

# Cypress

## Cypress Training for Authorized Testing Laboratories

May 15, 2018



# Purpose

- **The purpose of this training is to provide instruction for an Authorized Testing Laboratory (ATL) to set up and perform electronic clinical quality measure (eCQM) testing in Cypress for the electronic health record (EHR) Certification program supported by the Office of the National Coordinator for Health IT (ONC). The training covers the eCQM certification criteria addressed by Cypress:**
  - C1: Record and Export - Record clinical data and export it in a format usable by other EHRs
  - C2: Import and Calculate - Import data from other EHRs and perform eCQM calculations
  - C3: Report - Create standard data files that can be electronically submitted to quality reporting programs
  - C4: Data Filter - Filter clinical data based on patient and provider data
- **This training does not cover detailed requirements for specific quality reporting programs.**

# Agenda

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- Walkthrough of Features
  - Getting Started
  - Administrative Features
  - Creating a Test
  - Running a Test
    - C1 Record Sample
    - C1/C3 Tests
    - C2/C3 Tests
    - C4 Filter Tests
  - Editing a Test
  - Test Results
- Questions and Answers
  - Interactive Demonstration


# Getting Started

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# Getting Started

## Cypress Login Page

cypress 3.2.3
Sign In
Sign Up



**cypress**

**Rigorous & repeatable testing of Electronic Health Records**

**Sign In**

Email

Password

☐ Remember me

Sign In

[Sign up](#)  
[Reset password](#)  
[Resend confirmation email](#)

### What Is Cypress?

Cypress is the open source, rigorous and repeatable testing tool of Electronic Health Records (EHRs) and EHR modules in calculating eCQMs used by CMS's Quality Reporting Programs. It is available for use or adoption by the health IT community including EHR vendors and Authorized Testing Labs.

Cypress serves as the official testing tool for the 2014 and 2015 EHR Certification programs supported by the Office of the National Coordinator for Health IT (ONC).

For more information, visit the [Project Cypress site](#).

### CQM Certification

Cypress tests four different certification criteria:

- Record and Export - Record clinical data and export it in a format usable by other EHRs
- Import and Calculate - Import data from other EHRs and perform CQM calculations
- Report - Create standard data files that can be electronically submitted to quality reporting programs
- Data Filter - Filter clinical data based on patient and provider data

Testing may be performed manually or through an API (see the [Cypress API documentation](#) included in source for more information).

### Using Cypress

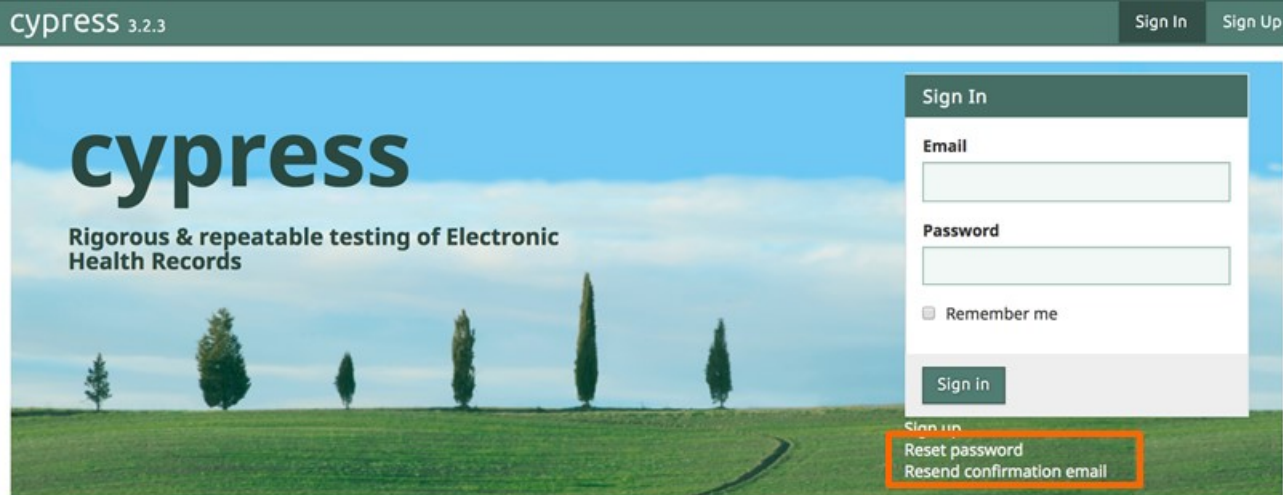
The Cypress software includes a standard test data of synthetic patient records that exercises all of the ACI CQMs, for Eligible Professionals (EP) and Eligible Hospitals (EH).

Testers download patient data from Cypress, manipulate it with the EHR technology, and upload the results to Cypress for validation. Cypress then provides a report of any errors detected in the uploaded results.

Usage of Cypress requires a UMLS account in order to sign into the Cypress Demo Server or download the CQMs.

# Getting Started

## Login Assistance



- **Reset password and Resend confirmation email will only work if an email server is configured with Cypress.**

### What is Cypress?

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Usage of Cypress requires a UMLS account in order to sign into the Cypress Demo Server or download the CQMs.

# Getting Started

## Cypress Dashboard

cypress 3.2.3

Dashboard Master Patient List dczulada@mitre.org Admin Log Out

Dashboard

### Vendors

+ Add Vendor

Vendor	Products	Passing	Failing	Errored	Incomplete
☆ Sample Vendor	2				2

Edit Vendor

- The dashboard lists all vendors accessible to the user.

# Getting Started


## Favorite Vendors

cypress 3.2.3 [Dashboard](#) [Master Patient List](#) [dczulada@mitre.org](#) [Admin](#) [Log Out](#)


Dashboard

### Favorite Vendors

[+ Add Vendor](#)

Vendor	Products	Passing	Failing	Errored	Incomplete	
 Sample Vendor	2				2	<a href="#">Edit Vendor</a>

### Vendors

Vendor	Products	Passing	Failing	Errored	Incomplete	
 Second Vendor	<a href="#">+ Add Product</a>					<a href="#">Edit Vendor</a>

- A user can select “Favorite” vendors, which will always display at the top of the dashboard page.



# Getting Started

## Edit Vendor

cypress 3.2.3

Dashboard Master Patient List dczulada@mitre.org Admin Log Out

Dashboard

Favorite Vendors + Add Vendor

Vendor	Products	Passing	Failing	Errored	Incomplete
★ Sample Vendor	2				2

Edit Vendor

Vendors

Vendor	Products	Passing	Failing	Errored	Incomplete
★ Second Vendor	<span>+ Add Product</span>				

Edit Vendor

- A user can edit vendor information.

# Getting Started

## Editing a Vendor

Dashboard Vendor: Sample Vendor Edit Vendor

Save Changes: Sample Vendor

Vendor Name  
Sample Vendor

Vendor ID

URL

Address

State

Zip

Add Point of Contact

Save Changes Cancel

Delete Vendor

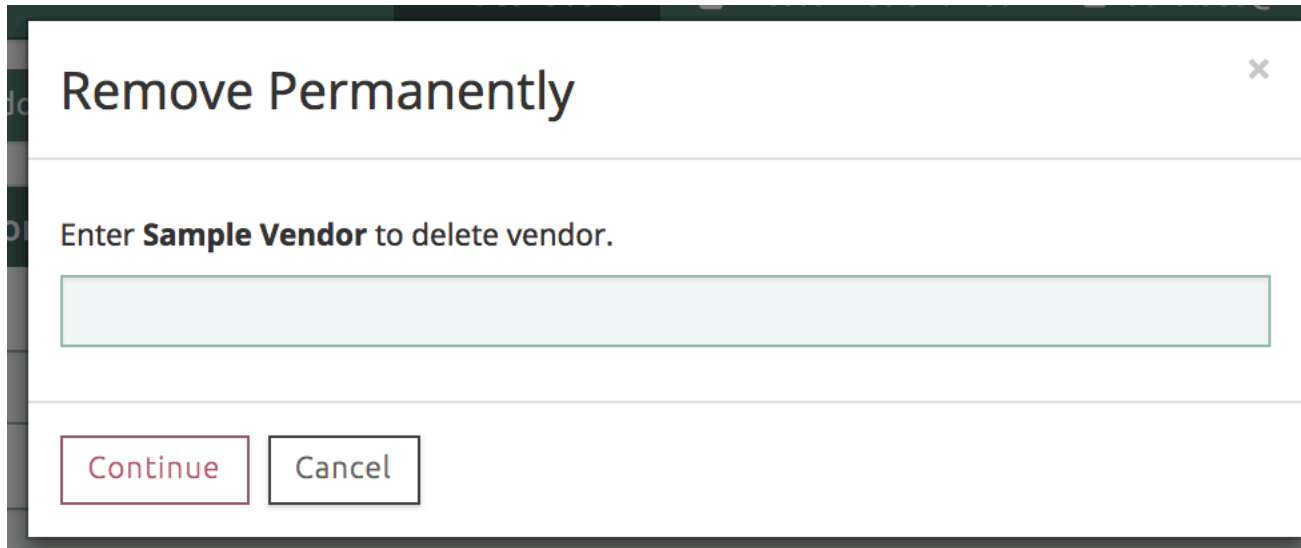
Removing a vendor will also delete all associated products, product tests, and test execution results. Be sure you want to do this.

Delete Vendor

- Vendor Name is the only required field.
- Deleting a vendor will delete all test data associated with the vendor.

## Getting Started

# Deleting in Cypress



A screenshot of a web application dialog box titled "Remove Permanently" with a close button (X) in the top right corner. The dialog contains the text "Enter **Sample Vendor** to delete vendor." followed by a text input field. At the bottom, there are two buttons: "Continue" (highlighted with a red border) and "Cancel".

- All “Deletes” are permanent and require a user to perform a confirmation action.

# Getting Started

## Master Patient List

The screenshot shows the Cypress 3.2.3 web interface. The top navigation bar includes the following elements:

- cypress 3.2.3
- Dashboard
- Master Patient List (highlighted with an orange box)
- dczulada@mitre.org
- Admin
- Log Out

Below the navigation bar is a 'Dashboard' button. The main content area is titled 'Favorite Vendors' and includes a '+ Add Vendor' button. It displays a table with the following columns: Vendor, Products, Passing, Failing, Errored, and Incomplete. The first row shows 'Sample Vendor' with 2 products, 2 passing, 0 failing, 0 errored, and 2 incomplete. An 'Edit Vendor' button is next to it. Below this is a section titled 'Vendors' with a similar table. The first row shows 'Second Vendor' with an 'Add Product' button and an 'Edit Vendor' button.

- All Cypress test decks are generated from a set of manually created “Master Patients”.
- The Master Patient List can be used to view all of these patients.

# Getting Started

## Viewing Master Patients

- Master Patients can be filtered by eCQM.

cypress 3.2.3 Dashboard Master Patient List dczulada@mitre.org Admin Log Out

Master Patient List

Master Patient List

**Filter Patients**

Type to search by measure

**Annual Update Bundle**

2016 Bundle for the 2017 Reporting Period [Download](#)

2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) [Download](#)

**All Patients**

Patient Name	DOB	Gender
1 AMI	January 3, 1949	Female
4 AMI	January 25, 1949	Female
5 AMI	January 12, 1949	Male
A AMI	January 7, 1949	Female
B AMI	January 5, 1949	Female
C AMI	January 7, 1949	Female
D AMI	January 12, 1949	Female

- Each bundle has a different set of test patients.
- Download will create a zip file with a Quality Reporting Document Architecture (QRDA) file for each patient.

# Getting Started

## Filtering Master Patients

cypress 3.2.3 [Dashboard](#) [Master Patient List](#) [dczulada@mitre.org](#) [Admin](#) [Log Out](#)

Master Patient List

Master Patient List

Filter Patients

Type to search by measure

CMS26

Annual Update Bundle

☐ 2016 Bundle for the 2017 Reporting Period [Download](#)

☒ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) [Download](#)

CMS26v5 Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver Patients

Patient Name	DOB	Gender	IPOP	DENOM	NUMER
B ASTHMA	February 8, 2009	Male	1	1	1
A ASTHMA	February 7, 2009	Male	1	1	0
Z1 N ASTHMA	October 18, 2006	Male	1	1	1
Total			3	3	2

- This filter shows patients in the 2017 Bundle who meet the Initial Population (IPOP) criteria for CMS26.

## Getting Started

# View / Edit User Information

The screenshot shows the Cypress 3.2.3 dashboard. The top navigation bar includes the Cypress logo, version 3.2.3, and links to Dashboard, Master Patient List, and a user profile for dczulada@mitre.org (highlighted with an orange box). There are also links for Admin and Log Out. Below the navigation bar, there is a 'Dashboard' button. The main content area is titled 'Favorite Vendors' and includes a '+ Add Vendor' button. It displays a table with columns for Vendor, Products, Passing, Failing, Errored, and Incomplete. The first row shows 'Sample Vendor' with 2 products, 2 passing, 0 failing, 0 errored, and 0 incomplete. There is an 'Edit Vendor' button next to it. Below this, there is a 'Vendors' section with a similar table. The first row shows 'Second Vendor' with 0 products, 0 passing, 0 failing, 0 errored, and 0 incomplete. There is an 'Add Product' button next to it and an 'Edit Vendor' button.

Vendor	Products	Passing	Failing	Errored	Incomplete
Sample Vendor	2	2	0	0	0

Vendor	Products	Passing	Failing	Errored	Incomplete
Second Vendor	0	0	0	0	0

- Clicking on your username will bring you to a page that will allow you to edit your user account or view your recent activity.

# Getting Started

## View User Account

### ■ User Stats

cypress 3.2.3 [Dashboard](#) [Master Patient List](#) [dczulada@mitre.org](#) [Admin](#) [Log Out](#)

Edit User

#### Account Details

Registered Friday at 9:21am  
Vendors 2  
Products 2

#### Recent Activity

Product	Test Name	Task	Results	Last Updated
1 (Sample Vendor)	CMS149v6 Dementia: Cognitive Assessment	C3 (QRDA-I)	✓ Passed	⌚ a minute ago
1 (Sample Vendor)	CMS149v6 Dementia: Cognitive Assessment	C1 (QRDA-I)	✓ Passed	⌚ a minute ago

- Recent activity is displayed with links to results.

### ■ Change user password

#### Edit User

Email

dczulada@mitre.org

Password

*we need your current password to confirm your changes*

New Password

*leave blank if you don't want to change it*

Confirm New Password

Edit User

Back

#### Delete Account

Once you delete your account you cannot get it back. Be sure you want to do this.

Delete Account



# Administrative Features

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# Administrative Features

## Administrative Setting

cypress 3.2.3

Dashboard Master Patient List dczulada@mitre.org **Admin** Log Out

Dashboard

Favorite Vendors [+ Add Vendor](#)

Vendor	Products	Passing	Failing	Errored	Incomplete	
★ Sample Vendor	2				2	<a href="#">Edit Vendor</a>

Vendors

Vendor	Products	Passing	Failing	Errored	Incomplete	
★ Second Vendor	<a href="#">+ Add Product</a>					<a href="#">Edit Vendor</a>

- An “Admin” user can change the administrative settings of Cypress.

# Administrative Features

## Current Application Settings

**Admin**

**Application Settings** | User Management | Bundles | Application Status

### Banner Message

[Edit Application Settings](#)

This server is for demonstration purposes; data on it will be removed every Saturday at 11:59 PM Eastern Time

### Sign in Warning Message

This warning banner provides privacy and security notices consistent with applicable federal laws, directives, and other federal guidance for accessing this Government system, which includes all devices/storage media attached to this system. This system is provided for Government-authorized use only. Unauthorized or improper use of this system is prohibited and may result in disciplinary action and/or civil and criminal penalties. At any time, and for any lawful Government purpose, the government may monitor, record, and audit your system usage and/or intercept, search and seize any communication or data transiting or stored on this system. Therefore, you have no reasonable expectation of privacy. Any communication or data transiting or stored on this system may be disclosed or used for any lawful Government purpose.

### Display Banner?

No

#### Mailer

Cypress URL	localhost
Cypress Port	3000
SMTP Server	not configured
Port	not configured
Domain	not configured
Username	not configured

#### Application Mode

Cypress is currently running in **ATL mode**. Users **will not** be automatically approved. Access **will** be restricted by role. A default role **will not** be set for new users. Debug features are currently **disabled**.

- The email server is not yet configured.

- Default “ATL” settings are displayed.

# Administrative Features

## Edit Application Settings

- Custom banner messages are displayed.

- “Custom” application modes are all disabled in “ATL” mode.

The screenshot shows the 'Edit Settings' interface for an application. It is divided into three main sections, each highlighted with an orange border:

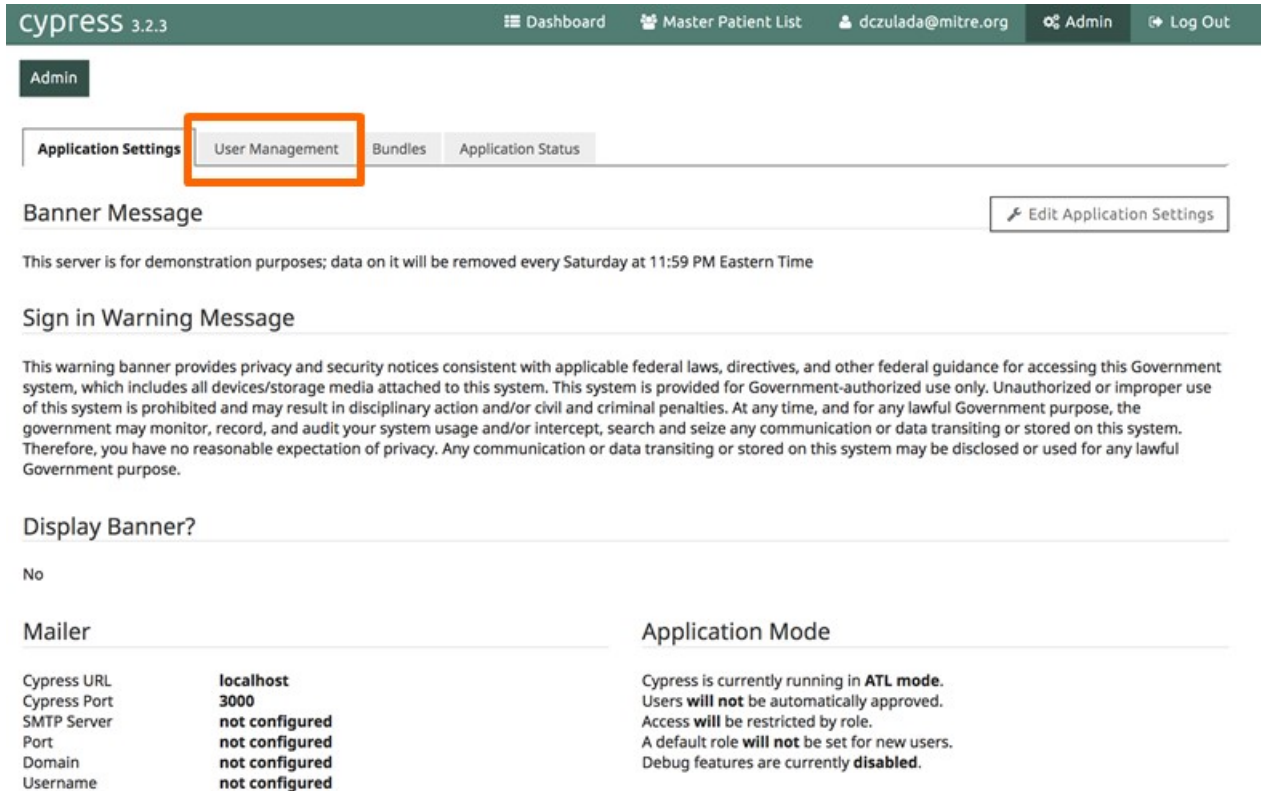
- Banner:** Contains two text areas for custom messages. The first says: 'This server is for demonstration purposes; data on it will be removed every Saturday at 11:59 PM Eastern Time'. The second says: 'This warning banner provides privacy and security notices consistent with applicable federal laws, directives, and other federal guidance for accessing this Government system, which includes all devices/storage media attached to this system. This system is provided for Government-authorized use only.' Below these is a checkbox labeled 'Display banner/warning?'.
- Email Settings:** Contains several input fields: 'Cypress Instance URL' (set to 'localhost'), 'Instance Port' (set to '3000'), 'SMTP Server', 'Port', 'Mailer Domain', 'Mailer Username', and 'Mailer Password'.
- Application Mode:** Contains a list of radio buttons for 'Internal', 'Demo', 'ATL', and 'Custom'. The 'Custom' option is selected. Below this is a section titled 'Custom Mode Options' with three toggle switches: 'Auto Approve' (set to 'Disable'), 'Ignore Roles' (set to 'Disable'), and 'Debug Features' (set to 'Disable'). At the bottom is a dropdown menu for 'Default role' set to 'None'.

At the bottom of the form are two buttons: 'Edit Settings' and 'Cancel'.

- Users can enter email configuration information.

# Administrative Features

## User Management



The screenshot shows the Cypress 3.2.3 Admin interface. The top navigation bar includes links for Dashboard, Master Patient List, a user profile (dczulada@mitre.org), Admin, and Log Out. The left sidebar has an 'Admin' button. The main content area has a navigation menu with 'Application Settings', 'User Management' (highlighted with an orange box), 'Bundles', and 'Application Status'. Below this, the 'Banner Message' section displays a server notice. The 'Sign in Warning Message' section contains a detailed privacy and security notice. The 'Display Banner?' section has a 'No' option. The 'Mailer' section lists configuration details for the email server. The 'Application Mode' section indicates the system is in 'ATL mode' with various restrictions.

**Admin**

**Application Settings** User Management Bundles Application Status

**Banner Message** [Edit Application Settings](#)

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**Sign in Warning Message**

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**Display Banner?**

No

**Mailer**

Cypress URL	localhost
Cypress Port	3000
SMTP Server	not configured
Port	not configured
Domain	not configured
Username	not configured

**Application Mode**

Cypress is currently running in **ATL mode**.  
 Users **will not** be automatically approved.  
 Access **will** be restricted by role.  
 A default role **will not** be set for new users.  
 Debug features are currently **disabled**.

## Administrative Features

# Manage Users

Admin

Application Settings	User Management	Bundles	Application Status
Email	Role	Approved	Assignments
dczulada@mitre.org	user	true	owner owner Sample Vendor Second Vendor
john.doe@vendor.com		false	

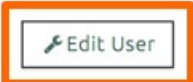
Edit User

- By default, a new user will not be approved.
- Clicking “false” will toggle the setting and “approve the user”.

# Administrative Features

## Edit User

Admin

Application Settings <b>User Management</b> Bundles   Application Status				
Email	Role	Approved	Assignments	
dczulada@mitre.org	user	true	owner owner	Sample Vendor Second Vendor
john.doe@vendor.com		true		

- **John.doe@vendor.com** is now approved to use Cypress.
- Click “Edit User” to set role and permissions.

## Administrative Features

# Add Role and Permission

Admin > Edit Users

### Edit User

Email  
john.doe@vendor.com

Assignments:  
Role Vendor Vendor Sample Vendor Add Assignment

Role  
☐ Admin  
☐ Atl  
☒ User

Edit User Cancel

### Delete User

Be sure you want to do this.

Delete User

- Vendors should be limited to “User” role.
- “Add Assignment” for each “Vendor” accessible to the user.



## Administrative Features

# Vendor Accounts Have Limited Access

cypress 3.2.3

Dashboard Master Patient List john.doe@vendor.com Log Out

Dashboard

Vendors

+ Add Vendor

Vendor	Products	✓ Passing	✗ Failing	! Errored	○ Incomplete
☆ Sample Vendor	2				2

Edit Vendor

- [John.doe@vendor.com](#) account is limited to viewing the “Sample Vendor” assigned to him.

# Administrative Features

## Bundle Management

cypress 3.2.3
Dashboard
Master Patient List
dczulada@mitre.org
Admin
Log Out

Admin

Application Settings
User Management
Bundles
Application Status

Banner Message

Edit Application Settings

This server is for demonstration purposes; data on it will be removed every Saturday at 11:59 PM Eastern Time

Sign in Warning Message

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Display Banner?

No

Mailer

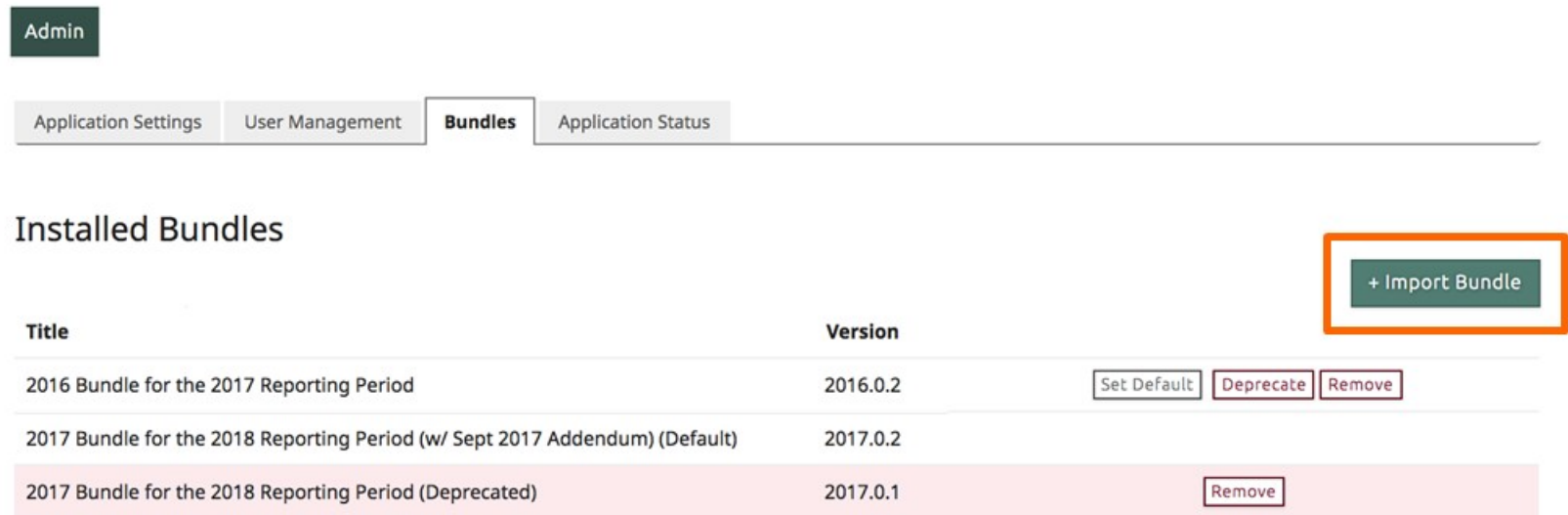
Cypress URL	localhost
Cypress Port	3000
SMTP Server	not configured
Port	not configured
Domain	not configured
Username	not configured

Application Mode

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## Administrative Features

# Import a New Bundle (1 of 3)



Admin

Application Settings User Management **Bundles** Application Status

### Installed Bundles

**+ Import Bundle**

Title	Version	
2016 Bundle for the 2017 Reporting Period	2016.0.2	Set Default Deprecate Remove
2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) (Default)	2017.0.2	
2017 Bundle for the 2018 Reporting Period (Deprecated)	2017.0.1	Remove

- Use “Import Bundle” to add a new bundle to Cypress.

# Administrative Features

## Import a New Bundle (2 of 3)

The image shows two overlapping screenshots. The background screenshot is the 'Cypress 3 Initial Setup' page on the GitHub wiki for 'projectcypress / cypress'. It features a list of bundles for download, with the 2015, 2016, and 2017 Annual Updates highlighted by an orange box. The foreground screenshot is a modal dialog titled 'Import Bundle' with a 'Choose File' button and 'Import Bundle' and 'Cancel' buttons.

**Import Bundle Dialog:**

- Bundle: Choose File (No file chosen)
- Buttons: Import Bundle, Cancel

**Cypress 3 Initial Setup Page:**

### Cypress 3 Initial Setup

dczulada edited this page 11 days ago · 8 revisions

#### Cypress Bundle Install

You will need an NLM VSAC account to download value set definitions and finalize the installation of the VM. You can sign up for an NLM VSAC account at <https://uts.nlm.nih.gov/home.html>. Click the 'Sign Up' link in the upper right of the page.

Bundles are now installed through the Cypress web interface:

- Download your bundle of choice. You will be prompted for your NLM VSAC credentials before the download begins:
  - 2015 Annual Update (2015.0.0): [https://cypressdemo.healthit.gov/measure\\_bundles/bundle-2015.zip](https://cypressdemo.healthit.gov/measure_bundles/bundle-2015.zip)
  - 2016 Annual Update (2016.0.2): [https://cypressdemo.healthit.gov/measure\\_bundles/bundle-2016.zip](https://cypressdemo.healthit.gov/measure_bundles/bundle-2016.zip)
  - 2017 Annual Update (2017.0.3): [https://cypressdemo.healthit.gov/measure\\_bundles/bundle-2017.zip](https://cypressdemo.healthit.gov/measure_bundles/bundle-2017.zip)
- Navigate to the IP address/URL of your Cypress install. This will vary based on your installation method.

**Links:**

- Cypress Homepage
- Cypress JIRA
- Cypress Talk List

**Install Instructions:**

- Cypress 3.2.3
- Cypress 3.2.3 Upgrade
- 2017.0.1 Bundle Patch
- Cypress Validation Utility
- Install FAQs

**Clone this wiki locally**

<https://github.com/projectcypress/cypress>

Clone in Desktop

- The current Bundles are listed on the “Initial Setup” page of Cypress installation instructions.

<https://github.com/projectcypress/cypress/wiki/Cypress-3-Initial-Setup>

## Administrative Features

# Import a New Bundle (3 of 3)

- Cypress and Cypress Bundle versions are discussed during the biweekly Cypress Tech Talks.

### Cypress Versions

Version	Dates	Measures Supported
V 3.2.3	December 14, 2017	Patch release to support the 2014 ONC Certification Edition

Bundle Version	Dates	
2015.0.0	July 28, 2016	Measures released in 2015 for the 2016 reporting year
2016.0.2	July 27, 2017	Measures released in 2016 for the 2017 reporting year (January 2017 addendum) Increased Measure Logic Coverage from 80% to 95% Patient data moved from CY2015 to CY2016
2017.0.2	October 24, 2017	Addendum updates the eCQM value sets (posted September 29, 2017)
2017.0.3	April 24, 2018	"Z1 BH Adult" updated for CMS128v6

# Administrative Features

## Common Bundle Import Errors

Admin

Application Settings User Management **Bundles** Application Status

### Installed Bundles

+ Import Bundle

Title	Version	
2016 Bundle for the 2017 Reporting Period	2016.0.2	Set Default Deprecate Remove
2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) (Default)	2017.0.2	
2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) (Default)	2017.0.3	
2017 Bundle for the 2018 Reporting Period (Deprecated)	2017.0.1	Remove

### Current Bundle Import Jobs

File	Status	
bundle-2017.zip	failed	<p>E11000 duplicate key error index:  cypress_3_2_3.patient_cache.\$value.measure_id_1_value.sub_id_1_value.effective_date_1_value.patient_id_1  dup key: { : "40280382-5ABD-FA46-015B-49B2128438CB", : null, : 1483228799.0, :  "55479e08636f6e5a587d8a00" } (11000)</p>

- If you try to install two bundles for the same reporting period, you will receive an error.

## Administrative Features

# Deprecate Older Bundle Before Importing New Bundle

Admin

Application Settings User Management **Bundles** Application Status

### Installed Bundles

+ Import Bundle

Title	Version	
2016 Bundle for the 2017 Reporting Period (Default)	2016.0.2	
2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum)	2017.0.2	Set Default Deprecate Remove
2017 Bundle for the 2018 Reporting Period (Deprecated)	2017.0.1	Remove

- When deprecating a bundle, all previously created tests can still be accessed and run.
- No new tests can be created with a deprecated bundle.

# Administrative Features

## Import a New Bundle

Admin

Application Settings User Management **Bundles** Application Status

### Installed Bundles

+ Import Bundle

Title	Version	
2016 Bundle for the 2017 Reporting Period (Default)	2016.0.2	
2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum)	2017.0.3	Set Default Deprecate Remove
2017 Bundle for the 2018 Reporting Period (Deprecated)	2017.0.1	Remove
2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) (Deprecated)	2017.0.2	Remove

- When a new bundle is installed, select “Set Default” if you would like this to be preselected when creating new tests.



# Administrative Features

## Application Status

cypress 3.2.3
Dashboard
Master Patient List
dczulada@mitre.org
Admin
Log Out

Admin

Application Settings
User Management
Bundles
Application Status

Banner Message
Edit Application Settings

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Display Banner?

No

Cypress URL

Cypress Port

SMTP Server

Port

Domain

Username

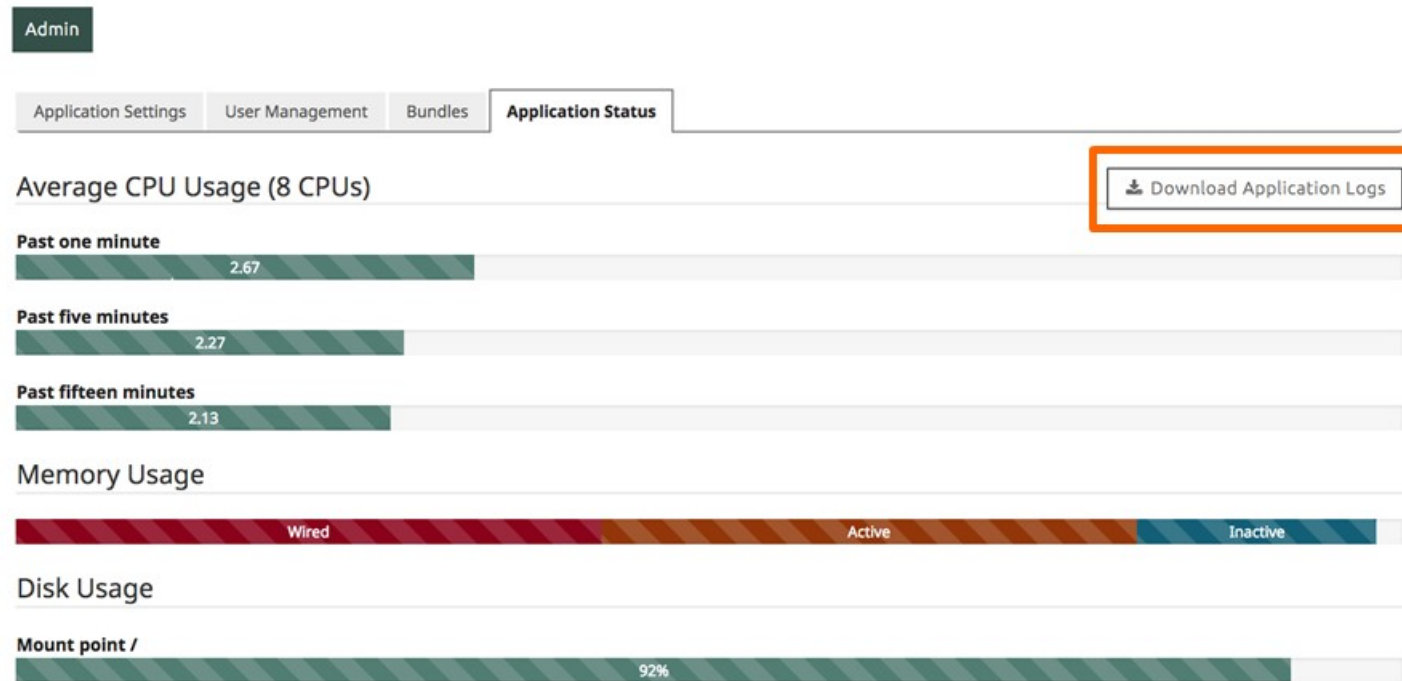
localhost  
3000  
not configured  
not configured  
not configured  
not configured

Application Mode

Cypress is currently running in **ATL mode**.  
Users **will not** be automatically approved.  
Access **will** be restricted by role.  
A default role **will not** be set for new users.  
Debug features are currently **disabled**.

# Administrative Features

## Application Logs



- Application logs are useful when debugging issues.

# Creating a Test

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## Creating a Test

# Adding a New Product (to a Vendor)

cypress 3.2.3 [Dashboard](#) [Master Patient List](#) [dczulada@mitre.org](#) [Admin](#) [Log Out](#)

[Dashboard](#)

### Favorite Vendors

[+ Add Vendor](#)

Vendor	Products	✓ Passing	✗ Failing	! Errored	○ Incomplete
★ <b>Sample Vendor</b>	2				2

[Edit Vendor](#)

### Vendors

Vendor	Products	✓ Passing	✗ Failing	! Errored	○ Incomplete
☆ <b>Second Vendor</b>	<a href="#">+ Add Product</a>				

[Edit Vendor](#)

- **Select the vendor for adding a new product.**

# Creating a Test

## Adding a New Product

Dashboard > Vendor: Sample Vendor

Sample Vendor

+ Add Product

Edit Vendor

### 2 Products

☆ 1	C1		C2	C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
✓ 2 Passing Tests		1			1			
✗ 0 Failing Tests								
○ 4 Not started Tests	1		1	1		1		

☆ 149	C1		C2	C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
✓ 0 Passing Tests								
✗ 0 Failing Tests								
○ 6 Not started Tests	1	1	1	1	1	1		

# Creating a Test

## Add Product (1 of 7)

- Product details include name, version, and description.
- Name is the only “Required” field.

Dashboard Vendor: Sample Vendor Add Product

### Add Product

**Name**

**Version**

**Description**

**Certification Edition**

☐ 2014 Edition  
☒ 2015 Edition

Select the certification edition.

**Certification Types**

☐ C1 Test  
☐ C2 Test  
☐ C3 Test  
☐ C4 Test

Select the certification type Cypress should use to certify this product

**Annual Update Bundle**

☒ 2016 Bundle for the 2017 Reporting Period 2016.0.2  
☐ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) 2017.0.3

Select the measure versions Cypress should use to certify this product.

☐ Shift Records

Selecting Shift Records will move patient data forward into the appropriate reporting period. Otherwise patient data will remain in a previously completed calendar year.

**Measures Options**

☐ Eligible Hospital eCQMs  
☐ Eligible Professional eCQMs  
☐ All eCQMs  
☐ Custom...

Indicate the clinical quality measures Cypress should use to certify this product. Testing will be performed on a measure-by-measure basis. Click 'Custom' to specify individual measures.

Add Product Cancel

# Creating a Test

## Add Product (2 of 7)

- 2015 is the default Certification Edition.

Dashboard Vendor: Sample Vendor Add Product

### Add Product

**Name**

**Version**

**Description**

**Certification Edition**

☐ 2014 Edition

☒ 2015 Edition

Select the certification edition.

**Certification Types**

☐ C1 Test

☐ C2 Test

☐ C3 Test

☐ C4 Test

Select the certification type Cypress should use to certify this product

**Annual Update Bundle**

☒ 2016 Bundle for the 2017 Reporting Period 2016.0.2

☐ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) 2017.0.3

Select the measure versions Cypress should use to certify this product.

☐ Shift Records

Selecting Shift Records will move patient data forward into the appropriate reporting period. Otherwise patient data will remain in a previously completed calendar year.

**Measures Options**

☐ Eligible Hospital eCQMs

☐ Eligible Professional eCQMs

☐ All eCQMs

☐ Custom...

Indicate the clinical quality measures Cypress should use to certify this product. Testing will be performed on a measure-by-measure basis. Click 'Custom' to specify individual measures.

Add Product Cancel

# Creating a Test

## Add Product (3 of 7)

- Select any combination of certification types.

Dashboard Vendor: Sample Vendor Add Product

### Add Product

**Name**

**Version**

**Description**

**Certification Edition**

☐ 2014 Edition

☒ 2015 Edition

Select the certification edition.

**Certification Types**

☐ C1 Test

☐ C2 Test

☐ C3 Test

☐ C4 Test

Select the certification type Cypress should use to certify this product

**Annual Update Bundle**

☒ 2016 Bundle for the 2017 Reporting Period 2016.0.2

☐ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) 2017.0.3

Select the measure versions Cypress should use to certify this product.

☐ Shift Records

Selecting Shift Records will move patient data forward into the appropriate reporting period. Otherwise patient data will remain in a previously completed calendar year.

**Measures Options**

☐ Eligible Hospital eQMs

☐ Eligible Professional eQMs

☐ All eQMs

☐ Custom...

Indicate the clinical quality measures Cypress should use to certify this product. Testing will be performed on a measure-by-measure basis. Click 'Custom' to specify individual measures.

**Add Product** Cancel



# Creating a Test

## Add Product (4 of 7)

Dashboard Vendor: Sample Vendor Add Product

### Add Product

**Name**

**Version**

**Description**

**Certification Edition**

☐ 2014 Edition

☒ 2015 Edition

*Select the certification edition.*

**Certification Types**

☐ C1 Test

☐ C2 Test

☐ C3 Test

☐ C4 Test

*Select the certification type Cypress should use to certify this product*

**Annual Update Bundle**

☒ 2016 Bundle for the 2017 Reporting Period 2016.0.2

☐ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) 2017.0.3

*Select the measure versions Cypress should use to certify this product.*

☐ Shift Records

*Selecting Shift Records will move patient data forward into the appropriate reporting period. Otherwise patient data will remain in a previously completed calendar year.*

**Measures Options**

☐ Eligible Hospital eCQMs

☐ Eligible Professional eCQMs

☐ All eCQMs

☐ Custom...

*Indicate the clinical quality measures Cypress should use to certify this product. Testing will be performed on a measure-by-measure basis. Click 'Custom' to specify individual measures.*

**Add Product** **Cancel**

- Cypress v3 supports the 2015, 2016, and 2017 bundles.

# Creating a Test

## Add Product (5 of 7)

Dashboard Vendor: Sample Vendor Add Product

### Add Product

**Name**

**Version**

**Description**

**Certification Edition**

☐ 2014 Edition  
☒ 2015 Edition

*Select the certification edition.*

**Certification Types**

☐ C1 Test  
☐ C2 Test  
☐ C3 Test  
☐ C4 Test

*Select the certification type Cypress should use to certify this product*

**Annual Update Bundle**

☒ 2016 Bundle for the 2017 Reporting Period 2016.0.2  
☐ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) 2017.0.3

*Select the measure versions Cypress should use to certify this product.*

☒ Shift Records

*Selecting Shift Records will move patient data forward into the appropriate reporting period. Otherwise patient data will remain in a previously completed calendar year.*

**Measures Options**

☐ Eligible Hospital eCQMs  
☐ Eligible Professional eCQMs  
☐ All eCQMs  
☐ Custom...

*Indicate the clinical quality measures Cypress should use to certify this product. Testing will be performed on a measure-by-measure basis. Click 'Custom' to specify individual measures.*

Add Product Cancel

- “Shift Records” moves a patient’s clinical data into the bundle’s “Reporting Period”.

# Creating a Test

## Add Product (6 of 7)

Dashboard Vendor: Sample Vendor Add Product

### Add Product

**Name**

**Version**

**Description**

**Certification Edition**

☐ 2014 Edition

☒ 2015 Edition

*Select the certification edition.*

**Certification Types**

☐ C1 Test

☐ C2 Test

☐ C3 Test

☐ C4 Test

*Select the certification type Cypress should use to certify this product*

**Annual Update Bundle**

☒ 2016 Bundle for the 2017 Reporting Period 2016.0.2

☐ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) 2017.0.3

*Select the measure versions Cypress should use to certify this product.*

☐ Shift Records

*Selecting Shift Records will move patient data forward into the appropriate reporting period. Otherwise patient data will remain in a previously completed calendar year.*

**Measures Options**

☐ Eligible Hospital eCQMs

☐ Eligible Professional eCQMs

☐ All eCQMs

☒ Custom...

*Indicate the clinical quality measures Cypress should use to certify this product. Testing will be performed on a measure-by-measure basis. Click 'Custom' to specify individual measures.*

**Add Product** **Cancel**

- “Custom” allows a user to select any combination of eCQMs.

## Creating a Test

### Add Product (7 of 7)

Select Custom Measures (0) Clear all

Type to filter by measure

heart

Core (1 EP)

Heart (2 EP)

☐ CMS90v7 Functional Status Assessments for Congestive Heart Failure (EP)

Select Custom Measures (0) Clear all

Type to filter by measure

cms123

Diabetes (1 EP)

☐ CMS123v6 Diabetes: Foot Exam (EP)

- When selecting measures to add to a product, use filtering to find measures by keyword or CMS ID.

# Creating a Test Favorite Products

Dashboard Vendor: Sample Vendor

Sample Vendor + Add Product Edit Vendor

### 1 Favorite Product

★ Sample Product	C1		C2	C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
✓ 0 Passing Tests								
✗ 0 Failing Tests								
○ 302 Not started Tests	4	71	71	4	71	71	5	5

### 2 Products

☆ 1	C1		C2	C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
✓ 2 Passing Tests		1			1			
✗ 0 Failing Tests								
○ 4 Not started Tests	1		1	1		1		

- A user can select a “Favorite” product that will always display at the top of the vendor’s products page.

# Creating a Test

## Building a Product

Dashboard
Vendor: Sample Vendor
Product: Sample Product

Sample Product
Edit Product
Download Report

✓ 0 Passing Tests  
✗ 0 Failing Tests  
○ 302 Not started Tests

C1		C2	C3			C4	
Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
4	71	71	4	71	71	5	5

Download Full Test Deck  
Patient records are being built for each measure.  
29 of 71 measures ready

C1 + C3 Sample
C1 + C3 (QRDA-I)
C2 + C3 (QRDA-III)
C4 (QRDA-I and QRDA-III)

Validate the EHR system for C1 and C3 certifications by entering specified patient data for the following measures.

View Record Sample

Upload Results	C1 Upload Results	C3 Upload Results	Status
○ Not Started	○ Not Started	○ Not Started	○ Not Started

Data Criteria Verification	Status
CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan	Not Started
CMS108v6 Venous Thromboembolism Prophylaxis	Not Started
CMS138v6 Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	Not Started
CMS145v6 Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	Not Started

# Creating a Test

## Downloading Test Decks

Dashboard
Vendor: Sample Vendor
Product: Sample Product

Sample Product
Edit Product
Download Report

	C1		C2	C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
✓ 0 Passing Tests								
✗ 0 Failing Tests								
○ 302 Not started Tests	4	71	71	4	71	71	5	5

Download Full Test Deck

This download contains a folder for each measure selected for this product. Inside these folders are XML documents for each patient associated with that measure.

Download All Patients (.zip)

C1 + C3 Sample
C1 + C3 (QRDA-I)
C2 + C3 (QRDA-III)
C4 (QRDA-I and QRDA-III)

Validate the EHR system for C1 and C3 certifications by entering specified patient data for the following measures.

View Record Sample

- **“Download All Patients” will download a zip file containing:**
  - Test decks for each individual measure test
  - Test deck and filter criteria for “C4” Filter test
  - Data Criteria for C1 Record Sample Test
  - Sample patients for C1 Record Sample Test

# Running a Test / C1 Record Sample

---



## Running a Test

# C1 Record Sample

C1 + C3 Sample

C1 + C3 (QRDA-I)

C2 + C3 (QRDA-III)

C4 (QRDA-I and QRDA-III)

Validate the EHR system for C1 and C3 certifications by entering specified patient data for the following measures.

[View Record Sample](#)

Upload Results

☐ Not Started

C1 Upload Results

☐ Not Started

C3 Upload Results

☐ Not Started

Status

☐ Not Started

Data Criteria Verification

Status

CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan

Not Started

CMS108v6 Venous Thromboembolism Prophylaxis

Not Started

CMS138v6 Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention

Not Started

CMS145v6 Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF &lt;40%)

Not Started

- **“View Record Sample” will take you to the top of the Record Sample Test.**
- **The eCQM name will take you to the location of that measure on the Record Sample page.**

## Running a Test

# C1 Record Sample (1 of 3)

The screenshot shows a web application interface for 'Record Sample'. At the top, there are navigation tabs: 'Dashboard', 'Vendor: Sample Vendor', 'Product: Sample Product', and 'Record Sample'. Below these are sub-tabs: 'C1', 'C2', 'C3', and 'C4'. The main heading is 'Record Sample'. A button labeled 'Download Criteria List' with a download icon is highlighted with an orange border. Below this is a section titled '1 ⚡ Record Sample Instructions' containing a list of instructions:

- Fill in the Data Criteria fields below.
  - If a Data Criteria has value sets listed, an appropriate code needs to be entered into the "Recorded Code" text box.
  - If an Attribute has a value set, an appropriate code needs to be entered into the "Recorded Attribute Code" text box.
  - Codes are validated upon saving.
  - Result, Date Times, Cumulative Medication Durations, Fulfills, and Length of Stay are to be recorded as free text. ATLS will record the values they have observed being entered into the system under test.
- Create (at least) one patient for each measure below. Patients may be created using a user interface, or may be created as a structured document to be imported into the system under test.
  - There are no requirements on what format the structured data artifact must be. Could be CCDA, QRDA, or other formats.
  - This structured data artifact needs to be created at the time of certification
  - The created patients must contain all required Data Criteria, for the selected measures, to pass certification.
  - Export the created patients as QRDA Category I, and create a zip file.
- Upload zip file with created test patients.

- **“Download Criteria List” creates a downloadable listing of criteria to be included in the vendor-generated test patients.**
  - The list includes sample patients (that meet IPOP criteria for selected eCQMs).

## Running a Test

# C1 Record Sample (2 of 3)

Edit Test

CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan

Validated in QRDA	Data Criteria	Section	Required Attributes	Value Set(s)	Recorded Code/Attribute Value
		Valuesets		Referrals where weight assessment may occur 2.16.840.1.113883.3.600.1.1527	<div>Code</div> <div>103698003</div>
	Intervention, Order				
		Attributes	Reason	Underweight SNOMEDCT Value Set 2.16.840.1.113883.3.600.2388	<div>Attribute code</div> <div></div>
		Valuesets		Negate entire Valueset	<div>Selected negated valueset</div> <div>Above Normal Medications - 2.16.840.1.113883.3.600.1.1502</div>
	Medication, Order				
		Attributes	Negation Code	Medical or Other reason not done 2.16.840.1.113883.3.600.1.1502	<div>Attribute code</div> <div></div>

- Use input boxes for recording observations of vendor entries for their test patients.
  - The entry can be a coded value or textual description.

# Running a Test

## C1 Record Sample (3 of 3)

Edit Test

CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan

Validated in QRDA	Data Criteria	Section	Required Attributes	Value Set(s)	Recorded Code/Attribute Value
		Valuesets		Referrals where weight assessment may occur 2.16.840.1.113883.3.600.1.1527	Code 103698003
	Intervention, Order				
		Attributes	Reason	Underweight SNOMEDCT Value Set 2.16.840.1.113883.3.600.2388	Attribute code
		Valuesets		Negate entire Valueset	Selected negated valueset
	Medication, Order				
		Attributes	Negation Code	Medical or Other reason not done 2.16.840.1.113883.3.600.1.1502	

List of codes

Filter codes

Patient referral to non-physician provider (procedure): 103698003

Patient referral to dietitian (procedure): 103699006

Referral to physician (procedure): 183515008

Referral to psychiatry service (procedure): 183524004

Refer to mental health worker (procedure): 183583007

Referred by another general practitioner (finding): 18539002

Referral by mental health counselor (procedure): 305922005

Referral to liaison psychiatry service (procedure): 306136006

Referral to dietetics service (procedure): 306163007

Referral to community-based dietetics service (procedure): 306164001

Referral to hospital-based dietetics service (procedure): 306165000

- Look up allowable codes by clicking on “Valuesets”.
- Clicking on a code will populate the input box.

## Running a Test

# Editing a C1 Record Sample Test

**Edit Test**

**CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan**

Validated in QRDA	Data Criteria	Section	Required Attributes	Value Set(s)	Recorded Code/Attribute Value
		Valuesets		Referrals where weight assessment may occur 2.16.840.1.113883.3.600.1.1527	Code <input type="text"/>
	Intervention, Order				
		Attributes	Reason	Underweight SNOMEDCT Value Set 2.16.840.1.113883.3.600.2388	Attribute code <input type="text"/>
		Valuesets		Negate entire Valueset	Selected negated valueset Above Normal Medications - 2.16.840.1.113883.3.600.1.1502
	Medication, Order				
		Attributes	Negation Code	Medical or Other reason not done 2.16.840.1.113883.3.600.1.1502	Attribute code <input type="text"/>

- Some eCQMs may have multiple ways of expressing the same clinical information.
  - Use “Edit Test” to edit a C1 Record Test to change the Data Criteria required for a specific C1 Record Sample test.

## Running a Test

# Editing a C1 Record Sample Test

**Edit Test**

**CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan**

Data Criteria	Section	Required Attributes	Value Set(s)	Toggle Negation	Swap Criteria
Intervention, Order	Valuesets		Referrals where weight assessment may occur 2.16.840.1.113883.3.600.1.1527		Replacement data criteria Intervention, Order: Referrals when
	Attributes	Reason	Underweight SNOMEDCT Value Set 2.16.840.1.113883.3.600.2388		
Medication, Order	Valuesets		Negate entire Valueset	<input checked="" type="checkbox"/>	Replacement data criteria Medication, Order: Below Normal N
	Attributes	Negation Code	Medical or Other reason not done 2.16.840.1.113883.3.600.1.1502		

- **When editing a C1 Record Sample Test, you can**
  - Swap Criteria
    - Replace one data criteria with another
  - Toggle Negation
    - Switch between negation of a valueset to negation of an individual code

## Running a Test

# Swapping Data Criteria in C1 Record Sample (1 of 3)

## ■ Common request for swapping criteria in CMS145, CMS144, CMS135

### • Denominator =

- AND: Initial Population
- AND: Union of:
  - "Diagnostic Study, Performed: Ejection Fraction (result < 40 %)"
  - "Diagnosis: Moderate or Severe LVSD"
  - "Diagnosis: Left Ventricular Systolic Dysfunction (severity: Moderate or Severe)"
  - Starts before end of Occurrence A of \$CADencounters145

CMS145v6 Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)

Data Criteria	Section	Required Attributes	Value Set(s)	Toggle Negation	Swap Criteria
Diagnosis	Valuesets		Left Ventricular Systolic Dysfunction 2.16.840.1.113883.3.526.3.1091		Replacement data criteria Diagnosis: Left Ventricular Systolic ⌵
	Attributes	Severity	Moderate or Severe Grouping Value Set 2.16.840.1.113883.3.526.3.1092		



## Running a Test

# Swapping Data Criteria in C1 Record Sample (2 of 3)

## ■ Common request for swapping criteria in CMS145, CMS144, CMS135

### • Denominator =

- AND: Initial Population
- AND: Union of:
  - "Diagnostic Study, Performed: Ejection Fraction (result < 40 %)"
  - Diagnosis: Moderate or Severe LVSD
  - "Diagnosis: Left Ventricular Systolic Dysfunction (severity: Moderate or Severe)"
  - starts before end of Occurrence A of \$CADEncounters145

CMS145v6 Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction Dysfunction (LVEF <40%)				
Data Criteria	Section	Required Attributes	Value Set(s)	Toggle Negation
Diagnosis	Valuesets		Left Ventricular Systolic Dysfunction 2.16.840.1.113883.3.526.3.1091	
	Attributes	Severity	Moderate or Severe Grouping Value Set 2.16.840.1.113883.3.526.3.1092	

Device, Applied:	
Diagnosis: Allergy to Beta Blocker Therapy	
Diagnosis: Arrhythmia	
Diagnosis: Asthma	
Diagnosis: Atrioventricular Block	
Diagnosis: Bradycardia	
Diagnosis: Cardiac Pacer in Situ	
Diagnosis: Coronary Artery Disease No MI	
Diagnosis: Hypotension	
Diagnosis: Intolerance to Beta Blocker Therapy	
✓ Diagnosis: Left Ventricular Systolic Dysfunction	
Diagnosis: Moderate or Severe LVSD	
Diagnosis: Myocardial Infarction	
Encounter, Performed: Care Services in Long-term Residential Facility	
Encounter, Performed: Face-to-Face Interaction	



## Running a Test

# Swapping Data Criteria in C1 Record Sample (3 of 3)

- Common request for swapping criteria in CMS145, CMS144, CMS135

- Denominator =

- AND: Initial Population
- AND: Union of:
  - "Diagnostic Study, Performed: Ejection Fraction (result < 40 %)"
  - "Diagnosis: Moderate or Severe LVSD"
  - "Diagnosis: Left Ventricular Systolic Dysfunction (severity: Moderate or Severe)"
  - starts before end of Occurrence A of \$CADEncounters145

Diagnostic Study, Performed	Valuesets	Ejection Fraction 2.16.840.1.113883.3.526.3.1134	Code <input type="text"/>
	Attributes	Result	Recorded result <input type="text"/>

# Saving the C1 Record Sample Form

Validated in QRDA	Data Criteria	Section	Required Attributes	Value Set(s)	Recorded Code/Attribute Value
Intervention, Order	Valuesets			Referrals where weight assessment may occur 2.16.840.1.113883.3.600.1.1527	✓ Code 103698003
				Underweight SNOMEDCT Value Set 2.16.840.1.113883.3.600.2388	✓ Attribute code 162769006
	Attributes	Reason			
Medication, Order	Valuesets			Negate entire Valueset	✓ Selected negated valueset Above Normal Medications - 2.16.840.1.113883.3.600.1.1498
	Attributes	Negation Code	Medical or Other reason not done 2.16.840.1.113883.3.600.1.1502	✓ Attribute code 428119001	
Physical Exam, Performed	Valuesets			Negate entire Valueset	✓ Selected negated valueset BMI LOINC Value - 2.16.840.1.113883.3.600.1.1575
	Attributes	Negation Code	Patient Reason refused 2.16.840.1.113883.3.600.791	✓ Attribute code 105480006	
Patient Characteristic Race	Valuesets			Race 2.16.840.1.114222.4.11.836	✓ Code 2076-8
	Attributes				
Medication, Order	Valuesets			Above Normal Medications 2.16.840.1.113883.3.600.1.1498	✓ Code 1112982
				Below Normal Medications 2.16.840.1.113883.3.600.1.1499	
Encounter, Performed	Valuesets			BMI Encounter Code Set 2.16.840.1.113883.3.600.1.1751	✗ Code 108220006
				Palliative care encounter 2.16.840.1.113883.3.600.1.1575	
	Attributes				

Save

- **Invalid Code**

## Running a Test

# Uploading QRDA Cat I Document for C1 Record Sample

**2 ⚡ Upload Files**

Upload results from the EHR system in the form of a zip file of QRDA Category I documents to get test results. This will automatically run a test execution.

Select file

- **“Select File” for file upload will become enabled once the C1 Record Sample Form is filled in and all of the codes have been verified.**

## Running a Test

# Validating QRDA Cat I Documents for C1 Record Sample

- After uploading a zip file of QRDA documents, Cypress will verify that all of the information record in the form is in one of the uploaded QRDA documents.

CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan

Validated in QRDA	Data Criteria	Section	Required Attributes	Value Set(s)	Recorded Code/Attribute Value
		Intervention, Order	Valuesets	Referrals where weight assessment may occur 2.16.840.1.113883.3.600.1.1527	Code 308470006
		Attributes	Reason	Underweight SNOMEDCT Value Set 2.16.840.1.113883.3.600.2388	Attribute code 162769006
✓		Medication, Order	Valuesets	Negate entire Valueset	Selected negated valueset Above Normal Medications - 2.16.840.1.113883.3.600.1.1498
		Attributes	Negation Code	Medical or Other reason not done 2.16.840.1.113883.3.600.1.1502	Attribute code 183932001
		Physical Exam, Performed	Valuesets	Negate entire Valueset	Selected negated valueset BMI LOINC Value - 2.16.840.1.113883.3.600.1.1751
		Attributes	Negation Code	Patient Reason refused 2.16.840.1.113883.3.600.791	Attribute code 105480006
✓		Patient Characteristic Race	Valuesets	Race 2.16.840.1.114222.4.11.836	Code 2054-5
		Attributes			
		Medication, Order	Valuesets	Above Normal Medications 2.16.840.1.113883.3.600.1.1498 Below Normal Medications 2.16.840.1.113883.3.600.1.1499	Code 1112982
		Attributes			
✓		Encounter, Performed	Valuesets	BMI Encounter Code Set 2.16.840.1.113883.3.600.1.1751 Palliative care encounter 2.16.840.1.113883.3.600.1.1575	Code 99203
		Attributes			

Save

- Medication, Order was not found.
- Encounter, Performed was found.

## Running a Test

# Viewing Results of C1 Record Sample

- Results display validation errors that are tied to a specific file.
  - For example, QRDA formatting

3 ⚡ View Results			
Upload Results	C1 Upload Results	C3 Upload Results	Status
View Results	✗ Failed	✓ Passed	✗ Failing
Data Criteria Verification			Status
CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan			Failing
CMS108v6 Venous Thromboembolism Prophylaxis			Not Started
CMS138v6 Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention			Not Started
CMS145v6 Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)			Not Started

3 ⚡ View Results			
Upload Results	C1 Upload Results	C3 Upload Results	Status
View Results	✗ Failed	✓ Passed	✗ Failing
Data Criteria Verification			Status
CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan			Failing
CMS108v6 Venous Thromboembolism Prophylaxis			Not Started
CMS138v6 Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention			Not Started
CMS145v6 Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)			Not Started

- This validation error indicates that Cypress could not find all data criteria for the failing eQM.

# Running a Test / C1/C3 Tests

---

# Running a Test

## C1/C3 Tests

Dashboard Vendor: Sample Vendor Product: Sample Product

Sample Product [Edit Product](#) [Download Report](#)

	C1		C2	C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
✓ 0 Passing Tests								
✗ 0 Failing Tests								
○ 302 Not started Tests	4	71	71	4	71	71	5	5

**Download Full Test Deck**

This download contains a folder for each measure selected for this product. Inside these folders are XML documents for each patient associated with that measure.

[Download All Patients \(.zip\)](#)

C1 + C3 Sample **C1 + C3 (QRDA-I)** C2 + C3 (QRDA-III) C4 (QRDA-I and QRDA-III)

Test the EHR system's ability to record and export (C1) and submit (C3) measure based data.

CMS ID	Measure Name	C1 Results	C3 Results	Quick Upload	Last Updated
CMS2v7	Preventive Care and Screening: Screening for Depression and Follow-Up Plan	○ Not Started	○ Not Started	<a href="#">upload</a>	○ an hour ago
CMS9v6	Exclusive Breast Milk Feeding	○ Not Started	○ Not Started	<a href="#">upload</a>	○ an hour ago
CMS22v6	Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented	○ Not Started	○ Not Started	<a href="#">upload</a>	○ an hour ago

- Complete a C1/C3 test for each eCQM.

# Running a Test

## C1/C3 Test Page

- Measure test information includes eCQM identifiers.
- The test deck zip file only contains patients for this eCQM.

Dashboard Vendor: Sample Vendor Product: Sample Product Test: Preventive Care and Screening: Screen...

C1 C2 C3 C4

Previous Test: CMS645v1 Next Test: CMS9v6

### Measure Test Information

**Measure:** Preventive Care and Screening: Screening for Depression and Follow-Up Plan  
**HQMF ID:** 40280382-5B4D-EEBC-015B-5844953B00A3  
**CMS ID:** CMS2v7

**Provider Name:** Parker, Jane  
**Provider NPI:** 1745446090  
**Provider TIN:** 310839152  
**Provider CCN:** 241387

View Patients

C1 and C3	C2 and C3
QRDA Errors --	QRDA Errors --
Reporting Errors --	Reporting Errors --
Submission Errors --	Submission Errors --
Warnings --	Warnings --
Execution Date --	Execution Date --

start

1 ⚡ Download Test Deck	2 ⚡ Upload Files
Download and import this data into your EHR clinical quality measure calculator.	Upload results from the EHR system in the form of a zip file of QRDA Category I documents to get test results. This will automatically run a test execution.
Download QRDA Category I (.zip)	Select file

- Use “Upload Files” to upload QRDA documents generated by the system under test.



# Running a Test

## C1/C3 Test Helpers

- Every test deck has a unique provider. Vendors can load in all test decks, and filter by provider for a specific test.

- “View Patients” provides an HTML rendering of every patient in the test deck.

Dashboard
Vendor: Sample Vendor
Product: Sample Product
Test: Preventive Care and Screening: Screen...

C1
C2
C3
C4

Previous Test: CMS645v1
Next Test: CMS9v6

Measure Test Information

Measure: Preventive Care and Screening: Screening for Depression and Follow-Up Plan  
HQMFI ID: 40280382-5B4D-EEBC-015B-5844953B00A3  
CMS ID: CMS2v7

Provider Name: Parker, Jane  
Provider NPI: 1745446090  
Provider TIN: 310839152  
Provider CCN: 241387

View Patients

C1 and C3

QRDA Errors --  
Reporting Errors --  
Submission Errors --  
Warnings --  
Execution Date --

C2 and C3

QRDA Errors --  
Reporting Errors --  
Submission Errors --  
Warnings --  
Execution Date --

start

1 Download Test Deck

Download and import this data into your EHR clinical quality measure calculator.  
Download QRDA Category I (.zip)

2 Upload Files

Upload results from the EHR system in the form of a zip file of QRDA Category I documents to get test results. This will automatically run a test execution.  
 Select file

# Running a Test

## View Patients

Dashboard	Vendor: Sample Vendor	Product: Sample Product	Test: Preventive Care and Screening: Screen...	Patient List
-----------	-----------------------	-------------------------	--	--------------

Patient List

[Download HTML Patients](#)

CMS2v7 Preventive Care and Screening: Screening for Depression and Follow-Up Plan Patients

Patient Name	Template Name	DOB	Gender	IPOP	DENOM	DENEX	NUMER	DENEXCEP
Aaron Vaughn	Z2 Cancer Male	May 3, 1955	Male					
Anna Ramirez	Z9 Heart Adult	March 9, 1960	Female					
Armando Lopez	Z5 BH Adult	July 2, 1993	Male					
Armando Schneider	Z10 BH Adult	January 25, 1976	Male					
Armando Figueroa	Z4 N Eye	February 28, 1973	Male					

- An ATL can see all test patients, and their expected calculation results.

Dashboard	Vendor: Sample Vendor	Product: Sample Product	Test: Preventive Care and Screening: Screen...	Patient List
-----------	-----------------------	-------------------------	--	--------------

Patient List

[Download HTML Patients](#)

CMS2v7 Preventive Care and Screening: Screening for Depression and Follow-Up Plan Patients

Patient Name	DOB	Gender
Aaron Vaughn	May 3, 1955	Male
Anna Ramirez	March 9, 1960	Female
Armando Lopez	July 2, 1993	Male
Armando Schneider	January 25, 1976	Male
Armando Figueroa	February 28, 1973	Male

- A vendor will not see the expected calculation results.

## Running a Test

# View Individual Patient (1 of 2)

Dashboard Vendor: Sample Vendor Product: Sample Product Test: Preventive Care and Screening: Screen... Patient List

Patient List

[Download HTML Patients](#)

CMS2v7 Preventive Care and Screening: Screening for Depression and Follow-Up Plan Patients

Patient Name	Template Name	DOB	Gender	IPOP	DENOM	DENEX	NUMER	DENEXCEP
Aaron Vaughn	Z2 Cancer Male	May 3, 1955	Male					
Anna Ramirez	Z9 Heart Adult	March 9, 1960	Female					
Armando Lopez	Z5 BH Adult	July 2, 1993	Male					

- Click on an individual's name to view the details in the patient's medical record.
- Download HTML Patients will download a zip file containing an HTML rendering of all of the test patients.

# Running a Test

## View Individual Patient (2 of 2)

Dashboard Vendor: Sample Vendor Product: Sample Product Test: Preventive Care and Screening: Screen... Patient List Patient: Aaron Vaughn

Patient Information for Aaron Vaughn

Measure Information

	IPOP	DENOM	NUMER	DENEX	DENEXCEP
CMS2v7 Preventive Care and ...					

Patient Details

DOB May 3, 1955  
 Gender Male  
 Race Native Hawaiian or Other Pacific Islander  
 Ethnicity Hispanic or Latino

Allergies

Assessments

Care Goals

Conditions

Diagnosis: Prostate Cancer

ICD-9-CM	185
SNOMED-CT	254900004
ICD-10-CM	C61
Start Time	February 6, 2018 8:00am

Encounters

Encounter, Performed: Office Visit

CPT	99203
Start Time	February 3, 2018 8:00am
End Time	February 3, 2018 9:00am

Encounter, Performed: Office Visit

CPT	99213
Start Time	March 5, 2018 8:00am
End Time	March 5, 2018 8:30am

- The information shown when viewing an individual patient is the patient's entire record.
- There may be information that is not relevant for the eCQM tested.

# Running a Test

## C1/C3 Test Results

### Measure Test Information

Measure: Preventive Care and Screening for Depression and Follow-Up Plan  
 HQMF ID: 40280382-5B4D-EEBC-015B-5B44953B00A3  
 CMS ID: CMS2v7

Provider Name: Parker, Jane  
 Provider NPI: 1745446090  
 Provider TIN: 310839152  
 Provider CCN: 241387

View Patients

C1 and C3	
QRDA Errors	1
Reporting Errors	7
Submission Errors	2
Warnings	0
Execution Date	May 14, 2018 5:52pm
✗ Failing	

### C2 and C3

QRDA Errors	--
Reporting Errors	--
Submission Errors	--
Warnings	--
Execution Date	--
start	

### Test results include:

— C1/C3 test status

1 Download Test Deck

Download and import this data into your EHR clinical quality measure calculator.

Download QRDA Category I (.zip)

2 Upload Files

Upload results from the EHR system in the form of a zip file of QRDA Category I documents to get test results. This will automatically run a test execution.

Select file

Results Most Recent - May 14, 2018 5:52pm (10 errors) Refresh View

✗ Failed with 10 errors

### Missing or Duplicate Files

- Records for patients SHARON HERNANDEZ, EILEEN KELLEY, CATHY SANCHEZ, LEONA TORRES, IVAN BARNETT, SHIRLEY COLE, MELVIN POTTER, HERBERT SPENCER, RODNEY TRAN, CLAUDIA GRAHAM, MATTHEW MANN, CASEY STONE, MARION LITTLE, TANYA GARCIA, ARMANDO FIGUEROA, ROSS PATTERSON, CHARLOTTE GLOVER, NICOLE LAMB, THERESA BLAKE, LEO HART, MARTIN PETERSON, KATRINA HENDERSON, LUIS MCCORMICK, JESUS PENA, BRENT CAMPBELL, MARIA ANDREWS, TYLER MILLER, CONNIE HINES, JULIE BARRETT, TERRY MEDINA, ROBERT HINES, MONICA PAUL, RAMON BROCK, BRITTANY ROBERTS, JEFFREY KIM, MITCHELL REYES, JOSEPH DIXON, LINDA LYNCH, GLADYS BALDWIN, RALPH PAGE, ELMER RYAN, WAYNE NGUYEN, WANDA LITTLE, BARRY KING, MATTHEW JENNINGS, LAURIE HORTON, LORI SULLIVAN, CODY COHEN, KATIE CURTIS, DEAN WATSON, GERALDINE ESTRADA, SHANNON FISHER, BRITTANY SIMPSON, ARMANDO LOPEZ, LENA FLEMING, ARMANDO SCHNEIDER, RITA ALVAREZ, IVAN ELLIS, JOY SWANSON, REGINA BOWERS, BRITTANY WARD, GERALD WILSON, DELORES BURKE, DONNA POPE, RUBY GORDON, MARIA CROSS, LONNIE RAMSEY not found in archive as expected
- 69 files expected but was 2

### Errors and Warnings

✗ 0\_Aaron\_Vaughn.xml

0\_Aaron\_Vaughn.xml - 4 errors and warnings

View Uploaded XML with Errors

QRDA (1) Reporting (3) Submission (0) CMS Warnings (0) Other Warnings (0)

#### Error message

SHALL contain exactly one [1..1] realmCode="US" (CONF:1198-16791)

Go To in XML

jump to error

— Errors that apply to the uploaded zip file

— Errors that apply to a single file in the zip file

## Running a Test

# C1/C3 Common Error Message (1 of 2)

### Errors and Warnings

The screenshot shows a web interface for 'Errors and Warnings'. On the left, a list of files is shown: '0\_Aaron\_Vaughn.xml' with 4 errors and '1\_Anna\_Ramirez.xml' with 3 errors. A button 'View Uploaded XML with Errors' is present. Below this, a tabbed interface shows 'Reporting (3)' as the active tab, with other tabs for 'QRDA (1)', 'Submission (0)', 'CMS Warnings (0)', and 'Other Warnings (0)'. The 'Error message' section displays three messages. The first message is highlighted with an orange box: 'Calculated value (0.0) for DENOM (A8FA495E-A133-44FB-9D1E-C85EE38AE9E6) does not match expected value (1.0)'. The other two messages are: 'Cannot find expected entry with templateId = 2.16.840.1.113883.10.20.24.3.23 with valueset 2.16.840.1.113883.3.600.1916' and 'Calculated value (0.0) for IPP (4DAED7C7-EAC9-43D2-B3FF-316DB539800C) does not match expected value (1.0)'. A 'Go To in XML' link is visible on the right.

0\_Aaron\_Vaughn.xml - 4 errors and warnings

View Uploaded XML with Errors

QRDA (1) Reporting (3) Submission (0) CMS Warnings (0) Other Warnings (0)

Error message	Go To in XML
Cannot find expected entry with templateId = 2.16.840.1.113883.10.20.24.3.23 with valueset 2.16.840.1.113883.3.600.1916	
Calculated value (0.0) for DENOM (A8FA495E-A133-44FB-9D1E-C85EE38AE9E6) does not match expected value (1.0)	
Calculated value (0.0) for IPP (4DAED7C7-EAC9-43D2-B3FF-316DB539800C) does not match expected value (1.0)	

- Cypress expected the patient to calculate into the Denominator; however, Cypress did not calculate the uploaded file into that population.

## Running a Test

# C1/C3 Common Error Message (2 of 2)

- If a vendor has questions regarding the measure calculation, you can direct them to the Cypress Validation Utility (<https://cypressvalidator.healthit.gov>).
- If the vendor loads their QRDA document into the Cypress Validation Utility, it will display the measure calculation and highlight the rationale for the measure calculation.

Calculation Results					
Measure Name	IPP	DENOM	DENEX	NUMER	DENEXCEP
CMS2v7 Preventive Care and Screening: Screening for Depression and Follow-Up Plan					

CMS2v7 Preventive Care and Screening: Screening for Depression and Follow-Up Plan	
<b>✓ Initial Population</b>	<ul style="list-style-type: none"> <li>• ✓ AND ✓ Patient Characteristic Birthdate: Birth Date ✓ &gt;= 12 years starts before start of Measurement Period</li> <li>• ✓ AND ✓ Encounter, Performed: Depression Screening Encounter Codes ✓ during Measurement Period</li> </ul>
<b>✓ Denominator</b>	None
<b>✗ Denominator Exclusions</b>	<ul style="list-style-type: none"> <li>• ✗ OR ✗ Diagnosis: Depression diagnosis SATISFIES ALL               <ul style="list-style-type: none"> <li>◦ ✗ Diagnosis: Depression diagnosis ✗ starts before start of ✓ Encounter, Performed: Depression Screening Encounter Codes ✓ during Measurement Period</li> <li>◦ ✗ Diagnosis: Depression diagnosis ✗ overlaps ✓ Encounter, Performed: Depression Screening Encounter Codes ✓ during Measurement Period</li> </ul> </li> <li>• ✗ OR ✗ Diagnosis: Bipolar Diagnosis SATISFIES ALL               <ul style="list-style-type: none"> <li>◦ ✗ Diagnosis: Bipolar Diagnosis ✗ starts before start of ✓ Encounter, Performed: Depression Screening Encounter Codes ✓ during Measurement Period</li> <li>◦ ✗ Diagnosis: Bipolar Diagnosis ✗ overlaps ✓ Encounter, Performed: Depression Screening Encounter Codes ✓ during Measurement Period</li> </ul> </li> </ul>
<b>✗ Numerator</b>	

# Running a Test

---



# Running a Test

## C2/C3 Tests

Dashboard Vendor: Sample Vendor Product: Sample Product

Sample Product [Edit Product](#) [Download Report](#)

	C1		C2	C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III
✓ 0 Passing Tests								
✗ 2 Failing Tests		1			1			
○ 300 Not started Tests	4	70	71	4	70	71	5	5

**Download Full Test Deck**

This download contains a folder for each measure selected for this product. Inside these folders are XML documents for each patient associated with that measure.

[Download All Patients \(.zip\)](#)

C1 + C3 Sample C1 + C3 (QRDA-I) **C2 + C3 (QRDA-III)** C4 (QRDA-I and QRDA-III)

- Complete a C2/C3 test for each eCQM.

Test the EHR system's ability to import and calculate (C2) and submit (C3) measure based data.

CMS ID	Measure Name	C2 Results	C3 Results	Quick Upload	Last Updated
CMS2v7	Preventive Care and Screening: Screening for Depression and Follow-Up Plan	○ Not Started	○ Not Started	<a href="#">upload</a>	○ 2 hours ago
CMS9v6	Exclusive Breast Milk Feeding	○ Not Started	○ Not Started	<a href="#">upload</a>	○ 2 hours ago
CMS22v6	Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented	○ Not Started	○ Not Started	<a href="#">upload</a>	○ 2 hours ago

# Running a Test

## C2/C3 Test Page

Dashboard Vendor: Sample Vendor Product: Sample Product Test: Preventive Care and Screening: Screen...

C1 **C2** C3 C4

Previous Test: CMS645v1 Next Test: CMS9v6

### Measure Test Information

**Measure:** Preventive Care and Screening: Screening for Depression and Follow-Up Plan  
**HQMF ID:** 40280382-5B4D-EEBC-015B-5844953B00A3  
**CMS ID:** CMS2v7

**Provider Name:** Parker, Jane  
**Provider NPI:** 1745446090  
**Provider TIN:** 310839152  
**Provider CCN:** 241387

View Patients

C1 and C3	C2 and C3
QRDA Errors 1	QRDA Errors --
Reporting Errors 7	Reporting Errors --
Submission Errors 2	Submission Errors --
Warnings 0	Warnings --
Execution Date May 14, 2018 5:52pm	Execution Date --

view **x Failing**

#### 1 Download Test Deck

Download and import this data into your EHR clinical quality measure calculator.

[Download QRDA Category I \(.zip\)](#)

#### 2 Upload Files

Upload results from the EHR system in the form of a QRDA Category III XML document to get test results. This will automatically run a test execution.

[Select file](#)

### Expected Aggregate Results

Measure Name	IPOP	DENOM	DENEX	NUMER	DENEXCEP
Preventive Care and Screening: Screening for Depression and Follow-Up Plan	69	69	16	5	5

- The C2/C3 test deck is shared with the C1/C3 test.

- Use “Upload Files” to upload QRDA documents generated by the System Under Test.

# Running a Test

## C2/C3 Test Helpers

Dashboard Vendor: Sample Vendor Product: Sample Product Test: Preventive Care and Screening: Screen...

C1 **C2** C3 C4

Previous Test: CMS645v1 Next Test: CMS9v6

### Measure Test Information

**Measure:** Preventive Care and Screening: Screening for Depression and Follow-Up Plan  
**HQMF ID:** 40280382-5B4D-EEBC-015B-5844953B00A3  
**CMS ID:** CMS2v7

**Provider Name:** Parker, Jane  
**Provider NPI:** 1745446090  
**Provider TIN:** 310839152  
**Provider CCN:** 241387

View Patients

1 Download Test Deck

Download and import this data into your EHR clinical quality measure calculator.

Download QRDA Category I (.zip)

2 Upload Files

Upload results from the EHR system in the form of a QRDA Category III XML document to get test results. This will automatically run a test execution.

Select file

C1 and C3 C2 and C3

QRDA Errors	1	QRDA Errors	--
Reporting Errors	7	Reporting Errors	--
Submission Errors	2	Submission Errors	--
Warnings	0	Warnings	--
Execution Date	May 14, 2018 5:52pm	Execution Date	--

view x Failing

### Expected Aggregate Results

Measure Name	IPOP	DENOM	DENEX	NUMER	DENEXCEP
Preventive Care and Screening: Screening for Depression and Follow-Up Plan	69	69	16	5	5

- Switch between C1/C3 and C2/C3.

- The ATL can view expected results.

# Running a Test

## C2/C3 Test Results

**Measure Test Information**

Measure: Preventive Care and Screening: Screening for Depression and Follow-Up Plan  
 HQMF ID: 40280382-5B4D-EEBC-015B-584953B00A3  
 CMS ID: CMS2v7

Provider Name: Parker, Jane  
 Provider NPI: 1745446090  
 Provider TIN: 310839152  
 Provider CCN: 241387

View Patients  
 Get Known Good Result

**C1 and C3**

QRDA Errors	1
Reporting Errors	7
Submission Errors	2
Warnings	0
Execution Date	May 14, 2018 5:52pm

view **x Failing**

**C2 and C3**

QRDA Errors	0
Reporting Errors	2
Submission Errors	0
Warnings	8
Execution Date	May 14, 2018 6:00pm

**x Failing**

**1 Download Test Deck**

Download and import this data into your EHR clinical quality measure calculator.

[Download QRDA Category I \(.zip\)](#)

**2 Upload Files**

Upload results from the EHR system in the form of a QRDA Category III XML document to get test results. This will automatically run a test execution.

[Select file](#)

**Expected Aggregate Results**

Measure Name	IPOP	DENOM	DENEX	NUMER	DENEXCEP
Preventive Care and Screening: Screening for Depression and Follow-Up Plan	69	69	16	5	5

**Results** Most Recent - May 14, 2018 6:00pm (10 errors) Refresh View

**Failed with 2 errors and 8 warnings**

**Errors and Warnings**

**x CMS2v7\_5af9b444aeac50...** CMS2v7\_5af9b444aeac5067865872c0.debug.xml - 10 errors and warnings

[View Uploaded XML with Errors](#)

QRDA (0) **Reporting (2)** Submission (0) **CMS Warnings (8)** Other Warnings (0)

Population ID	Supplemental Data Type	Code	Expected Value	Reported Value
DENOM	ETHNICITY	2135-2	38	39
DENOM	ETHNICITY	2186-5	31	30

- The ATL can view the status of the C2/C3 test.

- Issues regarding the CMS Implementation Guide (schematron) are reported as warnings.

## Running a Test

# C2/C3 Common Error

- Errors with population counts are returned in a table on the test page.

Results Most Recent - May 14, 2018 6:00pm (in progress) [Refresh View](#)

✖ Failed with 2 errors and 8 warnings

Errors and Warnings

✖ CMS2v7\_5af9b444aeac50... 10 CMS2v7\_5af9b444aeac5067865872c0.debug.xml - 10 errors and warnings

[View Uploaded XML with Errors](#)

Population ID	Supplemental Data Type	Code	Expected Value	Reported Value
DENOM	ETHNICITY	2135-2	38	39
DENOM	ETHNICITY	2186-5	31	30

### C2 Failing Measure Tests

#### CMS2v7 Preventive Care and Screening: Screening for Depression and Follow-Up Plan

- These same errors are only recorded generically as “supplemental data errors” in the generated report.

- supplemental data error (CMS2v7\_5af9b444aeac5067865872c0.debug.xml)
- supplemental data error (CMS2v7\_5af9b444aeac5067865872c0.debug.xml)

# Running a Test / C4 Filter Tests

---

# Running a Test

## C4 Test

Dashboard Vendor: Sample Vendor Product: Sample Product

Sample Product [Edit Product](#) [Download Report](#)

	C1		C2		C3			C4	
	Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III	
✓ 1 Passing Tests						1			
✗ 3 Failing Tests		1	1		1				
○ 298 Not started Tests	4	70	70	4	70	70	5	5	

**Download Full Test Deck**

This download contains a folder for each measure selected for this product. Inside these folders are XML documents for each patient associated with that measure.

[Download All Patients \(.zip\)](#)

C1 + C3 Sample C1 + C3 (QRDA-I) C2 + C3 (QRDA-III) **C4 (QRDA-I and QRDA-III)**

Test the EHR system's ability to filter patient records.

Filtering Criteria	QRDA Category I	QRDA Category III	Last Updated
Ethnicities/Age	<a href="#">start</a> <a href="#">upload</a>	<a href="#">start</a> <a href="#">upload</a>	○ 2 hours ago
Genders/Payers	<a href="#">start</a> <a href="#">upload</a>	<a href="#">start</a> <a href="#">upload</a>	○ 2 hours ago
NPI & TIN	<a href="#">start</a> <a href="#">upload</a>	<a href="#">start</a> <a href="#">upload</a>	○ 2 hours ago
NPI, TIN & Provider Location	<a href="#">start</a> <a href="#">upload</a>	<a href="#">start</a> <a href="#">upload</a>	○ 2 hours ago
Problems	<a href="#">start</a> <a href="#">upload</a>	<a href="#">start</a> <a href="#">upload</a>	○ 2 hours ago

- C4 Tests are performed for a single eCQM with 5 different sets of filter criteria.
- QRDA Category I and QRDA Category III are required for all tests.
- The same test deck is used for all C4 tests.

# Running a Test

## C4 Test Page

- **View Expected Results (viewable by ATL only) will show a list of a test patients who meet filter criteria.**
- **Filter Criteria are used to filter out patients who do not meet both criteria.**
- **The vendor should only upload QRDA files reflecting the patients who meet all filter criteria.**

Dashboard Vendor: Sample Vendor Product: Sample Product Test: Children Who Have Dental Decay or Ca...

C1 | C2 | C3 | **C4**

Previous Test: CMS75v6 Next Test: CMS75v6

### Filtering Test Information

Measure: Children Who Have Dental Decay or Cavities  
 HQMF ID: 40280382-SABD-FA46-015B-44CEF87E35C3  
 CMS ID: CMS75v6

View Patients  
**View Expected Result**

### QRDA Category I

QRDA Errors --  
 Reporting Errors --  
 Submission Errors --  
 Warnings --  
 Execution Date --

### QRDA Category III

QRDA Errors --  
 Reporting Errors --  
 Submission Errors --  
 Warnings --  
 Execution Date --

start

1 ⚡ Download Test Deck	2 ⚡ Filter Patients	3 ⚡ Upload Files
Download and import this data into your EHR clinical quality measure calculator. <b>Download QRDA Category I (.zip)</b>	Remove any patients not meeting the following criteria. <b>Ethnicities</b> Not Hispanic or Latino (code: 2186-5) <b>Age As Of May 14, 2018</b> Maximum 26	Upload results from the EHR system in the form of a zip file of QRDA Category I documents to get test results. This will automatically run a test execution. <input type="text"/> <b>Select file</b>

### Expected Aggregate Results

Measure Name	IPOP	DENOM	DENEX	NUMER
Children Who Have Dental Decay or Cavities	38	38	12	



# Editing a Test

---



## Editing a Test

# Limitations When Editing a Product

- Editing a test is currently limited to:
  - Naming
  - Selected eCQMs
    - Remove eCQMs
    - Add eCQMs

Dashboard Vendor: Sample Vendor Product: Sample Product Edit Product

**Edit Product: Sample Product**

**Name**

**Version**

**Description**

**Certification Edition**

☐ 2014 Edition  
☒ 2015 Edition

Select the certification edition.

**Certification Types**

☒ C1 Test  
☒ C2 Test  
☒ C3 Test  
☒ C4 Test

Select the certification type Cypress should use to certify this product.

**Annual Update Bundle**


☐ 2016 Bundle for the 2017 Reporting Period 2016.0.2  
☒ 2017 Bundle for the 2018 Reporting Period (w/ Sept 2017 Addendum) 2017.0.3

Select the measure versions Cypress should use to certify this product.

☒ Shift Records

Selecting Shift Records will move patient data forward into the appropriate reporting period. Otherwise patient data will remain in a previously completed calendar year.

**Measures Options**

 Changing selected measures will delete all associated product tests and test execution results for any removed measures. Be sure you want to do this before changing your selection.

[Yes, let me adjust my measures](#)

☐ Eligible Hospital eCQMs  
☐ Eligible Professional eCQMs  
☒ All eCQMs  
☐ Custom...

Indicate the clinical quality measures Cypress should use to certify this product. Testing will be performed on a measure-by-measure basis. Click 'Custom' to specify individual measures.

[Edit Product](#) [Cancel](#)

**Delete Product**

Removing a product will also delete all associated product tests and test execution results. Be sure you want to do this.

[Delete Product](#)

## Editing a Test

# Adding/Removing eCQMs



Changing selected measures will delete all associated product tests and test execution results for any removed measures. Be sure you want to do this before changing your selection.

Yes, let me adjust my measures

- Removing an eCQM will delete all C1/C2/C3 and C4 tests that include that eCQM.

C1 + C3 Sample

C1 + C3 (QRDA-I)

C2 + C3 (QRDA-III)

C4 (QRDA-I and QRDA-III)

Validate the EHR system for C1 and C3 certifications by entering specified patient data for the following measures.

View Record Sample

Upload Results	C1 Upload Results	C3 Upload Results	Status
<input type="radio"/> Not Started	<input type="radio"/> Not Started	<input type="radio"/> Not Started	<input type="radio"/> Not Started

Data Criteria Verification	Status
CMS69v6 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan	Failing
CMS108v6 Venous Thromboembolism Prophylaxis	Not Started
CMS138v6 Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	Not Started
CMS145v6 Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%)	Not Started

- If CMS108 is removed from the product, the entire C1 Record Sample test will be deleted.

# Test Results

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# Running a Test

## Track Progress and Generate Reports

- The Product page can be used to track progress toward completing certification.

Dashboard Vendor: Sample Vendor Product: Sample Product

Sample Product [Edit Product](#) [Download Report](#)

☒ 1 Passing Tests  
☒ 3 Failing Tests  
☐ 298 Not started Tests

C1		C2		C3			C4	
Sample	QRDA-I	QRDA-III	Sample	QRDA-I	QRDA-III	QRDA-I	QRDA-III	
					1			
4	70	70	4	70	70	5	5	

**Download Full Test Deck**

This download contains a folder for each measure selected for this product. Inside these folders are XML documents for each patient associated with that measure.

[Download All Patients \(.zip\)](#)

- “Download Report” contains a zip file with
  - Summary of all test results
  - Zip file of all test decks
  - Zip file of all test uploads

C1 + C3 Sample **C1 + C3 (QRDA-I)** C2 + C3 (QRDA-III) C4 (QRDA-I and QRDA-III)

Test the EHR system's ability to record and export (C1) and submit (C3) measure based data.

CMS ID	Measure Name	C1 Results	C3 Results	Quick Upload	Last Updated
CMS2v7	Preventive Care and Screening: Screening for Depression and Follow-Up Plan	✗ Failed	✗ Failed	<a href="#">upload</a>	⌚ 23 minutes ago
CMS9v6	Exclusive Breast Milk Feeding	○ Not Started	○ Not Started	<a href="#">upload</a>	⌚ 2 hours ago
CMS22v6	Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented	○ Not Started	○ Not Started	<a href="#">upload</a>	⌚ 2 hours ago
CMS26v5	Home Management Plan of Care (HMP) Document Given to Patient/Caregiver	○ Not Started	○ Not Started	<a href="#">upload</a>	⌚ 2 hours ago
CMS31v6	Hearing Screening Prior To Hospital Discharge	○ Not Started	○ Not Started	<a href="#">upload</a>	⌚ 2 hours ago
CMS32v7	Median Time from ED Arrival to ED Departure for Discharged ED Patients	○ Not Started	○ Not Started	<a href="#">upload</a>	⌚ 2 hours ago
CMS50v6	Closing the Referral Loop: Receipt of Specialist Report	○ Not Started	○ Not Started	<a href="#">upload</a>	⌚ 2 hours ago
CMS52v6	HIV/AIDS: Pneumocystis Jiroveci Pneumonia (PCP) Prophylaxis	○ Not Started	○ Not Started	<a href="#">upload</a>	⌚ 2 hours ago

# Question and Answers

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## Interactive Demo

# Next Cypress Tech Talk

- **Tuesday, May 22 at 1 pm ET**
- **Register at**  
**<https://attendee.gotowebinar.com/register/8110364277730751489>**
- **Completed Webinars will be posted on the Cypress Website on the Timeline Tab**
  - <https://www.healthit.gov/cypress/techtalks.html>
- **Send questions and feedback to the Cypress Talk List at**
  - [project-cypress-talk@googlegroups.com](mailto:project-cypress-talk@googlegroups.com)
- **Report bugs and issues to the Cypress JIRA at**
  - <https://oncprojecttracking.healthit.gov/support/browse/CYPRESS>