Test Procedure for §170.302 (c) Maintain up-to-date problem list

This document describes the test procedure for evaluating conformance of complete EHRs or EHR modules[1] to the certification criteria defined in 45 CFR Part 170 Subpart C of the Final Rule for Health Information Technology: Initial Set of standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology as published in the Federal Register on July 28, 2010. The document[2] is organized by test procedure and derived test requirements with traceability to the normative certification criteria as described in the Overview document located at http://healthcare.nist.gov/docs/TestProcedureOverview_v1.pdf. The test procedures may be updated to reflect on-going feedback received during the certification activities.

The HHS/Office of the National Coordinator for Health Information Technology (ONC) has defined the standards, implementation guides and certification criteria used in this test procedure. Applicability and interpretation of the standards, implementation guides and certification criteria to EHR technology is determined by ONC. Test procedures to evaluate conformance of EHR technology to ONC's requirements are defined by NIST. Testing of EHR technology is carried out by ONC-Authorized Testing and Certification Bodies (ATCBs), not NIST, as set forth in the final rule establishing the Temporary Certification Program (*Establishment of the Temporary Certification Program for Health Information Technology, 45 CFR Part 170; June 24, 2010.*)

Questions about the applicability of the standards, implementation guides or criteria should be directed to ONC at ONC.Certification@hhs.gov. Questions about the test procedures should be directed to NIST at hit-tst-fdbk@nist.gov. Note that NIST will automatically forward to ONC any questions regarding the applicability of the standards, implementation guides or criteria. Questions about functions and activities of the ATCBs should be directed to ONC at ONC.Certification@hhs.gov

CERTIFICATION CRITERIA

This Certification Criterion is from the Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology Final Rule issued by the Department of Health and Human Services (HHS) on July 28, 2010.

§170.302 (c) Maintain up-to-date problem list. Enable a user to electronically record, modify, and retrieve a patient's problem list for longitudinal care in accordance with:
(1) The standard specified in §170.207(a)(1); or
(2) At a minimum, the version of the standard specified in §170.207(a)(2).

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[1] Department of Health and Human Services, 45 CFR Part 170 Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, Final Rule, July 28, 2010.

[2] Disclaimer: Certain commercial products are identified in this document. Such identification does not imply recommendation or endorsement by the National Institute of Standards and Technology.

Per Section III.D of the preamble of the Health Information Technology: Initial Set of Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, Final Rule where the maintain up-to-date problem list certification criterion is discussed:

- "The reference to longitudinal care is intended to convey that the problem list must be comprehensive in the sense that it must be capable of including entries provided over an extended period of time. Consequently, for Complete EHRs and EHR Modules to be certified for an ambulatory setting, they will need to be designed to enable the user to electronically record, modify, and retrieve a patient's problem list over multiple encounters. For an inpatient setting, they will need to enable the user to electronically record, modify, and retrieve a patient's problem list for the duration of an entire hospitalization.

- "[…] meaningful use requirements will typically specify whether an adopted standard will have to be used among components of a business organization or solely for the electronic exchange of health information with other legal entities. The measure for this final meaningful use objective provides that entries be recorded as structured data. The certification criterion specifies that ICD-9CM or SNOMED-CT® are the code sets which must be included in Certified EHR Technology, and are therefore the code sets that would be used to record entries as structured data."

INFORMATIVE TEST DESCRIPTION

This section provides an informative description of how the test procedure is organized and conducted. It is not intended to provide normative statements of the certification requirements.

This test evaluates the capability for a Complete EHR or EHR Modules to enable a user to electronically record, modify, and retrieve a patient's problem list for longitudinal care.

The test procedure is not prescriptive about the method used to modify the problem list. For example, modifying a problem list does not require modifying an existing instance of a problem. Modification can be accomplished through changing the status of an existing problem or entering a new problem.

The test also evaluates conformance to the problem list vocabulary standards. Based on the text referenced above from the Final Rule, the longitudinal care requirement in this criteria shall be evaluated in the context of the care setting supported by the EHR. Specifically, for EHRs designed for an ambulatory setting, access to the problem list information gathered during multiple patient visits to a single Eligible Provider shall be available to the provider. There is no requirement that problem list information gathered by other providers or hospitals be accessible. For EHRs designed for an inpatient care setting, access to problem list information gathered during the current hospitalization episode of care shall be available to users in the inpatient care setting. There is no requirement that problem list information gathered during prior hospitalizations or by Eligible Providers in the ambulatory settings be accessible.

The Vendor provides part of the test data and NIST provides part of the test data for this test procedure.

This test procedure is organized into three sections:

- Record - evaluates the capability to enter patient health problems into the EHR to create the patient problem list
  - o The Tester enters the NIST-supplied patient problem test data. The Inspection Test Guide describes several methods by which the EHR can demonstrate conformance with the vocabulary requirement

- Modify – evaluates the capability to modify patient problem list data which have been previously entered into the EHR
  - o The Tester displays the patient problem list data entered during the Record Patient Problems test
  - o The Tester modifies the previously entered patient problems data using NIST-supplied patient problem list data

- Retrieve –evaluates the capability to display the patient problem list data that have been previously entered into the EHR, including the capability to display the patient problem list as recorded during multiple ambulatory visits with the same provider or during a single inpatient visit
  - o The Tester displays the patient problems data entered during the test
  - o The Tester displays the patient problem list recorded during multiple ambulatory visits or during an entire hospitalization
  - o The Tester validates that the displayed problem list data are accurate and complete, including the problem list data that were modified during the Modify test

For complete EHR or EHR modules **targeted to the ambulatory setting**, the following derived test requirements apply:
  - o DTR170.302.c – 1: Electronically Record Patient Problem List in an Ambulatory Setting
  - o DTR170.302.c – 2: Electronically Modify Patient Problem List in an Ambulatory Setting
  - o DTR170.302.c – 3: Electronically Retrieve Patient Problem List in an Ambulatory Setting

For complete EHR or EHR modules **targeted to the inpatient setting,** the following derived test requirements apply:
  - o DTR170.302.c – 4: Electronically Record Patient Problem List in an Inpatient Setting
  - o DTR170.302.c – 5: Electronically Modify Patient Problem List in an Inpatient Setting
  - o DTR170.302.c – 6: Electronically Retrieve Patient Problem List in an Inpatient Setting

For complete EHR or EHR modules **targeted to both settings**, the following derived test requirements apply:
  - o DTR170.302.c – 1: Electronically Record Patient Problem List in an Ambulatory Setting
  - o DTR170.302.c – 2: Electronically Modify Patient Problem List in an Ambulatory Setting
  - o DTR170.302.c – 3: Electronically Retrieve Patient Problem List in an Ambulatory Setting
  - o DTR170.302.c – 4: Electronically Record Patient Problem List in an Inpatient Setting
  - o DTR170.302.c – 5: Electronically Modify Patient Problem List in an Inpatient Setting
  - o DTR170.302.c – 6: Electronically Retrieve Patient Problem List in an Inpatient Setting

REFERENCED STANDARDS

§170.207 Vocabulary standards for representing electronic health information.	Regulatory Referenced Standard
The Secretary adopts the following code sets, terminology, and nomenclature as the vocabulary standards for the purpose of representing electronic health information:	
(a) Problems	

(1) Standard. The code set specified at 45 CFR 162.1002(a)(1).	45 CFR 162.1002 Medical data code sets
	The Secretary adopts the following code set maintaining organization's code sets as the standard medical data code sets:
	    (a) International Classification of Diseases, 9th Edition, Clinical Modification, (ICD-9- CM), Volumes 1 and 2 (including The Official ICD-9-CM Guidelines for Coding and Reporting), as maintained and distributed by HHS, for the following conditions:
	        (1) Diseases.

(2) Standard. International Health Terminology Standards Development Organization (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®) July 2009 version (incorporated by reference in §170.299).	

NORMATIVE TEST PROCEDURES – AMBULATORY SETTING

Derived Test Requirements

DTR170.302.c – 1:   Electronically Record Patient Problem List in an Ambulatory Setting

DTR170.302.c – 2:   Electronically Modify Patient Problem List in an Ambulatory Setting

DTR170.302.c – 3:   Electronically Retrieve Patient Problem List in an Ambulatory Setting

DTR170.302.c – 1: Electronically Record Patient Problem List in an Ambulatory Setting

Required Vendor Information

VE170.302.c – 1.01:   Vendor shall identify a patient with an existing record in the EHR containing patient problems entered during multiple ambulatory visits to the same provider to be used for this test (for testing purposes at least three visits over a multiple month timeframe)

VE170.302.c – 1.02:   Vendor shall identify the EHR function(s) that are available to: 1) select the patient, 2) enter patient problems, 3) modify patient problems, 4) retrieve patient problem list, and 5) retrieve patient problem history

VE170.302.c – 1.03:   Vendor shall identify which vocabulary standard is implemented in the EHR for recording patient problems (ICD-9 or SNOMED CT)

Required Test Procedure:

TE170.302.c – 1.01:   Tester shall select patient problems data from the NIST-supplied test data set TD170.302.c – 1

TE170.302.c – 1.02:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and enter patient problem list data from the test data set TD170.302.c – 1

TE170.302.c – 1.03:   Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the patient problem test data have been entered correctly, without omission and in conformance with the vocabulary standard identified by the Vendor

Inspection Test Guide

IN170.302.c – 1.01:   Using the data in the NIST-supplied Test Data set TD170.302.c – 1, Tester shall verify that the patient problem list test data are entered correctly and without omission

IN170.302.c – 1.02:   Tester shall verify that the patient problem list data entered during the test are associated with one of the required standard terminologies (ICD-9, SNOMED CT). Validation methods include, but are not limited to:
- verifying that the appropriate vocabulary code is displayed along with the patient problem description when the user is recording patient problems; or
- verifying that the EHR includes the capability to cross-reference (map) the user-displayed problem descriptions to the appropriate vocabulary codes; or
- verifying that the patient problem list data stored in the EHR contains the appropriate vocabulary codes

IN170.302.c – 1.03:   Tester shall verify the patient problem list data and the correct values from the standard terminology are stored in the patient's record

DTR170.302.c – 2: Electronically Modify Patient Problem List in an Ambulatory Setting
Required Vendor Information
- As defined in DTR170.302.c – 1, no additional information is required

Required Test Procedure:

TE170.302.c – 2.01:   Tester shall select patient problem test data from NIST-supplied test data set TD170.302.c – 2

TE170.302.c – 2.02:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record, shall display the patient problem list data entered during the DTR170.302.c – 1: Electronically Record Patient Problem List in an Ambulatory Setting test, and shall modify the previously entered patient problem list data

TE170.302.c – 2.03:   Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the patient problem list data modified in TE170.302.c – 2.02 have been entered correctly and without omission

Inspection Test Guide:

IN170.302.c – 2.01:   Tester shall verify that the patient problems entered during the DTR170.302.c – 1: Electronically Record Patient Problem List in an Ambulatory Setting test are accessed and modified

IN170.302.c – 2.02:   Using the data in the NIST-supplied Test Data set TD170.302.c – 2, Tester shall verify that the modified patient problem list data and the correct values from the standard terminology are stored in the patient's record

DTR170.302.c – 3: Electronically Retrieve Patient Problem List and Problem List History in an Ambulatory Setting

<u>Required Vendor Information</u>

- As defined in DTR170.302.c – 1, no additional information is required

<u>Required Test Procedure:</u>

TE170.302.c – 3.01:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and shall display the patient problems entered during the DTR170.302.c – 1: Electronically Record Patient Problem List in an Ambulatory Setting test and modified during the DTR170.302.c – 2: Electronically Modify Patient Problem List in an Ambulatory Setting test

TE170.302.c – 3.02:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and shall display the patient problem history

TE170.302.c – 3.03:   Using the NIST-supplied Inspection Test Guide, the tester shall verify that the patient problem list test data and the patient problem history display correctly and without omission

<u>Inspection Test Guide</u>

IN170.302.c – 3.01:   Using the data in the NIST-supplied Test Data set TD170.302.c – 3a, Tester shall verify that the patient problem list data entered in the DTR170.302.c – 1: Electronically Record Patient Problem List in an Ambulatory Setting test and DTR170.302.c – 2: Electronically Modify Patient Problem List in an Ambulatory Setting test display correctly and without omission

IN170.302.c – 3.02:   Using the data in the NIST-supplied Test Data set TD170.302.c – 3b, Tester shall verify that the patient problem history data and the correct values from the standard terminology display correctly and without omission

NORMATIVE TEST PROCEDURES – INPATIENT SETTING

Derived Test Requirements

DTR170.302.c – 4:   Electronically Record Patient Problem List in an Inpatient Setting

DTR170.302.c – 5:   Electronically Modify Patient Problem List in an Inpatient Setting

DTR170.302.c – 6:   Electronically Retrieve Patient Problem List in an Inpatient Setting

DTR170.302.c – 4: Electronically Record Patient Problem List in an Inpatient Setting

Required Vendor Information

VE170.302.c – 4.01:   Vendor shall identify a patient with an existing record in the EHR to be used for this test (for testing purposes over the duration of a hospital visit)

VE170.302.c – 4.02:   Vendor shall identify the EHR function(s) that are available to: 1) select the patient, 2) enter patient problems, 3) modify patient problems, 4) retrieve patient problem list, and 5) retrieve patient problem history

VE170.302.c – 4.03:   Vendor shall identify which vocabulary standard is implemented in the EHR for patient problems (ICD-9 or SNOMED CT)

Required Test Procedure:

TE170.302.c – 4.01:   Tester shall select patient problems data from NIST-supplied test data set TD170.302.c – 4

TE170.302.c – 4.02:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and enter patient problem list data from the test data set TD170.302.c – 4

TE170.302.c – 4.03:   Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the patient problem test data have been entered correctly, without omission and in conformance with the vocabulary standard identified by the Vendor

Inspection Test Guide

IN170.302.c – 4.01:   Using the data in the NIST-supplied Test Data set TD170.302.c – 4, Tester shall verify that the patient problem list test data are entered correctly and without omission

IN170.302.c – 4.02:   Tester shall verify that the patient problem list data entered during the test are associated with one of the required standard terminologies (ICD-9, SNOMED CT). Validation methods include, but are not limited to:

- verifying that the appropriate terminology code is displayed along with the patient problem description when the user is recording patient problems; or
- verifying that the EHR includes the capability to cross-reference (map) the user-displayed problem descriptions to the appropriate vocabulary codes; or
- verifying that the patient problem list data stored in the EHR contains the appropriate vocabulary codes

IN170.302.c – 4.03:   Tester shall verify the patient problem list data and the correct values from the standard terminology are stored in the patient's record

DTR170.302.c – 5: Electronically Modify Patient Problem List in an Inpatient Setting

Required Vendor Information

- As defined in DTR170.302.c – 4, no additional information is required

Required Test Procedure:

TE170.302.c – 5.01:   Tester shall select patient problem test data from NIST-supplied test data set TD170.302.c – 5

TE170.302.c – 5.02:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record, shall display the patient problem list data entered during the DTR170.302.c – 4: Electronically Record Patient Problem List in an Inpatient Setting test, and shall modify the previously entered patient problem list data

TE170.302.c – 5.03:   Using the NIST-supplied Inspection Test Guide, the Tester shall verify that the patient problem list data modified in TE170.302. c – 5.02 have been entered correctly and without omission

Inspection Test Guide:

IN170.302.c – 5.01:   Tester shall verify that the patient problems entered during the DTR170.302.c – 4: Electronically Record Patient Problem List in an Inpatient Setting test are accessed and modified

IN170.302.c – 5.02:   Using the data in the NIST-supplied Test Data set TD170.302.c – 5, Tester shall verify that the modified patient problem list data and the correct values from the standard terminology are stored in the patient's record

DTR170.302.c – 6: Electronically Retrieve Patient Problem List and Problem List History in an Inpatient Setting

Required Vendor Information

- As defined in DTR170.302.c – 4, no additional information is required

Required Test Procedure:

TE170.302.c – 6.01:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and shall display the patient problems entered during the DTR170.302.c – 4: Electronically Record Patient Problem List in an Inpatient Setting test and modified during the DTR170.302.c – 5: Electronically Modify Patient Problem List in an Inpatient Setting test

TE170.302.c – 6.02:   Using the EHR function(s) identified by the Vendor, the Tester shall select the patient's existing record and shall display the patient problem history

TE170.302.c – 6.03:   Using the NIST-supplied Inspection Test Guide, the tester shall verify that the patient problem list test data and the patient problem history display correctly and without omission

Inspection Test Guide

IN170.302.c – 6.01:   Using the data in the NIST-supplied Test Data set TD170.302.c – 6a, Tester shall verify that the patient problem list data entered in the DTR170.302.c – 4: Electronically Record Patient Problem List in an Inpatient Setting test and DTR170.302.c – 5: Electronically Modify Patient Problem List in an Inpatient Setting test display correctly and without omission

IN170.302.c – 6.02: Using the data in the NIST-supplied Test Data set TD170.302.c – 6b, Tester shall verify that the patient problem history data and the correct values from the standard terminology display correctly and without omission

TEST DATA

Test data is provided by NIST in this Test Procedure to ensure that the functional and interoperable requirements identified in the criteria can be adequately evaluated for conformance, as well as to provide consistency in the testing process across multiple ONC-Authorized Testing and Certification Bodies (ATCBs). The NIST-supplied test data focus on evaluating the basic capabilities required of EHR technology, rather than exercising the full breadth/depth of capability that installed EHR technology might be expected to support. The test data is formatted for readability of use within the testing process. The format is not prescribing a particular end-user view or rendering. No additional requirements should be drawn from the format.

The Tester shall use and apply the NIST-supplied test data during the test, without exception, unless one of the following conditions exists:

- The Tester determines that the Vendor product is sufficiently specialized that the NIST-supplied test data needs to be modified in order to conduct an adequate test. Having made the determination that some modification to the NIST-supplied test data is necessary, the Tester shall record the modifications made as part of the test documentation.
- The Tester determines that changes to the test data will improve the efficiency of the testing process; primarily through using consistent demographic data throughout the testing workflow. The Tester shall ensure that the functional and interoperable requirements identified in the criterion can be adequately evaluated for conformance and that the test data provides a comparable level of robustness.

Any departure from the NIST-supplied test data shall strictly focus on meeting the basic capabilities required of EHR technology relative to the certification criterion rather than exercising the full breadth/depth of capability that installed EHR technology might be expected to support.

The Test Procedures require that the Tester enter the test data into the EHR technology being evaluated for conformance. The intent is that the Tester fully controls the process of entering the test data in order to ensure that the data are correctly entered as specified in the test procedure. If a situation arises where it is impractical for a Tester to directly enter the test data, the Tester, at the tester's discretion, may instruct the Vendor to enter the test data, so long as the Tester remains in full control of the testing process, directly observes the test data being entered by the Vendor, and validates that the test data are entered correctly as specified in the test procedure.

Ambulatory Setting Test Data

All status data and dates are Vendor-supplied; dates are to include month, day and year; no standard date format is required.

TD170.302.c – 1: Record Problems – Ambulatory Setting

Using ICD-9 Codes

- Cerebrovascular Accident, ICD-9 Code: V12.54, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Recurrent Urinary Tract Infection, ICD-9 Code: V13.02, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010)
- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, ICD-9 Code: 401.9, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

Using SNOMED CT Codes

- Cerebrovascular Accident, SNOMED CT Code: 230690007, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Recurrent Urinary Tract Infection, SNOMED CT Code: 197927001, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010)
- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, SNOMED CT Code: 59621000, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

TD170.302.c – 2: Modify Problems – Ambulatory Setting

Modify the **Status** of Urinary Tract Infection from Vendor-supplied (e.g. Active) to Vendor-supplied (e.g. Resolved), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
Modify the **Status** of Essential Hypertension from Vendor-supplied (e.g. Active) to Vendor-supplied (e.g. Inactive), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)

Revised Problem List

Using ICD-9 Codes

- Cerebrovascular Accident, ICD-9 Code: V12.54, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Recurrent Urinary Tract Infection, ICD-9 Code: V13.02, **Status**: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)

- Essential Hypertension, ICD-9 Code: 401.9, **Status**: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)

Using SNOMED CT Codes

- Cerebrovascular Accident, SNOMED CT Code: 230690007, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Recurrent Urinary Tract Infection, SNOMED CT Code: 197927001, **Status**: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, SNOMED CT Code: 59621000, **Status**: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)

TD170.302.c – 3a: Retrieve Problems – Ambulatory Setting

Active Problems only

Using ICD-9 Codes

- Cerebrovascular Accident, ICD-9 Code: V12.54, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)

Using SNOMED CT Codes

- Cerebrovascular Accident, SNOMED CT Code: 230690007, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)

TD170.302.c – 3b: Retrieve Problem History – Ambulatory Setting

List of all Problems

Using ICD-9 Codes

- Cerebrovascular Accident, ICD-9 Code: V12.54, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Recurrent Urinary Tract Infection, ICD-9 Code: V13.02, Status: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, ICD-9 Code: 401.9, Status: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)

Using SNOMED CT Codes

- Cerebrovascular Accident, SNOMED CT Code: 230690007, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Recurrent Urinary Tract Infection, SNOMED CT Code: 197927001, Status: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, SNOMED CT Code: 59621000, Status: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)

Inpatient Setting Test Data

All status data and dates are Vendor-supplied; dates are to include month, day and year; no standard date format is required.

TD170.302.c – 4: Record Problems – Inpatient Setting

Using ICD-9 Codes

- Congestive Heart Failure, ICD-9 Code: 428.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Acute Myocardial Infarction, ICD-9 Code: 410.90, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010)
- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, ICD-9 Code: 401.9, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

Using SNOMED CT Codes

- Congestive Heart Failure, SNOMED CT Code: 42343007, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010)
- Acute Myocardial Infarction, SNOMED CT Code: 57054005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010)
- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, SNOMED CT Code: 59621000, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

TD170.302.c – 5: Modify Problems – Inpatient Setting

Modify the **Status** of Congestive Heart Failure from Vendor-supplied (e.g. Active) to Vendor-supplied (e.g. Resolved), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
Modify the **Status** of Acute Myocardial Infarction from Vendor-supplied (e.g. Active) to Vendor-supplied (e.g. Inactive), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)

Revised Problem List

Using ICD-9 Codes

- Congestive Heart Failure, ICD-9 Code: 428.0, **Status**: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
- Acute Myocardial Infarction, ICD-9 Code: 410.90, **Status**: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, ICD-9 Code: 401.9, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

Using SNOMED CT Codes

- Congestive Heart Failure, SNOMED CT Code: 42343007, **Status**: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
- Acute Myocardial Infarction, SNOMED CT Code: 57054005, **Status**: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), **Date Modified**: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)

- Essential Hypertension, SNOMED CT Code: 59621000, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

TD170.302.c – 6a: Retrieve Problems – Inpatient Setting

<u>Active Problems only</u>

Using ICD-9 Codes

- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, ICD-9 Code: 401.9, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

Using SNOMED CT Codes

- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, SNOMED CT Code: 59621000, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

TD170.302.c – 6b: Retrieve Problem History – Inpatient Setting

<u>List of all Problems</u>

Using ICD-9 Codes

- Congestive Heart Failure, ICD-9 Code: 428.0, Status: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)
- Acute Myocardial Infarction, ICD-9 Code: 410.90, Status: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Pulmonary Disease, ICD-9 Code: 496.0, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, ICD-9 Code: 401.9, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

Using SNOMED CT Codes

- Congestive Heart Failure, SNOMED CT Code: 42343007, Status: Vendor-supplied (e.g. Resolved), Date Diagnosed: Vendor-supplied (e.g. May 22, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)
- Acute Myocardial Infarction, SNOMED CT Code: 57054005, Status: Vendor-supplied (e.g. Inactive), Date Diagnosed: Vendor-supplied (e.g. June 24, 2010), Date Modified: Vendor-supplied (e.g. August 29, 2010)
- Chronic Obstructive Lung Disease, SNOMED CT Code: 13645005, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. April 4, 2010)
- Essential Hypertension, SNOMED CT Code: 59621000, Status: Vendor-supplied (e.g. Active), Date Diagnosed: Vendor-supplied (e.g. March 30, 2010)

CONFORMANCE TEST TOOLS

None

Document History

Version Number	Description	Date Published
0.4	Original draft version	February 26, 2010
1.0	Updated to reflect Final Rule	July 21, 2010
1.0	Updated to remove "Pending" from header	August 13, 2010
1.1	Removed "draft" from introductory paragraph In the Informative Test Description, page 2: • Moved the sentence "The test also evaluates conformance to the problem list vocabulary standards." • Added: "The test procedure is not prescriptive about the method used to modify the problem list. For example, modifying a problem list does not require modifying an existing instance of a problem. Modification can be accomplished through changing the status of an existing problem or entering a new problem." • Added the sentence "The Vendor provides part of the test data and NIST provides part of the test data for this test procedure." • Added sentence "The test also evaluates conformance to the problem list vocabulary standards." In the Test Data section, the following changes were made: • Added once for both the Ambulatory and IP Test Data the following statement: "All status data and dates are Vendor-supplied; dates are to include month, day and year; no standard date format is required." • Changed "Status: Active to "Status: Vendor-supplied (e.g. Active) and so forth, pages 10 – 15 • Changed the word "change" to "modify", page 13 • Added "Date Modified: Vendor-supplied (e.g. *Month DD*, 2010)" to "Modify Problems" Test Data sections including Amb and IP for "Revised Problem List" • Added "Date Modified: Vendor-supplied (e.g. *Month DD*, 2010)" to "Retrieve Problems" Test Data including Amb and IP "List of All Problems"	September 24, 2010