Cypress™

Cypress Tech Talk

July 30, 2019

MITRE

The Office of the National Coordinator for Health Information Technology

CMS CENTERS FOR MEDICARE & MEDICAID SERVICES

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Agenda

- Software Updates
  - Cypress Validation Utility + Calculation Check (CVU+)
  - Cypress 5 Releases
  - CVU+ Demo
  - Recent Updates
- Recent Issues
- Cypress Versions
- Open Discussion
- Contact Information

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Software Update

Cypress Validation Utility + Calculation Check (CVU+)

- **Cypress v5 will include a new set of features called Cypress Validation Utility + Calculation Check (CVU+)**
- **CVU+ seeks to address the vendor concern that the 'certification process does not mirror a production scenario for electronic clinical quality measure (eCQM) reporting'**
  - Certification uses a constrained set of test patients
  - Certification does not enforce reporting program requirements (i.e., CMS Implementation Guide)
- **CVU+ will supplement the existing certification program**
  - Use of the CVU+ is not currently a requirement of the program

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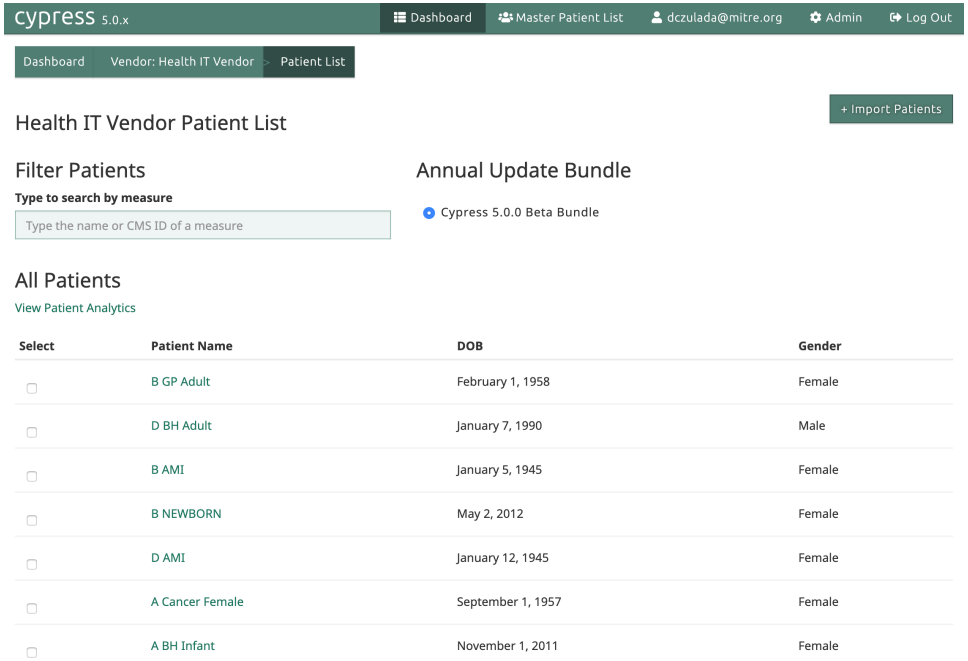
CVU+ Features

Perform Tests using Developer-Generated test patients

- **CVU+ supports developer-generated test patients, allowing vendors to supplement Cypress test patients with their own test patients to increase eCQM logic/code coverage.**
  - Pre-certification tests will no longer be constrained to using Cypress generated tests patients



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CVU+ Features

Verify QRDA Export and eCQM Calculations

- **CVU+ performs and displays eCQM calculation for uploaded developer-generated test patients.**
- **eCQM calculations are displayed for all eCQMs where developer-generated test patients meet the IPP requirements.**

cypress 5.0.x | Dashboard | Master Patient List | dczulada@mitre.org | Admin | Log Out

Dashboard > Vendor: Health IT Vendor > Patient List > Patient: B GP Adult

Measure Information

	IPOP	DENOM	NUMER	DENEX	DENEXCEP
CMS2v9 - PopulationSet_1					
CMS22v8 - PopulationSet_1					
CMS50v8 - PopulationSet_1					
CMS68v9 - PopulationSet_1	2	2	1		
CMS69v8 - PopulationSet_1					
CMS124v8 - PopulationSet_1					
CMS125v8 - PopulationSet_1					
CMS130v8 - PopulationSet_1					
CMS138v8 - PopulationSet_1					
CMS138v8 - PopulationSet_2					
CMS138v8 - PopulationSet_3					
CMS147v9 - PopulationSet_1					
CMS249v2 - PopulationSet_1					
CMS347v3 - PopulationSet_1					
CMS347v3 - PopulationSet_2					
CMS347v3 - PopulationSet_3					
CMS349v2 - PopulationSet_1					

Cypress Certification Patient Test Record: B GP Adult

Patient	B GP Adult	**Sex**	
Date of birth		**Date of expiration**	
Race		**Ethnicity**	
Insurance Providers		**Patient IDs**	5d2de151c1c38835d22a0be4 Cypress
Contact info			

QDM::AssessmentPerformed

Tobacco Use Screening

Codes:

LOINC: 72166-2

Time Elements:

Author Date/Time: 2012-06-25T14:15:00.000+00:00

Other Fields:

Result: 110483000 (SNOMEDCT)

QDM::CommunicationPerformed

Consultant Report

Codes:

LOINC: 11488-4

SNOMEDCT: 371530004

Time Elements:

Relevant Period Start: 2012-04-02T15:00:00.000Z

Author Date/Time: 2012-04-02T15:00:00.000+00:00

Other Fields:

QDM::DiagnosticStudyPerformed

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CVU+ Features

Analyze rigor of Developer-Generated test patients

- **CVU+ performs analysis on uploaded developer-generated test patients.**

- **Statistics include:**
  - Measure Coverage
  - Logic Coverage
  - Valuesets used
  - Code Systems used
  - Data Element Types used

cypress 5.0.x

Dashboard | Vendor: Health IT Vendor | Patient List > Analysis

Analysis of Patients

Data Type	Value
# Patients	7
Measure Coverage	37.3% (22 of 59)
Population Coverage	44.8% Missing Populations
# Data Element Types	20
# Valuesets Used	61
Valuesets Coverage	8.3%
Uncovered Valuesets	677 Uncovered Valuesets
Code System per Valueset Coverage	8.2%
Uncovered Code Systems in each Valueset	1076 Uncovered Code Systems
Average Percent Code Coverage per Valueset	3.0%
Logic Coverage	Logic Coverage Per Measure
Least Logic Coverage	CMS190v8 (9.4%)
Average Logic Coverage	44.2%

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Software Update

Cypress 5 Releases

- **Cypress v5 Alpha**
  - Released May 23, 2019
  - Includes CVU+ features and Annual Update Measures posted May 13, 2019
    - Posted on resource center: https://ecqi.healthit.gov/
  - Available as a virtual machine (VM) download

- **Cypress v5 Beta**
  - June 20, 2019
  - Available as a VM download

- **Cypress v5 Official Release**
  - **July 25, 2019**
  - Available as a VM, AMI, and on the demo server: cypress.healthit.gov

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Software Update

Cypress v5 Release

- https://www.healthit.gov/cypress/release.html#5.0.0

Download Cypress v5.0.0 www.healthit.gov/SITE HealthIT.gov

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Cypress Releases

5.0.0 Patch

4.0.3 Patch

4.0.2 Patch

4.0.1 Patch

4.0.0

Cypress Bundle Releases

2019.0.1 Bundle

2018.1.0 Bundle

2018.0.1 Bundle

Retired Releases

Retired Releases

Cypress v5.0.0

Cypress v5.0 with the fully integrated Cypress Validation Utility + Calculation Check (CVU+) is now available to support 2015 Edition Certification for the Office of the National Coordinator for Health Information Technology Certification Program for electronic clinical quality measures (eCQM). Cypress v5.0 supports testing the Eligible Hospital/Critical Access Hospital eCQMs and Eligible Professional/Eligible Clinician eCQMs updated for calendar year 2020 reporting.

Cypress v5.0 Features

- Supports the §170.315(c)(1), §170.315(c)(2), §170.315(c)(3), and §170.315(c)(4) certification criteria.
- Supports validation with Health Level Seven International (HL7) Clinical Document Architecture (CDA®) R2 Implementation Guide: Quality Reporting Document Architecture (QRDA) I, Release 1, Standard for Trial Use (STU) Release 5.1 - US Realm.
- Supports validation with HL7 Clinical Document Architecture (CDA®) R2 Implementation Guide: QRDA III, Release 1, STU Release 2.1 - US Realm.
- Supports the eCQMs for eReporting for the 2019 Reporting Period.
- Supports eCQM Value Sets as of 5/10/2019.

Cypress Validation Utility + Calculation Check (CVU+) Features

- Supports validation with the CMS Implementation Guide for QRDA Category I - Implementation Guide for 2020.
- Supports validation with the CMS Implementation Guide for Quality Reporting Document Architecture Category III - Implementation Guide for 2020.
- Supports multi-measure tests, allowing vendors to test eCQM calculations with a single test deck across multiple measures.
- Supports code system preference, allowing vendors to choose preferences for the code systems to be used in test patients.
- Supports developer-generated test patients, allowing vendors to supplement Cypress test patients with their own test patients to increase eCQM logic/code coverage.
- Evaluates the rigor of a set of test patients.

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Software Update

CVU Standalone

- **CVU no longer available as a standalone application**
  - 2020 reporting period measures and moving forward
  - Functionality subsumed by CVU+
- **CVU+**
  - Can utilize validation logic through creating a CVU+ product
  - Tests for CVU+ products include CMS Program Tests which will run program-specific validations
- **Validation for 2019 reporting period**
  - CVU is still available as a standalone application for 2019 reporting period
  - CVU is available with Cypress 4.0.3 as a VM, AMI, or through Chef installation

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Cypress Versions

Version	Dates	Measures Supported
V4.0.3	**May 2, 2019**	Latest version supporting eCQMs for the 2019 Reporting/Performance Period and CQL. Fixes record sample and other 4.0.2 bugs.
V5.0.0	**July 25, 2019**	Latest version supporting eCQMs for the 2020 Reporting/Performance Period and CQL.

Bundle Version	Dates	Features
2018.1.0	**October 11, 2018**	**Cypress v4 only** CQL-based measures released in 2018 for the 2019 reporting year eCQM Value Sets as of 9/17/2018.
2019.0.1	**July 25, 2019**	**Cypress v5 only** CQL-based measures released in 2019 for the 2020 reporting year eCQM Value Sets as of 5/10/2019.

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OPEN DISCUSSION

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Next Cypress Tech Talk

- Tuesday, August 13, 2019 at 1pm ET
- To join online, visit: https://meetings.cms.gov/orion/joinmeeting.do?MTID=98271705d4bcc4ad148cf1e39d5c7408
- To join via phone, dial: 1-877-267-1577
- Meeting Number: 998 084 717
- Meeting link, as well as a calendar event file, available at:
  - https://www.healthit.gov/cypress/techtalks.html

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Notes

- **Completed Webinars will be posted on the Cypress website on the Tech Talks tab**
  - https://www.healthit.gov/cypress/techtalks.html
- **Send questions and feedback to the Cypress Talk List at**
  - project-cypress-talk@googlegroups.com
- **Report bugs and issues to the Cypress JIRA at**
  - https://oncprojectracking.healthit.gov/support/browse/CYPRESS

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