# Test Criteria: 170.315.c.1 CQMs – Record and Export

# Test Criteria: 170.315.c.2 CQMs – Import and Calculate

# Test Criteria: 170.315.c.3 CQMs – Report

# Test Criteria: 170.315.c.4 CQMs – Filter

|  |  |
| --- | --- |
| **Testing Result** |  |
| Participant and Product-with-version |  |
| Setting (Ambulatory or Inpatient) |  |
| Test Proctor |  |
| Test Date |  |
| CQMs Tested |  |
| 170.315.c.1 Test Result | Pass:  Fail:  No Attempt: |
| 170.315.c.2 Test Result | Pass:  Fail:  No Attempt: |
| 170.315.c.3 Test Result | Pass:  Fail:  No Attempt: |
| 170.315.c.4 Test Result | Pass:  Fail:  No Attempt: |
| Error Description (if applicable) |  |
| Modifications to Product Under Test |  |
| Additional Software Used |  |
| Additional Proctor Notes |  |

### Overview

In this document you will find:

* [Test Data and Test Tools](#_Test_Data_and)
* [Standards Support](#_Demonstrate_Standards_Support_1)
* [Drummond Test Report (Instructions, Expected Results, Points to Remember)](#_170.315(c)(1)_Record_and)
* [Test Procedures](#_Test_Procedures)
* [Appendix A: Testing Guide](#_Appendix_A:_Testing)
* [Appendix B: ONC Criteria](#_Appendix_B:_ONC)

### Version of ONC Test Method

1.0

### Scope of Proctoring Sheet

The ONC test method associated with this criterion is the only approved test method for EHR Meaningful Use certification. This Proctoring Sheet is not a replacement test method but a test procedure document for performing the ONC test method and recording the results. Proctoring Sheet describe test data, test criteria and expected results. It is assumed the Health IT developer or Participant under Test is familiar with the associated ONC test method.

# Robustness and Reliability Requirement

To satisfy the module criteria, it is expected that the Product-Under-Test is able to complete the testing requirements reliably, including repeat testing with the same result without error, and with a satisfactory level of robustness. This includes unexpected error messages produced through normal operation, multiple unintended restarts of the application or any other “buggy” facets of the product displayed while testing. These errors are record in the Additional Proctor Notes of the proctor sheet. Lack of reliability and robustness of design will result in failure of the module.

# Test Data and Tools

|  |  |
| --- | --- |
| **Test Data Source:** | ONC-Supplied  DG-Supplied:  Developer-Supplied: |
| **Pre-Test Data Setup:**   * Submit a list of CQMs for certification to your Test Proctor 2-4 weeks prior to your test date. * Automated Entry Test Data (section 1.3) may be pre-loaded based on health IT limitations. Discuss pre-test data setup request with your Test Proctor. * If planning to use the Cypress API capability, discuss with your Test Proctor at least two weeks prior to your test date. | |
| **Test Data:**   * Cypress Gold Standard Test Data is provided to you by your Test Proctor. | |
| **Test Tools:**  [Cypress v3](https://www.healthit.gov/cypress/)  Please note there is a ‘Cypress Issue Tracker’ in JIRA used to track bugs and fixes within the Cypress Test Tool and is accessible by clicking [here](https://oncprojectracking.healthit.gov/). | |

# Demonstrate Standards Support

|  |  |
| --- | --- |
| **Test Result:** | PASS:  FAIL:  No Attempt: |
| **Instructions:** Health IT module must support all standards listed below. | |

.

|  |  |  |
| --- | --- | --- |
| **Applies to 170.315.c.1, c.2, c.3, and c.4** | | |
|  | §170.205(h)(2) | [HL7 CDA® Release 2 Implementation Guide for: Quality Reporting Document Architecture – Category I(QRDA I), DTSU Release 3 (US Realm), Volume I – Introductory Material, June 2015](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=35)  [HL7 CDA® Release 2 Implementation Guide: Quality Reporting Document Architecture – Category I (QRDA I): Release 1, DSTU Release 3 (US Realm), Volume 2 – Templates and Supporting Material, June 2015](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=35) |
| **Applies to 170.315.c.2, c.3 and c.4** | | |
|  | §170.205(k)(1) | [Quality Reporting Document Architecture Category III, Implementation Guide for CDA Release 2 (incorporated by reference in § 170.299)](http://www.hl7.org/implement/standards/product_brief.cfm?product_id=286) |
|  | §170.205(k)(2) | [Errata to the HL7 Implementation Guide for CDA® Release 2: Quality Reporting Document Architecture – Category III, DSTU Release 1 (US Realm), September 2014 (incorporated by reference in § 170.299).](http://www.hl7.org/dstucomments/showdetail.cfm?dstuid=90) |
| **Applies to 170.315.c.3** | | |
|  | CMS QRDA Implementation Guide | (Optional) [CMS QRDA Implementation Guide](https://ecqi.healthit.gov/qrda) in accordance with the relevant measure publication and set |
| **Applies to 170.315.c.4** | | |
|  | §170.205(f)(2) | Race and Ethnicity. [CDC Race and Ethnicity Code Set Version 1 (March 2000)](http://www.cdc.gov/nchs/data/dvs/Race_Ethnicity_CodeSet.pdf). |
|  | §170.207(n)(1) | Birth sex must be coded in accordance with HL7 Version 3 attributed as follows:  (i) Male. M  (ii)Female. F  (iii)Unknown. UNK. |
|  | §170.207(a)(4) | [IHTSDO SNOMED CT®, U.S. Edition, September 2015 Release or more recent.](https://www.nlm.nih.gov/research/umls/Snomed/us_edition.html) |
|  | §170.207(r)(1) | [Healthcare Provider Taxonomy Code Set (updated April 2, 2015)](https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/MedicareProviderSupEnroll/Downloads/TaxonomyCrosswalk.pdf) |
|  | §170.207(s)(1) | [Public Health Data Standards Consortium Source of Payer Typology Code Set Version 5.0 (October 2011)](http://www.phdsc.org/standards/payer-typology.asp) |

# 170.315(c)(1) Record and Export

|  |  |
| --- | --- |
| **Test Result:** | PASS:  FAIL:  No Attempt: |
| **Instructions:**   * User records Cypress test data into patient charts, including exclusions and exceptions, which is necessary to calculating each CQM. * To support testing of 170.315(c)(2), user demonstrates the health IT module can automate the recording (via batch entry) of Cypress test data provided using codified entries, including exclusions and exceptions, which is necessary to calculating each CQM. * User exports valid QRDA Category I files on-demand based on Cypress test data without needing developer assistance. | |
| **Expected Test Result:**   * Health IT module must demonstrate Record Sampling by recording data needed for each CQM using a manual entry through a user interface or import using structured documents (e.g, QRDA, CCDA, or Custom Format). Codified entries required for all CQM data criteria, including, but not limited to:   + Patient reason;   + System reason; and   + Medical reason * Health IT module must be able to record (via batch entry of QRDA I files) all of the data that would be necessary to calculate each CQM including, but not limited to, the following codified entries:   + Patient reason;   + System reason; and   + Medical reason * Health IT module must be able to electronically export at any time (on-demand) individual, patient-level eCQM data formatted to the HL7 QRDA Category I standard specified at §170.205(h)(2) that includes all of the data captured for each and every eCQM for which EHR technology is being certified. This functionality must also permit the user to export based on one or multiple patients, and without needing developer assistance. | |
| **Points to Remember:**   * This module requires use of the Cypress Test Tool. For instructions on using the tool, please refer to <https://www.healthit.gov/cypress/> as well as the ONC Test Procedures. Instructions in this proctor sheet address the testing actions without re-addressing the detail of using Cypress to perform the test tool activities. * Developers may use the ‘Cypress Issue Tracker’ [here](https://oncprojectracking.healthit.gov/) to verify or address bugs/issues encountered using the test tool. * ONC no longer requires a specific number and type of CQMs for certification. However, please note **CMS still requires a minimum number of measures to be met. Please see Appendix A below for more details.** * Data required for CQM exclusions or exceptions must be codified entries, which may include specific terms as defined by each CQM, or may include codified expressions of “patient reason,” “system reason,” or “medical reason.” * QRDA Category I files generated for this module should contain only the elements required to calculate the eCQMs. * (170.315)(c)(1) Capture and Export is part of the 2015 Edition Base EHR definition. * Automated Entry (section 1.3) is demonstrated only if also certifyingto*(c)(2) Import and Calculate.* | |

### Test Procedures

**1.1 Cypress Test Data**

|  |  |
| --- | --- |
|  | Health IT developer provides Proctor a list of all CQMs for which technology is certifying. EHR Proctor provides to the developer:   * Cypress Manual Entry Checklist * “Cypress Gold Standard Test Data” consisting of QRDA I files to incorporate |

<INSERT LINK TO TEST DATA FILES>

**1.2 Record Sampling**

|  |  |
| --- | --- |
|  | Proctor observes user manually records the data from the ***Cypress Manual Entry Checklist***. |
|  | User verifies codified entries are recorded for CQM exclusions/exceptions including, but not limited to, patient reason, system reason, and medical reason. If codified entries are not displayed in user interface, verification of the codified entries in the data store (back end database) is permitted. |
|  | User generates QRDA Cat I file(s) based on the data entered and combines all files into one zip file. User submits file to Proctor. |
|  | Proctor validates the QRDA zip file using the Cypress validation tool. |

<INSERT SCREEN SHOTS>

<INSERT LINK TO QRDA DATA FILES>

<INSERT LINK TO CYPRESS VALIDATION REPORTS>

**1.3 Automated Entry**

*Automated Entry is demonstrated only if also certifying* ***(c.2) Import and Calculate***.

|  |  |
| --- | --- |
|  | User demonstrates health IT module can electronically import and record the ***Cypress Gold Standard Test Data*** formatted to the QRDA Category I standard. |
|  | Proctor visually inspects test data is recorded within a patient record and verifies codified entries. |

<INSERT SCREEN SHOTS>

**1.4 Export**

|  |  |
| --- | --- |
|  | Health IT developer submits documentation attesting that a user can export a QRDA Cat I file(s) at any time the user chooses (on-demand) and without subsequent developer assistance based on:   * one or more CQMs associated with one or more patients; * CQMs chosen by the user; and * reporting period designated by the user. |
|  | *Based on the test data in section 1.3 above*, user generates QRDA Category I data files for each CQM for which technology is certifying. User combines and zips applicable QRDA Category I files so that each CQM measure has its own zip file. User submits files to Proctor. |
|  | Proctor validates QRDA Category I (zip) files using the Cypress Test Tool for each CQM measure presented for certification. |
|  | *Alternative Approach:* User may utilize the Cypress Certification API for validation. However, the user will manually generate/export as instructed above for at least one CQM to ensure this functionality is present. |

<INSERT LINK TO ATTESTATION>

<INSERT LINK TO QRDA DATA FILES>

<INSERT LINK TO CYPRESS VALIDATION REPORTS>

**170.315(c)(2) Import and Calculate**

|  |  |
| --- | --- |
| **Test Result:** | PASS: ☐ FAIL: ☐ No Attempt: ☐ |
| **Instructions:**   * User demonstrates health IT module can electronically: * import HL7 QRDA Category I files for all data needed to calculate each of the certified CQMs. * calculate each and every CQM which is presented for certification. | |
| **Expected Test Result:**   * Health IT module must be able to:   + electronically import a data file formatted in accordance to the HL7 QRDA Category I standard specified at §170.205(h)(2);   + de-duplicate imported test data;   + calculate aggregate reports based on the imported and de-duplicated test data; and   + generate an aggregate report for each of the CQMs to be certified. | |
| **Points to Remember:**   * This module requires use of the Cypress Test Tool. For instructions on using the tool, please refer to <https://www.healthit.gov/cypress/> as well as the ONC Test Procedures. Instructions in this proctor sheet address the testing actions without re-addressing the detail of using Cypress to perform the test tool activities. * Developers may use the ‘Cypress Issue Tracker’ [here](https://oncprojectracking.healthit.gov/) to verify or address bugs/issues encountered using the test tool. * ONC no longer requires a specific number and type of CQMs for certification. However, please note **CMS still requires a minimum number of measures to be met. Please see Appendix A below for more details.** * Users must be able to execute the import capability at any time (on-demand) and without developer assistance to operate. | |

**Test Procedures**

**2.1 Execute On-Demand - Attestation**

|  |  |
| --- | --- |
| ☐ | Health IT developer submits documentation attesting that a user can execute import functionality at any time the user chooses and without subsequent developer assistance to operate. |

<LINK TO ATTESTATION DOCUMENT>

**2.2 Import**

|  |  |
| --- | --- |
|  | *If Automated Entry not already demonstrated under section 1.3 above*, health IT developer provides Proctor a list of all CQMs for which technology is certifying. EHR Proctor provides to the developer the ***Cypress Gold Standard Test Data*** consisting of QRDA I files to incorporate. |
|  | User demonstrates health IT module can electronically import and record the ***Cypress Gold Standard Test Data*** formatted to the QRDA Category I standard. |
|  | Proctor visually inspects test data is recorded and verifies codified entries. |

<INSERT SCREEN SHOTS>

**2.3 Calculate**

|  |  |
| --- | --- |
| ☐ | User demonstrates the health IT module can use the imported and de-duplicated CQM data to calculate the aggregate reports for each CQM presented for certification. |
| ☐ | User generates QRDA Category III files (.xml) for each CQM measure and submits to Proctor. |
| ☐ | Proctor validates QRDA Category III file(s) calculation results using the Cypress Test Tool for each CQM measure presented for certification. |
| ☐ | *Alternative Approach:* User may utilize the Cypress Certification API for validation. However, the user will manually generate/export as instructed above for at least one CQM to ensure this functionality is present. |

<INSERT SCREEN SHOTS>

<INSERT LINK TO QRDA DATA FILES>

<INSERT LINK TO CYPRESS VALIDATION REPORTS>

**170.315(c)(3) Report**

|  |  |
| --- | --- |
| **Test Result:** | PASS: ☐ FAIL: ☐ No Attempt: ☐ |
| **Instructions:**   * User generates data files formatted to the HL7 QRDA Category I and HL7 QRDA Category III and submits for Cypress Test Tool QRDA validation and optional CMS submission validation. | |
| **Expected Test Result:**   * Health IT module generates data files formatted to the HL7 QRDA Category I standard specified at §170.205(h)(2) and HL7 QRDA Category III standards specified at §170.205(k)(1) and §170.205(k)(2). * QRDA files successfully pass the Cypress test tool validation without any errors. * (Optional) The QRDA Category I and Category III reports successfully pass the Cypress test tool validation for CMS submission. | |
| **Points to Remember:**   * This module requires use of the Cypress Test Tool. For instructions on using the tool, please refer to <https://www.healthit.gov/cypress/> as well as the ONC Test Procedures. Instructions in this proctor sheet address the testing actions without re-addressing the detail of using Cypress to perform the test tool activities. * Developers may use the ‘Cypress Issue Tracker’ [here](https://oncprojectracking.healthit.gov/) to verify or address bugs/issues encountered using the test tool. * ONC no longer requires a specific number and type of CQMs for certification. However, please note **CMS still requires a minimum number of measures to be met. Please see Appendix A below for more details.** * QRDA Category I and Category III files generated as part of (c)(1) and (c)(2) above may be used to satisfy the reporting requirement for (c)(3). * QRDA Category I files generated for this module should contain only the elements required to calculate the eCQMs. * Users must be able to execute the export capability at any time (on-demand) and without developer assistance to operate. | |

**Test Procedures**

**3.1 QRDA Category III Report**

|  |  |
| --- | --- |
| ☐ | User generates an aggregated report (QRDA Category III) with calculated summary data based on the Cypress Gold Standard Test Data provided under *(c)(2) Import and Calculate.* |
| ☐ | User generates QRDA Category III files (.xml) for each CQM measure and submits to Proctor. |
| ☐ | Proctor validates the xml schema for each QRDA Category III file(s) generated using the Cypress Test Tool for each CQM measure presented for certification. |
|  | *Alternative Approach:* User may utilize the Cypress Certification API for validation. However, the user will manually generate/export as instructed above for at least one CQM to ensure this functionality is present. |

<INSERT LINK TO QRDA DATA FILES>

<INSERT LINK TO CYPRESS VALIDATION REPORTS>

**3.2 QRDA Category I Report**

|  |  |
| --- | --- |
| ☐ | User generates de-duplicated QRDA Category I files based on the Cypress Gold Standard Test Data provided under *(c)(2) Import and Calculate.* |
| ☐ | User generates QRDA Category I files for each CQM for which technology is certifying. User combines and zips applicable QRDA Category I files so that each CQM measure has its own zip file. User submits files to Proctor. |
| ☐ | Proctor validates the xml schema for each QRDA Category I file(s) using the Cypress Test Tool for each CQM measure presented for certification. |
|  | *Alternative Approach:* User may utilize the Cypress Certification API for validation. However, the user will manually generate/export as instructed above for at least one CQM to ensure this functionality is present. |

<INSERT LINK TO QRDA DATA FILES>

<INSERT CYPRESS VALIDATION REPORTS>

**3.3 (Optional) Data File can be electronically accepted by CMS**

|  |  |
| --- | --- |
| ☐ | Using the Cypress Validation Report, the Proctor validates the QRDA III files generated in section 3.1 above can be electronically accepted by CMS. |

<INSERT LINK TO CYPRESS VALIDATION REPORTS>

# 170.315(c)(4) - Filter

|  |  |
| --- | --- |
| **Test Result:** | PASS:  FAIL:  No Attempt: |
| **Instructions:**   * User records and filters based on the (9) data elements identified below within health IT module. * User generates QRDA Category I and Category III data files based on filtered data. | |
| **Expected Test Result:**   * Health IT module must record and filter based on the following data elements:  1. **Taxpayer Identification Number** (TIN); 2. **National Provider Identifier** (NPI); 3. **Provider Type** in accordance with, at a minimum, the standard specified in 170.207(r)(1); 4. **Practice Site Address**; 5. **Patient Insurance** in accordance with, at a minimum, the standard specified in § 170.207(s)(1); 6. **Patient Age** (calculated from the Patient Date of Birth) 7. **Patient Sex** in accordance with, at a minimum, the version of the standard specified in § 170.207(n)(1); 8. **Patient Race and Ethnicity** in accordance with, at a minimum, the version of the standard specified in § 170.207(f)(2); and 9. **Patient Problem List Data** in accordance with, at a minimum, the version of the standard specified in § 170.207(a)(4).  * Record data (according to specified standards, where applicable) and filter eCQM results at both patient and aggregate levels. * Apply all of the specified filters and generate valid patient level and aggregate reports based on each applied filter and any on any one combination of two or more filters. * Display the filtered reports to users in a human readable format. * Health IT module generates data files filtered on elements listed above and formatted to the HL7 QRDA Category I standard specified at §170.205(h)(2) and HL7 QRDA Category III standards specified at §170.205(k)(1) and §170.205(k)(2). * QRDA files successfully pass the Cypress test tool validation without any errors. | |
| **Points to Remember:**   * Developers may use the ‘Cypress Issue Tracker’ [here](https://oncprojectracking.healthit.gov/) to verify or address bugs/issues encountered using the test tool. | |

### Test Procedures

**4.1 Record**

|  |  |
| --- | --- |
| ☐ | Based on the Cypress “Filter” test deck provided by Proctor, user verifies health IT module can record all of the CQM data elements listed below:   * **Taxpayer Identification Number (TIN)** * **National Provider Identifier (NPI)** * **Provider Type** in accordance with, at a minimum, the standard specified in 170.207(r)(1) * **Practice Site Address** * **Patient Insurance** in accordance with, at a minimum, the standard specified in § 170.207(s)(1) * **Patient Age** (calculated from the Patient Date of Birth) * **Patient Sex** in accordance with, at a minimum, the version of the standard specified in § 170.207(n)(1) * **Patient Race and Ethnicity** in accordance with, at a minimum, the version of the standard specified in § 170.207(f)(2) * **Patient Problem List Data** in accordance with, at a minimum, the version of the standard specified in § 170.207(a)(4). |

<INSERT SCREENSHOTS>

**4.2 Filter**

|  |  |
| --- | --- |
| ☐ | Using the Cypress Test Tool, the Proctor provides user the data elements to filter on which will include, at a minimum:   * Two multi-factor filter tests based on Patient Information (*e.g., Ethnicity and Payer, Race and Age, etc.*) * Two multi-factor filter tests based on Provider Information (*e.g., NPI, TIN and Provider Location, NPI and TIN, etc*.) * A filter test based on Patient Problem List |
| ☐ | User demonstrates health IT module can filter at the patient and aggregate levels based on the combination of data elements provided in the preceding step. |
| ☐ | User calculates the aggregate reports for each filter applied. |
| ☐ | User generates filtered data formatted to the QRDA Category I and Category III standards. |
| ☐ | Proctor validates the filtered QRDA Category I and Category III files using the Cypress Test Tool based on each CQM measure presented for certification. |
|  | *Alternative Approach:* User may utilize the Cypress Certification API for validation. However, the user will manually generate/export as instructed above for at least one CQM to ensure this functionality is present. |

<INSERT SCREENSHOTS>

<INSERT LINKS TO FILTERED QRDA DATA FILES>

<INSERT LINKS TO CYPRES VALIDATION REPORTS>

**4.3 Display Filtered Data Results**

|  |  |
| --- | --- |
| ☐ | Using the filtered data created in the preceding steps (section 4.3 above), user displays the filtered data results in human readable form including the following information for each measure:   * Patient Population; * Denominator; * Numerator; * Exclusions; and * Exceptions |
| ☐ | Proctor verifies the health IT module displays the filtered data from section 4.3 above along with the (5) elements identified in the preceding step. |

<INSERT SCREENSHOTS>

# Appendix A: Testing Guide

*This appendix contains more details and background on the testing requirements, including explanation on underlying standards, notable issues and best practice suggestions.*

Rev 01-Dec-2016 Additions

* While ONC no longer specifies a minimum number or type of CQMs to certify, CMS still requires the following based on the cited program:

Stage 3 Meaningful Use (Medicaid):

* + EPs must report on 9 out of 64 total CQMs.
  + Eligible hospitals and CAHs must report on 16 out of 29 total CQMs.
  + For EPs, 6 of the CQMs must be from the recommend core set identified by CMS. EHs/CAHs do NOT have a core set.
  + For EPs/EHs/CAHs, CQMs must be from at least 3 of the 6 key health care policy domains from the Department of Health and Human Services’ National Quality Strategy

MIPS Quality Payment Program (QPP):

* + Requires at least six (6) measures including at least one (1) outcome measure.
  + If an applicable outcome measure is not available, report one other high priority measure (appropriate use, patient safety, efficiency, patient experience, and care coordination measures).
  + If fewer than six measures apply to the MIPS eligible clinician or group, report on each measure that is applicable.
  + A comprehensive list of Clinical Quality Measures and Outcome Measures can be found in the appendix of the [CMS MACRA Final Rule](https://www.federalregister.gov/documents/2016/11/04/2016-25240/medicare-program-merit-based-incentive-payment-system-mips-and-alternative-payment-model-apm) and also here: <https://qpp.cms.gov/measures/quality>.

Rev 01-Sept-2016 Additions

* See the “eCQI Resource Center” (<https://ecqi.healthit.gov/>) for eCQM resources and implementation guides.
* (c.1) Record and Export - The capability to export eCQM data serves two purposes:

(1) a provider or health system can view and verify their eCQM results for quality improvement on a near real-time basis, and

(2) providers can export their results to multiple programs, such as those run by CMS, states, and private payers.

* (c.4) Filter - The filter functionality included in this criterion will allow a provider to make a query for eCQM results using one or a combination of data captured by the certified health IT for quality improvement and quality reporting purposes. It can also aid in the identification of health disparities, enable care quality improvement, and support providers in delivering more effective care to their patient populations. These filters include, but are not limited to, practice site address, patient age, patient sex, and patient problem list.
* No requirements are specified as to how systems demonstrate auto de-duplication. This flexibility allows health IT developers and providers to determine the most suitable methods for de-duplication and import of data for a given situation.
* For EHRs not certifying for reporting (C3), non-conformance with the HL7 QRDA Implementation Guide will be treated as warnings.
* The CQM health care policy domains are:
  + Patient and Family Engagement
  + Patient Safety
  + Care Coordination
  + Population and Public Health
  + Efficient Use of Healthcare Resources
  + Clinical Processes/Effectiveness

# Appendix B: ONC Criteria and Standards

*This appendix contains copy of the relevant ONC criteria and standards for this proctor sheet as a reference. In the event of a discrepancy with the ONC Final Rule, the ONC Final Rule takes precedence.*

**§170.315(c) *Clinical quality measures*—(1) *Clinical quality measures—record and export*—(**i) *Record.* For each and every CQM for which the technology is presented for certification, the technology must be able to record all of the data that would be necessary to calculate each CQM. Data required for CQM exclusions or exceptions must be codified entries, which may include specific terms as defined by each CQM, or may include codified expressions of “patient reason,” “system reason,” or “medical reason.”

(ii) *Export.* A user must be able to export a data file at any time the user chooses and without subsequent developer assistance to operate:

(A) Formatted in accordance with the standard specified in § 170.205(h)(2);

(B) Ranging from one to multiple patients; and

(C) That includes all of the data captured for each and every CQM to which technology was certified under paragraph (c)(1)(i) of this section.

**§170.315(c) *Clinical quality measures*—(2) Clinical quality measures—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.

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

**§170.315(c) *Clinical quality measures*—(3) *Clinical quality measures—report.*** Enable a user to electronically create a data file for transmission of clinical quality measurement data:

(i) At a minimum, in accordance with the standards specified in § 170.205(h)(2) and § 170.205(k)(1) and (2).

(ii) *Optional.* That can be electronically accepted by CMS.

**§170.315(c) *Clinical quality measures*—(4) - filter**

(i) Record the data listed in paragraph (c)(4)(iii) of this section in accordance with the identified standards, where specified.

(ii) Filter CQM results at the patient and aggregate levels by each one and any combination of the data listed in paragraph (c)(4)(iii) of this section and be able to:

(A) Create a data file of the filtered data in accordance with the standards adopted in § 170.205(h)(2) and §170.205(k)(1) and (2); and

(B) Display the filtered data results in human readable format.

(iii) Data.

(A) Taxpayer Identification Number.

(B) National Provider Identifier.

(C) Provider type in accordance with, at a minimum, the standard specified in § 170.207(r)(1).

(D) Practice site address.

(E) Patient insurance in accordance with the standard specified in § 170.207(s)(1).

(F) Patient age.

(G) Patient sex in accordance with the version of the standard specified in § 170.207(n)(1).

(H) Patient race and ethnicity in accordance with, at a minimum, the version of the standard specified in § 170.207(f)(2).

(I) Patient problem list data in accordance with, at a minimum, the version of the standard specified in § 170.207(a)(4).

**§170.205 Content Exchange Standards.**

(h) *Clinical quality measure data import, export and reporting.* (2) *Standard.* 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).

**(k) *Clinical quality measure aggregate reporting.* (1) *Standard.*** Quality Reporting Document Architecture Category III, Implementation Guide for CDA Release 2 (incorporated by reference in § 170.299).

**(2) *Standard.*** Errata to the HL7 Implementation Guide for CDA® Release 2: Quality Reporting Document Architecture—Category III, DSTU Release 1 (US Realm), September 2014 (incorporated by reference in § 170.299).

**§170.207 Content Exchange Standards.**

(n)(1): Birth sex must be coded in accordance with HL7 Version 3 attributed as follows:

(i)Male. M

(ii)Female. F

(iii)Unknown. UNK..

(a)(4): Development Organisation (IHTSDO) Systematized Nomenclature of Medicine Clinical Terms (SNOMED CT®), U.S. Edition, September 2015Release

(s)(1): Public Health Data Standards Consortium Source of Payer Typology Code Set Version 5.0 (October 2011);

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# Change Log

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| Revision | Change Description |
| 03-Apr-2017 | Updated test section name from ‘Manual Entry’ to ‘Record Sampling’ (section 1.2) and clarified a user interface is not required for record sampling. |
| 01-Dec-2016 | Updated Appendix A with ‘01-Dec-2016 additions’ with minimum CQM requirements based on CMS payment programs. Removed “Filter Instructions attestation” section. Added reference to Cypress Issue Tracker in JIRA. |
| 01-Nov-2016 | Clarified separate test deck for “Filter” (c.4) will be provided by proctor. (v2) Removed “points to remember” under (c.4). |
| 01-Sept-2016 | Initial Release. |
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**About Drummond Group LLC**

Drummond Group LLC is a global software test and certification lab that serves a wide range of vertical industries.  In healthcare, Drummond Group tests and certifies Controlled Substance Ordering Systems (CSOS), Electronic Prescription of Controlled Substances (EPCS) software and processes, and Electronic Health Records (EHRs) – designating the trusted test lab as the only third-party certifier of all three initiatives designed to move the industry toward a digital future. Founded in 1999, and accredited for the Office of the National Coordinator Health IT Certification Program as an Authorized Certification Body (ACB) and an Authorized Test Lab (ATL), Drummond Group continues to build upon its deep experience and expertise necessary to deliver reliable and cost-effective services. For more information, please visit <http://www.drummondgroup.com> or email [ehr@drummondgroup.com](mailto:ehr@drummondgroup.com)

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