USER GUIDE

NHCS Release 1 Validator Test Tool User Guide

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2.0 OVERVIEW

2.1 Role of NIST

Since its foundation in 1901, the National Institute of Standards and Technology (NIST) has been devoted to promoting innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve human qualities of life. In support of this mission, NIST has strategically acknowledged the need for opportunity discovery within the private sector's range of vital industries and technology areas. Under the American Recovery and Reinvestment Act of 2009 (Recovery Act), NIST was called upon to consult with the Office of the National Coordinator (ONC) in its mission to encourage greater adoption of interoperable health IT technologies and capabilities. To accomplish this mission, NIST is collaborating with ONC to develop a structured program that eligible professionals, hospitals, and critical access hospitals (CAHs) can achieve that demonstrates compliance with applicable Meaningful Use Modified Stage 2 (MU2)[1] and Stage 3 (MU3)[2] criteria and requirements. NIST's primary role is to assist ONC in establishing the necessary functional and conformance testing requirements, Test Cases, and testing tool sets need to successfully implement a voluntary health IT certification program.

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[1]CMS: EHR Incentive Programs: 2015 through 2017 (Modified Stage 2) Overview: http://www.cdc.gov/ehrmeaningfuluse/docs/cms_stage_3_mu_overview_2015_2017.pdf

[2] https://www.federalregister.gov/articles/2015/03/30/2015-06685/medicare-and-medicaid-programs-electronic-health-record-incentive-program-stage-3

2.2 National Health Care Survey Validation Tool

NIST has developed tooling designed to be used by HIT developers and implementers during the development of software that implements CDA-based specifications. These tools can be used for self-testing to determine if an XML instance document is correct with respect to the conformance statements in the HL7 specification: National Health Care Surveys Release 1.0, DSTU, available through HL7.org.
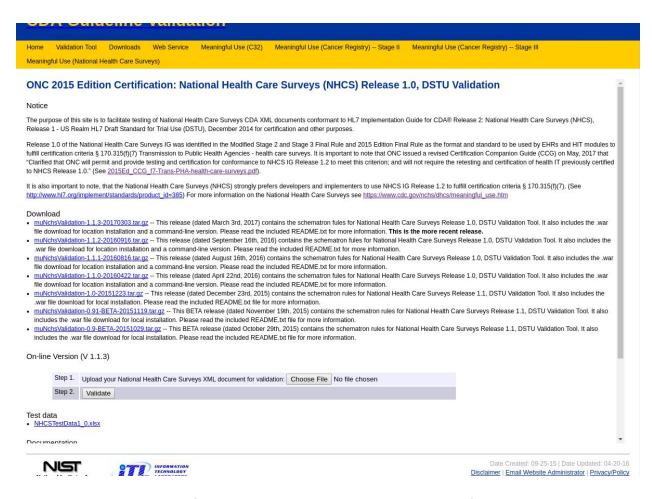
The schematron used by this tool is from the HL7 specification package with possible modifications as needed for this context. This software is available to download as both a command-line validation tool and as a deployable web archive. Instructions for local installation are included in the download package.

2.3 Purpose

The purpose of this National Health Care Survey User Guide is to outline the process by which HIT developers and implementers can check the output of software to determine conformance with the conformance statements in the HL7 specification: National Health Care Surveys Release 1.0, DSTU, available through HL7.org.
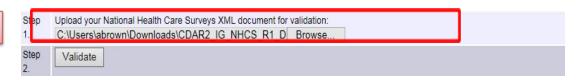
3.0 USING THE TOOL

1. Navigate to the National Health Care Survey Validation Page by either clicking the following link or entering it directly into a web browser:
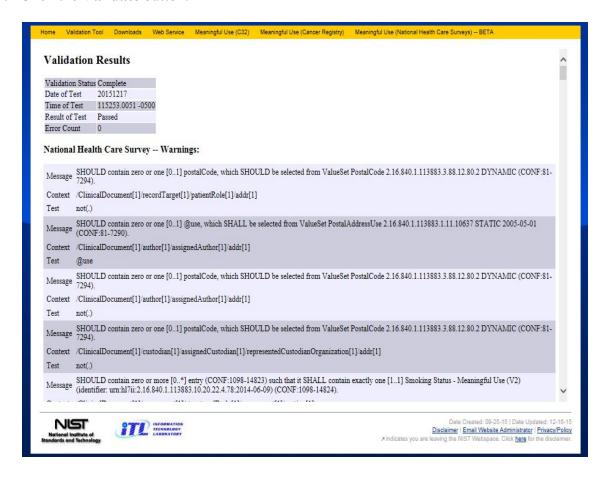   http://cda-validation.nist.gov/cda-validation/muNHCS.html.

2. The **Download** section allows you to download the latest version of the tool (as well as previous, legacy versions).
3. The **Online Version** of the tool allows you to:
   Step 1. Upload your National Healthcare Survey XML document.
   Step 2. Validate your document.
4. **Test Data** provides test data.
5. The **Documentation** section provides instructions and updates.

4.0 UPLOADING YOUR DOCUMENTS

1. Upload the CDA file using the buttons provided.

2. Click the **Validate** button.

3. A **Validation Report** will appear.

> **Note:** Scroll down to view the entire listing of validation results. Information will consist of the Report's time, date, status, number of errors, etc. This summary information will be followed by a detailed listing of the errors found.

5.0 UNDERSTANDING ERRORS

4. If there are errors / warnings, they divide into two types.

- The first error type is schema errors. (*This is displayed as simply a schema error message.*)

- The second error type is schematron errors/warnings.

There are three items associated with each: "*message*", "*context*", and "*test*." Following immediately after the second error type is schematron errors/warnings.

- **Message** is a quote from the specification indicating what the XML failed to do.

- **Context** is an XPath expression indicating where in the XML document the issue occurred.

- **Test** is the actual schematron XPath test that was run. This logical expression was executed from the context location and resolved to "false" but the tool was looking for "true".