



HealthCare Systems

GENERAL INFORMATION

Plan Report ID Number: [For ONC-Authorized Certification Body use only]

Developer Name: Health Care Systems, Inc.

Product Name(s): HCS eMR

Version Number(s): 9.0

Certified Health IT Product List (CHPL) ID(s): 15.07.07.1582.HC01.03.00.1.200507

Developer Real World Testing Page URL:

<http://www.hcsinc.net/images/HCSRealWorldTestingPlan.pdf>

Justification for Real World Testing Approach

HCS eMR v9.0 is primarily marketed to standalone behavioral health hospitals, some of whom also provide more traditional medical services that qualify that subset of their patient population for needing to utilize certified EHR Technology.

While facilities using HCS eMR v9.0 appreciate knowing that their organizations are as future-proofed as possible to new government requirements, many of the features for which HCS eMR v9.0 is certified rarely get used in a true production environment because having these features is not typically an expectation for facilities in the behavioral health space.

For Real World Testing, HCS will work with customers who are attesting to Meaningful Use/Promoting Interoperability in order to best approximate the scenario where these features would get utilized.

For metrics not currently in use a production sites, HCS' testing methodology will be to simulate "A Day In the Life" of a patient taking a selection of patients from a deployed production environment and performing all functions necessary to fully test the patient specific criteria required for Real World Testing. Each measure will be tested by performing the required functions to validate the measures on actual patients from within the database. When applicable, the output of those actions will be de-identified to protect patient privacy and tested against publicly available validators to confirm the documents produced conform to the standards.

The patient specific criteria (or measures that can and will be tested successfully on a patient by patient basis) are as follows:

170.315(b)(1), 170.315(b)(2), 170.315(b)(6), 170.315(b)(7), 170.315(b)(8), 170.315(b)(9), 170.315(e)(1), 170.315(f)(1), 170.315(f)(2), 170.315(f)(3), 170.315(f)(4), 170.315(f)(5), 170.315(f)(6), 170.315(f)(7), 170.315(g)(7), 170.315(g)(8), 170.315(g)(9), 170.315(h)(1)

The remaining metrics (all CQMs) for 170.315(c)(1), 170.315(c)(2) and 170.315(c)(3) will be tested by importing a test scenario into the production database and then exporting the results for validation against the standards. Once testing is complete the test data will be purged from the production environment.

Standards Updates and USCDI

Standards and Version: N/A

Updated Certification Criteria and Associated Product: N/A

Health IT Module CHPL ID: 15.07.07.1582.HC01.03.00.1.200507

Method used for Standard Update: N/A

Date of ONC ACB Notification: N/A

Date of Customer Notification (SVAP Only): N/A

Conformance Measure: N/A

USCDI Updated certification Criteria (and version): N/A

Measures Used in Overall Approach

Description of Measurement/Metric:

1. **Rate of Success/Failure:** For each metric being used for production purposes and tested in a real world environment, HCS will confirm that the underlying function is consistently being performed without exception, error, or unexpected outcomes. When applicable, HCS will use the denominator from 170.315(g)(2) for a 30 day time period to determine how many times these metrics should have been attempted and then investigate logs to determine a numerator of how many times these metrics were completed successfully and a numerator of the number of times these metrics were completed unsuccessfully.
2. **Conformance to Standards:** For each metric not actually being used for production purposes but being tested in a real world environment, HCS will validate that the content produced or received (as applicable) is conformant to the required standards. It is expected that each standard will be tested with no errors against the appropriate validators. This will be done at 2 points throughout the year to confirm that required capabilities remain intact during patches and hotfixes.
3. **Pass/Fail:** For each metric not actually being used for production purposes but being tested in a real world environment, HCS will confirm that the underlying function can be performed without exception, error, or unexpected outcomes. This will be done at 2 points throughout the year to confirm that required capabilities remain intact during patches and hotfixes.

Associated Certification Criteria:

1. Rate of Success/Failure:

170.315(b)(1) – Transitions of Care

HCS will work with site(s) actively using Direct Messaging to send Transitions of Care records to follow on providers. This measure will use the number of messages that were attempted to be sent as a denominator and the number of messages correctly sent without error as the numerator. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(e)(1) – Patient Portal – VDT

HCS will work with site(s) actively using the Patient Portal to provide records to patients and their caregivers. This measure will utilize transaction logs to review attempts to view, download, or transmit records from within the patient portal as three separate denominators (one for each process). The numerator will be the number of times the above named processes were successful. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(f)(1) – Transmission to Immunization Registries

HCS will work with site(s) actively sending HL7 transactions to immunization registries to communicate vaccines administered at their facilities. The denominator will be the number of messages that were attempted to be sent and the numerator will be the number of successful transactions. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(f)(2) – Syndromic Surveillance

HCS will work with site(s) actively sending HL7 transactions to governmental agencies to communicate patient care being performed at their facilities. The denominator will be the number of messages that were attempted to be sent and the numerator will be the number of successful transactions. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(f)(3) – Reportable Labs

HCS will work with site(s) actively sending HL7 transactions to governmental agencies to communicate reportable lab results at their facilities. The denominator will be the number of messages that were attempted to be sent and the numerator will be the number of successful transactions. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(g)(7) – API Patient Selection

HCS will work with site(s) actively using our FHIR API to communicate patient data. The denominator will be the number of patient selection requests received during this time period and the numerator will be the number of those requests that were successful. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(g)(8) – API Data Category Request

HCS will work with site(s) actively using our FHIR API to communicate patient data. The denominator will be the number of data category requests received during this time period and the numerator will be the number of those requests that were successful. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(g)(9) – API All Data Request

HCS will work with site(s) actively using our FHIR API to communicate patient data. The denominator will be the number of all data requests received during this time period and the numerator will be the number of those requests that were successful. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(h)(1) – Direct Project

HCS will work with site(s) actively using Direct Messaging to send Transitions of Care records to follow on providers. This measure will use the number of messages that were attempted to be sent as a denominator and the number of messages correctly sent without error as the numerator. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(c)(1) – CQMs Record and Export

HCS will work with site(s) actively using Clinical Quality Measures to record and report their data. This measure will use the number of Clinical Quality Measures being measured as a denominator and the number of Quality Measures successfully calculated based on existing data as the numerator. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(c)(2) – CQMs Import and Calculate

HCS will work with site(s) actively using Clinical Quality Measures to calculate their data. This measure will use the number of Clinical Quality Measures being measured as a denominator and the number of Quality Measures successfully calculated based on existing data as the numerator. This will be reviewed for a 30 day time period at two different times throughout the year.

170.315(c)(3) – CQMs Report

HCS will work with site(s) actively using Clinical Quality Measures to report their data. This measure will use the number of Clinical Quality Measures being measured as a denominator and the number of Quality Measures successfully calculated based on existing data as the numerator. This will be reviewed for a 30 day time period at two different times throughout the year.

2. **Conformance to Standards:**

170.315(b)(6) – Data Export

Data Export is not routinely used by any HCS customers. HCS will test this metric in a real world environment by identifying patients who have the required data entered in the record and generating a CCDA to be tested by the validator. The outcome of this test will be a pass or fail result based on the results of validating the CCDAs used in the test.

170.315(b)(7) – Data Segmentation for Privacy (Send)

Data Segmentation is not used by any HCS customers. HCS will test this metric in a real world environment by identifying patients who have the required data entered in the record, setting the flag for privacy and generating a CCDA to be tested by the validator. The outcome of this test will be a pass or fail result based on the CCDA passing current validators as being correct and without error.

170.315(b)(8) – Data Segmentation for Privacy (Receive)

Data Segmentation is not used by any HCS customers. HCS will test this metric in a real world environment by identifying patients who have the required data entered in the record, setting the flag for privacy and generating a CCDA to be tested by the validator. The outcome of this test will be a pass or fail result based on the CCDA passing current validators as being correct and without error.

170.315(b)(9) – Care Plan

Care Plan is not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient, entering the Care Plan data and generating a CCDA. The outcome of this test will be a pass or fail result based on the CCDA passing current validators as being correct and without error.

170.315(f)(4) – Cancer Registries

No HCS Customers send data to Cancer Registries. HCS will test this measure by identifying an appropriate patient, entering the required data and generating the correct documents. The outcome of this test will be a pass or fail result based on the documents passing current validators as being correct and without error.

170.315(f)(5) – Electronic Case Reporting

Electronic Case Reporting is not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient, entering the Electronic Case Reporting data and generating a CCDA. The outcome of this test will be a pass or fail result based on the CCDA passing current validators as being correct and without error.

170.315(f)(6) – Antimicrobial Use and Resistance

Antimicrobial Use and Resistance is not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient population, entering the Antimicrobial Use and Resistance and generating the required XML files. The outcome of this test will be a pass or fail result based on the XML files passing current validators as being correct and without error.

170.315(f)(7) – Health Care Surveys

Health Care Surveys are not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient, entering

the Health Care Survey data and generating the appropriate CDA. The outcome of this test will be a pass or fail result based on the CDA file passing current validators as being correct and without error.

3. Pass/Fail:

170.315(b)(2) – Clinical Information Reconciliation

While HCS customers use many elements of Clinical Information Reconciliation, no active customers utilize the import of CCDAs to drive the process. HCS will test this capability by using a standard CCDA validated to current standards from the test script to import on a patient in a production environment and test the Clinical Information Reconciliation process. This measure will validate that CCDAs from HCS conform to current standards and that HCS is capable of importing current standards. The outcome of this test will be a pass or fail result based on the ability to complete the steps required by the Clinical Information Reconciliation test script. This test will make use of IBM MicroMedex (Version 2019).

170.315(b)(6) – Data Export

Data Export is not routinely used by any HCS customers. HCS will test this metric in a real world environment by identifying patients who have the required data entered in the record and generating a CCDA to be tested by the validator. The outcome of this test will be a pass or fail result based on the ability to generate the CCDAs used in the test.

170.315(b)(7) – Data Segmentation for Privacy (Send)

Data Segmentation is not used by any HCS customers. HCS will test this metric in a real world environment by identifying patients who have the required data entered in the record, setting the flag for privacy and generating a CCDA to be tested by the validator. The outcome of this test will be a pass or fail result based on the ability to flag the record as private and prevent unauthorized users from viewing it.

170.315(b)(8) – Data Segmentation for Privacy (Receive)

Data Segmentation is not used by any HCS customers. HCS will test this metric in a real world environment by identifying patients who have the required data entered in the record, setting the flag for privacy and generating a CCDA to be tested by the validator. The Receive component of this will be tested by importing the above CCDA into a different customer database. The outcome of this test will be a pass or fail result based on the ability to properly flag the record as private and prevent unauthorized users from viewing it.

170.315(b)(9) – Care Plan

Care Plan is not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient, entering the Care Plan data and generating a CCDA. The outcome of this test will be a pass or fail result based on the ability to enter all the requisite data and create the CCDA without error.

170.315(f)(4) – Cancer Registries

No HCS Customers send data to Cancer Registries. HCS will test this measure by identifying an appropriate patient, entering the required data and generating the correct documents. The outcome of this test will be a pass or fail result based on the ability to enter all the requisite data and create the CCDA without error.

170.315(f)(5) – Electronic Case Reporting

Electronic Case Reporting is not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient, entering the Electronic Case Reporting data and generating a CCDA. The outcome of this test will be a pass or fail result based on the ability to enter all the requisite data and create the CCDA without error.

170.315(f)(6) – Antimicrobial Use and Resistance

Antimicrobial Use and Resistance is not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient population, entering the Antimicrobial Use and Resistance and generating the required XML files. The outcome of this test will be a pass or fail result based on the ability to enter all the requisite data and create the XML files without error.

170.315(f)(7) – Health Care Surveys

Health Care Surveys are not routinely used by any HCS customers. HCS will test this measure by identifying an appropriate patient, entering the Health Care Survey data and generating the appropriate CDA. The outcome of this test will be a pass or fail result based on the ability to enter all the requisite data and create the CDA without error.

Justification for Selected Measurement/Metric:

1. **Rate of Success/Failure:** When processes are used frequently, the best measure of success is to measure that success over time. This allows for many variables to be captured and accounted for by taking the full scope of possible interoperability partners and a realistic patient mix to be taken into account during the time of measurement.
2. **Conformance to Standards:** The most important factor in facilitating interoperability with third parties is conformance to standards. If all parties involved are utilizing the same standards then it minimizes the need for extensibility and vendor specific/proprietary changes. For processes that are used infrequently in a production environment, testing our ability to send or receive data that validators confirm is compliant with current industry standards allows us to confirm that our certified functionality is still in compliance with those standards.
3. **Pass/Fail:** All certified criteria must be usable in a production environment should customers choose to do so. By testing each metric in a deployed system, HCS confirms that standards been affected by product updates and that they are functional outside the certification database. For processes that are used infrequently in a production environment, this metric allows us to confirm that the certified functionality can be performed without error while utilizing the current industry standards at the time of testing. This measure will be validated twice throughout the year to confirm continued compliance with the applicable standards.

Care Settings

HCS eMR v9.0 is only marketed to **Behavioral Health Hospitals** and Correctional Facilities (which have no potential to be included for federal funding). **Behavioral Health Hospitals** are the only Care Setting we will be testing in.

Expected Outcomes

1. **Rate of Success/Failure:** HCS will validate applicable certified metrics currently being used in production environments with an expectation of at least a 95% aggregated success rate for each metric.
2. **Conformance to Standards:** HCS will confirm that all EHI generated by the software passes the latest validators to the latest standards of use without errors. This test will confirm that the output of the HCS eMR system complies with the latest technical standards and vocabulary code sets. Testing against the interoperability validators will ensure that HCS eMR is appropriately implementing the technology necessary for certified EHRs.
3. **Pass/Fail:** HCS and our customers will follow similar test methods to those used in certification in a deployed production environment to confirm the expected outcomes are achieved. Each metric to be tested will follow a script substantially similar to the certification test scripts for that metric/measure and be evaluated for success or failure in a manner consistent with how the software evaluated by the ONC ACB.

Schedule of Key Milestones

| Key Milestone | Care Setting | Timeframe |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|------------------|
| HCS will coordinate with existing customers to communicate the test plan and the desire to use their production database for Real World Testing | Behavioral Health Hospital | Dec 2022 |
| HCS will work with existing customers to select representative patients to use for testing. HCS will ensure customers know ePHI will be de-identified before submitting to public facing validators | Behavioral Health Hospital | Feb 2023 |
| HCS will perform the test method steps on these patients to generate data and receive data using the appropriate standards and vocabularies. | Behavioral Health Hospital | Mar 2023 |
| HCS will test generated data against existing validators (and actual third parties when appropriate) to confirm conformance to the appropriate standards and vocabularies. | Behavioral Health Hospital | Mar 2023 |
| Results will be aggregated and reported back to customers and any issues with configuration or setup arising from their deployed environment will be rectified. | Behavioral Health Hospital | Mar 2023 |
| HCS will review transaction and interface logs to determine the Rate of Success/Failure for applicable measures for the 30 day time period from March 1 – March 30, 2022. | Behavioral Health Hospital | Apr 2023 |
| HCS will work with existing customers to select representative patients to use for testing. HCS will ensure customers know ePHI will be de-identified before submitting to public facing validators | Behavioral Health Hospital | August 2023 |
| HCS will perform the test method steps on these patients to generate data and receive data using the appropriate standards and vocabularies. | Behavioral Health Hospital | September 2023 |
| HCS will test generated data against existing validators (and actual third parties when appropriate) to confirm conformance to the appropriate standards and vocabularies. | Behavioral Health Hospital | September 2023 |
| Results will be aggregated and reported back to customers and any issues with configuration or setup arising from their deployed environment will be rectified. | Behavioral Health Hospital | September 2023 |
| HCS will review transaction and interface logs to determine the Rate of Success/Failure for applicable measures for the 30 day time period from September 1 – September 30, 2022. | Behavioral Health Hospital | October 2023 |


Attestation

This Real World Testing plan is complete with all required elements, including measures that address all certification criteria and care settings. All information in this plan is up to date and fully addresses the health IT developer's Real World Testing requirements.

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