○ Healthcare Associated Infection (HAI) Reports for Long Term Care Facilities (HAI-LTCF-CDA) (STU R1D1; November 2020)
- ○ Healthcare Associated Infection (HAI) Reports for Long Term Care Facilities (HAI-LTCF-CDA) (R1 STU2.1; April 2023)
- ○ Healthcare Associated Infection (HAI) Reporting (STU R4D2; July 2022)
- ○ Healthcare Associated Infection (HAI) Reporting (STU R4D2.1; July 2023)

**Public Health Case Report - the Electronic Initial Case Report (eICR) (HL7 Balloted IG)**

- ○ Public Health Case Report - the Electronic Initial Case Report (eICR) Release 1, STU Release 1.1

https://validator-legacy.lantanagroup.com/validator/

# Thank you!

**Please submit questions, concerns, or feedback to https://inquiry.healthit.gov/**