The Office of the National Coordinator for
Health Information Technology

2015 Edition Cures Update §170.315(b)(3) Electronic prescribing
Testing Components:
Gap ⊘   ⊘   🔍   🔧   ONC Supplied Test Data
Draft

Please consult the Final Rule entitled: *21st Century Cures Act: Interoperability, Information Blocking, and the ONC Health IT Certification Program* for a detailed description of the certification criterion with which these testing steps are associated.

Revision History

Version #	Description of Change	Version Date
1.0	2015 Edition Cures Update Test Procedure	XX-XX-2020

Regulation Text

§170.315 (b)(3) Electronic prescribing

(ii)—

(A) Enable a user to perform the following prescription-related electronic transactions in accordance with the standard specified in § 170.205(b)(1) and, at a minimum, the version of the standard specified in § 170.207(d)(3) as follows:

    (*1*) Create new prescriptions (NewRx).

    (*2*) Request and respond to change prescriptions (RxChangeRequest, RxChangeResponse).

    (*3*) Request and respond to cancel prescriptions (CancelRx, CancelRxResponse).

    (*4*) Request and respond to renew prescriptions (RxRenewalRequest, RxRenewalResponse).

    (*5*) Receive fill status notifications (RxFill).

    (*6*) Request and receive medication history (RxHistoryRequest, RxHistoryResponse).

    (*7*) Relay acceptance of a transaction back to the sender (Status).

    (*8*) Respond that there was a problem with the transaction (Error).

    (*9*) Respond that a transaction requesting a return receipt has been received (Verify).

(B) Optionally, enable a user to perform the following prescription-related electronic transactions in accordance with the standard specified in § 170.205(b)(1) and, at a minimum, the version of the standard specified in § 170.207(d)(3) as follows:

    (*1*) Create and respond to new prescriptions (NewRxRequest, NewRxResponseDenied).

    (*2*) Send fill status notifications (RxFillIndicator).

    (*3*) Ask the Mailbox if there are any transactions (GetMessage).

    (*4*) Request to send an additional supply of medication (Resupply).

    (*5*) Communicate drug administration events (DrugAdministration).

    (*6*) Request and respond to transfer one or more prescriptions between pharmacies (RxTransferRequest, RxTransferResponse, RxTransferConfirm).

    (*7*) Recertify the continued administration of a medication order (Recertification).

    (*8*) Complete Risk Evaluation and Mitigation Strategy (REMS) transactions (REMSInitiationRequest, REMSInitiationResponse, REMSRequest, and REMSResponse).

    (*9*) Electronic prior authorization (ePA) transactions (PAInitiationRequest, PAInitiationResponse, PARequest, PAResponse, PAAppealRequest, PAAppealResponse and PACancelRequest, and PACancelResponse).

(C) For the following prescription-related transactions, the technology must be able to receive and transmit the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>:

    (*1*) Required transactions

        (*i*) Create new prescriptions (NewRx).

        (*ii*) Request and respond to change prescriptions (RxChangeRequest, RxChangeResponse).

        (*iii*) Request to cancel prescriptions (CancelRx).

        (*iv*) Request and respond to renew prescriptions (RxRenewalRequest, RxRenewalResponse).

        (*v*) Receive fill status notifications (RxFill).

        (*vi*) Receive medication history (RxHistoryResponse).

    (*2*) Optional transactions

        (*i*) Request to send an additional supply of medication (Resupply)

        (*ii*) Request and respond to transfer one or more prescriptions between pharmacies (RxTransferRequest, RxTransferResponse)

        (*iii*) Complete Risk Evaluation and Mitigation Strategy (REMS) transactions (REMSInitiationRequest, REMSInitiationResponse, REMSRequest, and REMSResponse).

        (*iv*) Electronic prior authorization (ePA) transactions (PAInitiationRequest, PAInitiationResponse, PARequest, PAResponse, PAAppealRequest, PAAppealResponse and PACancelRequest, PACancelResponse).

(D) *Optional.* For each transaction listed in paragraph (b)(3)(ii)(C) of this section, the technology must be able to receive and transmit reason for prescription using the <IndicationforUse> element in the Sig segment.

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

(F) 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) Referenced

Paragraph (b)(3)(i)
§ 170.205(b)(2) NCPDP SCRIPT Standard, Implementation Guide, Version 2017071
§ 170.207(d)(3) RxNorm, September 8, 2015 Full Release Update

Required Tests

Paragraphs (b)(3)(ii)(A)(1-5, 7-9)

System Under Test	Test Lab Verification

1. The health IT developer creates new prescriptions (NewRx) in accordance with (b)(3)(ii)(A)(1) and (b)(3)(ii)(A)(2) request and respond to change prescriptions (RxChangeRequest, RxChangeResponse), and (b)(3)(ii)(A)(5) fill status notifications (RxFill).
 2. The health IT developer creates new prescriptions (NewRx) in accordance with (b)(3)(ii)(A)(1) and (b)(3)(ii)(A)(3) request and respond to cancel prescriptions (CancelRx, CancelRxResponse).
 3. The health IT developer creates new prescriptions (NewRx) in accordance with (b)(3)(ii)(A)(1) and (b)(3)(ii)(A)(4) request and respond to renew prescriptions (RxRenewalRequest, RxRenewalResponse).
	1. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool interaction steps and verifies the validation report for the following required transactions:
	   a. Create and send new prescription (NewRx);
	   b. Receive prescription change request (RxChangeRequest);
	   c. Create and send prescription change response (RxChangeResponse); and
	   d. Receive fill status notification (RxFill).
	 2. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool

System Under Test	Test Lab Verification

4. The health IT developer relays acceptance of a transaction back to the sender (Status) in accordance with (b)(3)(ii)(A)(7).
5. The health IT developer responds that there was a problem with the transaction (Error) in accordance with (b)(3)(ii)(A)(8).
6. The health IT developer responds that a transaction requesting a return receipt has been received (Verify) in accordance with (b)(3)(ii)(A)(9).
	interaction steps and verifies the validation report for the following required transactions:
	  a. Create and send new prescription (NewRx);
	  b. Send request to cancel prescription (CancelRx); and
	  c. Receive response to request to cancel prescription (CancelRxResponse).
	3. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool interaction steps and verifies the validation reports for the following required transactions:
	  a. Create and send new prescription (NewRx);
	  b. Receive request to renew prescription (RxRenewalRequest); and
	  c. Create and send response to renew prescription (RxRenewalResponse).
	4. The tester verifies that the Health IT Module supports Status, Error and Verify transactions.

Paragraph (b)(3)(ii)(A)(6)

System Under Test	Test Lab Verification

1. The health IT developer requests and receives a patient's medication history (RxHistoryRequest, RxHistoryResponse) in accordance with (b)(3)(ii)(A)(6).	1. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool interaction steps and verifies the validation report for the following required transactions:
	  a. Send a request for a medication history (RxHistoryRequest); and
	  b. Receive a response to a request for a medication history (RxHistoryResponse).

System Under Test	Test Lab Verification
	2. The tester verifies that the Health IT Module supports, as applicable, Status, Error and Verify transactions.

Paragraph (b)(3)(ii)(C)(1)

System Under Test	Test Lab Verification

1. The Health IT Module is able to transmit and receive the reason for the prescription using the <Diagnosis><Primary> or <Secondary> diagnosis elements for the following transactions in accordance with (b)(3)(ii)(C)(1):
  a. Create new prescriptions (NewRx);
  b. Request and respond to change prescriptions (RxChangeRequest, RxChangeResponse);
  c. Request to cancel prescriptions (CancelRx);
  d. Request and respond to renew prescriptions (RxRenewalRequest, RxRenewalResponse);
  e. Receive fill status notifications (RxFill); and
  f. Receive response to medication history requested (RxHistoryResponse).
	1. The tester verifies that the Health IT Module sends and receives the reason for the prescription using the <Diagnosis><Primary> or <Secondary> diagnosis elements for all transactions, using the test data specified with the selected test case via the test tool:
	  a. Create new prescriptions (NewRx);
	  b. Request and respond to change prescriptions (RxChangeRequest, RxChangeResponse);
	  c. Request to cancel prescriptions (CancelRx);
	  d. Request and respond to renew prescriptions (RxRenewalRequest, RxRenewalResponse);
	  e. Receive fill status notifications (RxFill); and
	  f. Receive response to medication history (RxHistoryResponse).

Paragraph (b)(3)(ii)(E)

System Under Test	Test Lab Verification
1. The Health IT Module is able to prescribe all oral liquid medications in only the metric standard units of milliliter (mL) (i.e., not cubic centimeter (cc) or teaspoon) in accordance with (b)(3)(ii)(E). 2. Negative Testing: The health IT developer attempts to prescribe an oral liquid medication using non-metric standard units.	1. The tester verifies that the Health IT Module limits the ability to prescribe all oral liquid medications in metric standard units of milliliter (mL). 2. Negative Testing: The tester verifies through visual inspection of the system under test that the Health IT Module has the ability to prescribe oral liquid medications using non-metric standard units (i.e., cubic centimeter (cc), teaspoon).

Paragraph (b)(3)(ii)(F)

System Under Test	Test Lab Verification
1. The Health IT Module inserts leading zeroes before the decimal point for all amounts less than one when a prescriber prescribes medication in accordance with (b)(3)(ii)(F). 2. The Health IT Module does not allow trailing zeroes after a decimal point when a prescriber prescribes medication.	1. The tester verifies 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 prescriber prescribes medication. 2. The tester verifies through visual inspection of the system under test that there are no trailing zeroes after a decimal point when a prescriber prescribes medication.

Optional Tests

Paragraph (b)(3)(ii)(B)(1) *Optional*

System Under Test	Test Lab Verification

1. The health IT developer receives the transaction creating a request for a new prescription and denies the request (NewRxRequest, NewRxResponseDenied) in accordance with (b)(3)(ii)(B)(1).	1. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool interaction steps and verifies the validation report for the following transactions:
	  a. Receive request for a new prescription (NewRxRequest); and
	  b. Send denial for a request for new prescription (NewRxResponseDenied).

Paragraph (b)(3)(ii)(B)(2) *Optional*

System Under Test	Test Lab Verification
1. The health IT developer sends a fill status indicator change (RxFillIndicatorChange) in accordance with (b)(3)(ii)(B)(2).	1. The tester verifies that the Health IT Module sends the RxFillIndicatorChange transaction and completes all required test tool interaction steps and verifies the validation report.

Paragraph (b)(3)(ii)(B)(3) *Optional*

System Under Test	Test Lab Verification
1. The health IT developer asks the mailbox if there are any transactions (GetMessage) in accordance with (b)(3)(ii)(B)(3).	1. The tester verifies that the Health IT Module tests the GetMessage transaction and completes all required test tool interaction steps and verifies the validation report.

Paragraph (b)(3)(ii)(B)(4) *Optional*

System Under Test	Test Lab Verification
1. The health IT developer sends the transaction to request to send an additional supply of medication (Resupply) in accordance with (b)(3)(ii)(B)(4). 2. The Health IT Module is able to transmit the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>.	1. The tester verifies that the Health IT Module sends the Resupply transaction and completes all required test tool interaction steps and verifies the validation report. 2. The tester verifies that the Health IT Module transmits the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>. 3. The tester verifies that the Health IT Module supports, as applicable, Status, Error and Verify transactions.

Paragraph (b)(3)(ii)(B)(5) *Optional*

System Under Test	Test Lab Verification
1. The health IT developer sends the transaction to communicate drug administration events (DrugAdministration) in accordance with (b)(3)(ii)(B)(5).	1. The tester verifies that the Health IT Module sends the DrugAdministration transaction and completes all required test tool interaction steps and verifies the validation report. 2. The tester verifies that the Health IT Module supports, as applicable, Status, Error and Verify messages.

Paragraph (b)(3)(ii)(B)(6) *Optional and for Pharmacy Only*

System Under Test	Test Lab Verification

1. The health IT developer completes the request and response to transfer one or more prescriptions between pharmacies (RxTransferRequest, RxTransferResponse, RxTransferConfirm) in accordance with (b)(3)(ii)(B)(6).
 	
2. The Health IT Module is able to receive and transmit the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>.
	1. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool interaction steps and verifies the validation report for the following transactions:
	   a. RxTransferRequest;
	   b. RxTransferResponse; and
	   c. RxTransferConfirm.
	
	2. The tester verifies that the Health IT Module receives and transmits the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>.
	
	3. The tester verifies that the Health IT Module supports, as applicable, Status, Error and Verify messages.

Paragraph (b)(3)(ii)(B)(7) *Optional*

System Under Test	Test Lab Verification
1. The health IT developer sends the transaction to recertify the continued administration of a medication order (Recertification) in accordance with (b)(3)(ii)(B)(7).	1. The tester verifies that the Health IT Module sends the Recertification transaction and completes all required test tool interaction steps and verifies the validation report. 2. The tester verifies that the Health IT Module supports, as applicable, Status, Error and Verify messages.

Paragraph (b)(3)(ii)(B)(8) *Optional*

System Under Test	Test Lab Verification
1. The health IT developer completes the Risk Evaluation and Mitigation Strategy (REMS) transactions (REMSInitiationRequest, REMSInitiationResponse, REMSRequest, REMSResponse) in accordance with (b)(3)(ii)(B)(8). 2. The Health IT Module is able to receive and transmit the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>.	1. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool interaction steps and verifies the validation reports for the following transactions: a. Create and send REMS Initiation Request (REMSInitiationRequest);

System Under Test	Test Lab Verification
	b. Receive REMS Initiation Response (REMSInitiationResponse); c. Create and send REMS Request (REMSRequest); and d. Receive REMS Response (REMSResponse). 2. The tester verifies that the Health IT Module receives and transmits the reason for the prescription using the diagnosis elements <Diagnosis><Primary> or <Secondary>. 3. The tester verifies that the Health IT Module supports, as applicable, Status, Error and Verify messages.

Paragraph (b)(3)(ii)(B)(9) *Optional*

System Under Test	Test Lab Verification

1. The health IT developer completes the electronic prior authorization transactions (PAInitiationRequest, PAInitiationResponse, PARequest, PAResponse, PAAppealRequest, PAAppealResponse, PACancelRequest, PACancelResponse) in accordance with (b)(3)(ii)(B)(9).
 2. The Health IT Module is able to receive and transmit the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>.
	1. The tester verifies that the Health IT Module sends and receives the following transactions and completes all required test tool interaction steps and verifies the validation report for the following transactions:
	    a. Create and send PA Initiation Request (PAInitiationRequest);
	    b. Receive PA Initiation Response (PAInitiationResponse);
	    c. Create and send PA Request (PARequest);
	    d. Receive PA Response (PAResponse);
	    e. Create and send PA Appeal Request (PAAppealRequest);
	    f. Receive PA Appeal Response (PAAppealResponse);
	    g. Create and send PA Cancel Request (PACancelRequest); and
	    h. Receive PA Cancel Response (PACancelResponse).
	 2. The tester verifies that the Health IT Module receives and transmits the reason for the prescription using the diagnosis elements: <Diagnosis><Primary> or <Secondary>.

System Under Test	Test Lab Verification
	3. The tester verifies that the Health IT Module supports, as applicable, Status, Error and Verify messages.

Paragraph (b)(3)(ii)(D) *Optional*

System Under Test	Test Lab Verification
1. The Health IT Module receives and transmits the reason for the prescription using the <IndicationforUse> element in the Sig segment, and be consistent with the International Statistical Classification of Diseases and Related Health Problems (ICDs) sent in the diagnosis element(s) for all optional transactions as listed in (b)(3)(ii)(C) in accordance with (b)(3)(ii)(D).	1. The tester verifies that the Health IT Module receives and transmits the reason for the prescription using the <IndicationforUse> element in the Sig segment, and be consistent with the International Statistical Classification of Diseases and Related Health Problems (ICDs) sent in the diagnosis element(s) for all applicable transactions and test data specified with the selected test case via the test tool.

Testing tab

Testing Tool

[NCPDP Electronic Prescribing (eRx) Testing Tool (not the final version of the tool for ONC certification testing)](#)