

2015 Edition §170.315(c)(2) Clinical quality measures – import and calculate

Testing Components:

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| | | | | ONC Supplied Test Data |
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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

(c)(2) Import and Calculate

(i) Import: Enable a user to import a data file in accordance with the standard specified in § 170.205(h)(2) for one or multiple patients and use such data to perform the capability specified in paragraph (c)(2)(ii) of this section. A user must be able to execute this capability at any time the user chooses and without subsequent developer assistance to operate.

Standard(s): § 170.205(h)(2) [HL7 CDA® R2 Implementation Guide: Quality Reporting Document Architecture – Category I \(QRDA I\); Release 1, DSTU Release 3 \(US Realm\)](#), Volume 1 – Introductory Material and HL7 CDA® R2 Implementation Guide: Quality Reporting Document Architecture – Category I (QRDA I); Release 1, DSTU Release 3 (US Realm), Volume 2 – Templates and Supporting Material (incorporated by reference in § 170.299)

Test Data: [Cypress Gold Standard Test Data created using the Cypress Test Tool](#)

Test Tool: [Cypress Test Tool User Interface](#)

| Criteria ¶ | System Under Test | Test Lab Verification |
|------------|--|--|
| (i) | <p><u>Execute Any time</u> The health IT developer supplies documentation outlining how a user can execute the import capability described in (c)(2)(i) any time the user chooses and without subsequent developer assistance to operate.</p> | <p><u>Execute Any time</u> The tester verifies that the health IT developer supplied documentation outlines that a user can perform an import as specified in (c)(2)(i) any time the user chooses and without subsequent developer assistance to operate.</p> |

| Criteria ¶ | System Under Test | Test Lab Verification |
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| (i) continued | <p>Setup</p> <ol style="list-style-type: none"> The health IT developer provides the following information in order to enable the creation of the (c)(2)(i) "Cypress Gold Standard Test Data": <ul style="list-style-type: none"> Name of the health IT developer Name of the Product List of CQMs to be certified <p>Import</p> <ol style="list-style-type: none"> Using the "Cypress Gold Standard Test Data" a user demonstrates the importing of reports formatted in accordance with the standard specified at § 170.205(h)(2), HL7 CDA® R2 Implementation Guide: Quality Reporting Document Architecture – Category I (QRDA I) DSTU Release 3 (US Realm for all of the data needed to calculate each of the clinical quality measures (CQMs) presented for testing, for one or multiple patients. <ol style="list-style-type: none"> This import will include both the manual entry of a subset of data elements as well as the direct upload of sets of test files that correspond to the measures being tested. | <p>Setup</p> <ol style="list-style-type: none"> The tester creates the "Cypress Gold Standard Test Data" based upon the information provided by the health IT developer, in the Cypress Test Tool User Interface, which will create a new (c)(2) test instance. <p>Import</p> <ol style="list-style-type: none"> Using visual inspection, the tester verifies that the Health IT Module can demonstrate the importing of CQM data specified in accordance to the standard at § 170.205(h)(2). <ul style="list-style-type: none"> A subset of data elements critical to the accurate calculation of the measure will be manually entered to ensure the user interface allows users to directly enter these elements. A larger test deck will be imported that covers all or greater than 80% of possible measure pathways for testing. |

(ii) **Calculate:** Calculate each and every clinical quality measure for which it is presented for certification.

Standard(s): § 170.205(h)(2) [HL7 CDA® R2 Implementation Guide: Quality Reporting Document Architecture – Category I \(QRDA I\); Release 1, DSTU Release 3 \(US Realm\)](#), Volume 1 – Introductory Material and HL7 CDA® R2 Implementation Guide: Quality Reporting Document Architecture – Category I (QRDA I); Release 1, DSTU Release 3 (US Realm), Volume 2 – Templates and Supporting Material (incorporated by reference in § 170.299)

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Testing must be conducted for one of the Alternatives outlined below to satisfy the requirements for this criterion.

| Criteria ¶ | System Under Test | Test Lab Verification |
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| <p>(ii) Alternative</p> | <p>Calculate</p> <ol style="list-style-type: none"> 3. The user calculates the aggregate reports for the CQMs for which they are seeking certification, based upon the imported and de-duplicated data set. 4. The Health IT Module submits a set of aggregate reports which includes all of the CQMs to be certified. | <p>Calculate</p> <ol style="list-style-type: none"> 3. The tester verifies that the Health IT Module can calculate the aggregate data and display the report based upon imported CQM data specified in accordance to the standard at § 170.205(h)(2) using visual inspection. 4. Using the Cypress Test Tool User Interface, the tester: <ul style="list-style-type: none"> • uploads the aggregate report(s) submitted by the Health IT Module in step 4 of the SUT; and • evaluates and displays the accuracy of the submitted CQM results. <p>Packaging of Results</p> <ol style="list-style-type: none"> 5. Upon completion of step 4, the tester generates a test artifact containing the following into a single archived file that is cryptographically signed and any additional notes that the tester deems important: <ul style="list-style-type: none"> • all of the test data used to test (c)(2); • all of the data generated by the Health IT Module. |

| Criteria ¶ | System Under Test | Test Lab Verification |
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| <p>(ii) Alternative continued</p> | <p>Calculate with Group Support</p> <p>3. The user calculates the aggregate reports for the CQMs for which they are seeking certification, based upon the imported and de-duplicated data set.</p> <p style="padding-left: 40px;">Note: In addition to removing identical duplicate CQM records, identical CQM records imported from the same group are also removed from the calculation.</p> <p>4. The Health IT Module submits a set of aggregate reports which includes all of the CQMs to be certified.</p> | <p>Calculate with Group Support</p> <p>3. The tester verifies that the Health IT Module can calculate the aggregate data and display the report based upon imported CQM data specified in accordance to the standard at § 170.205(h)(2) using visual inspection.</p> <p>4. Using the Cypress Test Tool User Interface, the tester:</p> <ul style="list-style-type: none"> • uploads the aggregate report(s) submitted by the Health IT Module in step 4 of the SUT; and • evaluates and displays the accuracy of the submitted CQM results. <p style="padding-left: 40px;">Note: The report should not include any duplicate CQM records and should account for CQM records from the same group.</p> <p>Packaging of Results</p> <p>5. Upon completion of step 4, the tester generates a test artifact containing the following into a single archived file that is cryptographically signed any additional notes that the tester deems important:</p> <ul style="list-style-type: none"> • all of the test data used to test (c)(2); • all of the data generated by the Health IT Module. |

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](#).