

2015 Edition §170.315(b)(3) Electronic Prescribing				
Testing Components:				
				ONC Supplied Test Data
Test Procedure Version 1.0 – Last Updated 1/20/16				

Please consult the Final Rule entitled: *2015 Edition Health Information Technology (Health IT) Certification Criteria, 2015 Edition Base Electronic Health Record (EHR) Definition, and ONC Health IT Certification Program Modifications* for a detailed description of the certification criterion with which these testing steps are associated. We also encourage developers to consult the Certification Companion Guide in tandem with the test procedure as they provide clarifications that may be useful for product development and testing.

Note: The order in which the test steps are listed reflects the sequence of the certification criterion and does not necessarily prescribe the order in which the test should take place.

Required Tests

(b)(3) Electronic prescribing

(i) Enable a user to perform all the following prescription-related electronic transactions in accordance with the standards specified at § 170.205(b)(2), and, at a minimum, the version of the standard specified in § 170.207(d)(3), as follows:

- (A) Create new prescriptions (NEWRX);
- (B) Change prescriptions (RXCHG, CHGRES);
- (C) Cancel prescriptions (CANRX, CANRES);
- (D) Refill prescriptions (REFREQ, REFRES);
- (E) Receive fill status notifications (RXFILL);
- (F) Request and receive medication history information (RXHREQ, RXHRES).

Standard(s): §170.205(b)(2) - [SCRIPT Standard, Implementation Guide, Version 10.6, October, 2008](#)

§170.207(d)(3) - RxNorm, September 8, 2015 Full Release Update; available at: <http://www.nlm.nih.gov/research/umls/rxnorm/docs/rxnormfiles.html>

Test Tool and Test Data: [NIST eRx Test Tool](#)

Normative Test Process document: [NIST eRx Normative Test Process Document](#)

Criteria ¶	System Under Test	Test Lab Verification
(i)(A)-(E)	<ol style="list-style-type: none"> 1. The user performs “Change Prescription and Receive Fill Status Notifications Scenario” in the NIST Normative Test Process Document, which tests (i)(A) create new prescription (NEWRX), (i)(B) change prescription transactions (RXCHG, CHGRES), and (i)(E) fill status notification (RXFILL). 2. The user performs “Cancel Prescription Scenario” in the NIST Normative Test Process Document, which tests (i)(A) create new prescription (NEWRX) and (i)(C) cancel prescription transactions (CANRX, CANRES). 3. The user performs “Refill Prescription Scenario” in the Normative Test Process Document, which tests (i)(A) create new prescription (NEWRX) and (i)(D) refill prescription transactions (REFREQ, REFRES). 	<ol style="list-style-type: none"> 1. The tester verifies that the Health IT Module receives and sends the following transactions using the “Change Prescription and Receive Fill Status Notifications Scenario” of the Normative Test Process Document, and completes ALL required test tool interaction steps and verifies the validation reports for the following required transactions in the scenario: <ul style="list-style-type: none"> • Create New Prescription (NEWRX); • Change Request (RXCHG); • Change Response (CHGRES); and • Fill Status Notification (RXFILL). 2. The tester verifies that the Health IT Module receives and sends the following transactions using the “Cancel Prescription Scenario” of the Normative Test Process Document and completes ALL required test tool interaction steps and verifies the validation reports for the following required transactions in the scenario: <ul style="list-style-type: none"> • Create New Prescription (NEWRX); • Cancel Request (CANRX); and • Cancel Response (CANRES). 3. The tester verifies that the Health IT Module receives and sends the following transactions using the “Refill Prescription Scenario” of the Normative Test Process Document and completes ALL required test tool interaction steps and verifies the validation reports for the following required transactions in the scenario: <ul style="list-style-type: none"> • Create New Prescription (NEWRX); • Refill Request (REFREQ); and • Refill Response (REFRES).

Criteria ¶	System Under Test	Test Lab Verification
(i)(F)	The user performs “Medication History Request Scenario” in the Normative Test Process Document, which tests medication history (i)(F) prescription transactions (RXHREQ, RXHRES).	The tester verifies that the Health IT Module receives and sends the following transactions using the “Medication History Request Scenario” of the Normative Test Process Document, and completes ALL required test tool interaction steps and verifies the validation reports for the following required transactions in the scenario: <ul style="list-style-type: none"> • Medication History Request (RXHREQ); and • Medication History Response (RXHRES).

(ii) Transmit and receive the reason for the prescription.

Evaluate the Health IT Module’s ability to transmit and receive the reason for the prescription for each transaction listed in paragraph (b)(3)(i) of this section using the Diagnosis elements in DRU Segment.

Standard(s): §170.205(b)(2) - [SCRIPT Standard, Implementation Guide, Version 10.6, October, 2008](#)

Test Tool and Test Data: [NIST eRx Test Suite](#) **Normative Test Process document:** [NIST eRx Normative Test Process Document](#)

Criteria ¶	System Under Test	Test Lab Verification
(ii)	The Health IT Module is able to transmit and receive the reason for the prescription using the Diagnosis elements in the DRU Segment for all transactions: <ul style="list-style-type: none"> (A) Create new prescriptions (NEWRX); (B) Change prescriptions (RXCHG, CHGRES); (C) Cancel prescriptions (CANRX); (D) Refill prescriptions (REFREQ, REFRES); (E) Receive fill status notifications (RXFILL); and (F) Receive medication history information (RXHRES). 	The tester verifies that the Health IT Module transmits and receives the reason for the prescription using the Diagnosis elements in the DRU Segment for all transactions, using the Normative Test Process Document and test data specified with the selected test case via the test tool: <ul style="list-style-type: none"> (A) Create new prescriptions (NEWRX); (B) Change prescriptions (RXCHG, CHGRES); (C) Cancel prescriptions (CANRX); (D) Refill prescriptions (REFREQ, REFRES); (E) Receive fill status notifications (RXFILL); and (F) Receive medication history information (RXHRES).

(iii) Optionally, For each transition listed in paragraph (b)(3)(i) of this section, the technology must be able to receive and transmit the reason for the prescription using the indication elements in the SIG Segment.

Standard(s): §170.205(b)(2) - [SCRIPT Standard, Implementation Guide, Version 10.6, October, 2008](#)

Test Tool and Test Data: [NIST eRx Test Tool](#) **Normative Test Process document:** [NIST eRx Normative Test Process Document](#)

Criteria ¶	System Under Test	Test Lab Verification
(iii) (Optional)	The Health IT Module transmits and receives the reason for the prescription using the Indication elements in the SIG Segment for all transactions.	The tester verifies that the Health IT Module transmits and receives the reason for the prescription using the Indication elements in the SIG Segment for all transactions using the Normative Test Process Document and test data specified with the selected test case via the test tool.

(iv) Limit a user's ability to prescribe all oral liquid medications in only metric standard units of mL (i.e., not cc).

Evaluate the Health IT Module's ability to enable a user to prescribe all oral liquid medications in only metric standard units, i.e. mL.

Standard(s): §170.205(b)(2) - [SCRIPT Standard, Implementation Guide, Version 10.6, October, 2008](#)

Test Tool and Test Data: [NIST eRx Test Tool](#) Normative Test Process document: [NIST eRx Normative Test Process Document](#)

Criteria ¶	System Under Test	Test Lab Verification
(iv)	<ol style="list-style-type: none"> The user is able to prescribe all oral liquid medications in only the metric standard, i.e. milliliter (mL). Negative Testing: The user attempts to prescribe an oral liquid medication using non-metric standard units. 	<ol style="list-style-type: none"> The tester uses the Normative Test Description section of the Normative Test Process Document to verify that users are able to prescribe all oral liquid medications in only the metric standard, i.e. milliliter (mL). Negative Testing: The tester uses the Normative Test Process Document to verify through Visual Inspection of the system under test that users are not able to prescribe oral liquid medications using non-metric standard units, i.e. cc, teaspoon.

(v) Always insert leading zeroes before the decimal point for amounts less than one and must not allow trailing zeroes after a decimal point when a user prescribes medications.

Evaluate the Health IT Module's ability to always insert leading zeroes before the decimal point for amounts less than one and must not allow trailing zeroes after a decimal point when a user prescribes medications.

Standard(s): §170.205(b)(2) - [SCRIPT Standard, Implementation Guide, Version 10.6, October, 2008](#)

Test Tool and Test Data: [NIST eRx Test Tool](#) Normative Test Process document: [NIST eRx Normative Test Process Document](#)

Criteria ¶	System Under Test	Test Lab Verification
(v)	<ol style="list-style-type: none"> <li data-bbox="254 224 961 326">1. The Health IT Module inserts leading zeroes before the decimal point for all amounts less than one when a user prescribes medication. <li data-bbox="254 337 989 407">2. The Health IT Module does not allow trailing zeroes after a decimal point when a user prescribes medication. 	<ol style="list-style-type: none"> <li data-bbox="1064 224 1927 402">1. The tester uses the Normative Test Description scenario of the Normative Test Process Document to verify through Visual Inspection of the system under test that leading zeroes are inserted before the decimal point for all amounts less than one when a user prescribes medication. <li data-bbox="1064 414 1927 516">2. The tester verifies through Visual Inspection of the system under test that there are no trailing zeroes after a decimal point when a user prescribes medication.

Document History

Version Number	Description of Change	Date
1.0	Final Test Procedure	January 20, 2016

Dependencies: For all related and required criteria, please refer to the [Master Table of Related and Required Criteria](#).