

RESOURCE AND PATIENT MANAGEMENT SYSTEM

# **Electronic Clinical Quality Measures Engine**

(ECQM)

**User Manual**

Version 7.0  
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Office of Information Technology  
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## Preface

Electronic Clinical Quality Measures (eCQM) are not just standardized metrics; they are the backbone of our healthcare system, playing a pivotal role in measuring and tracking the quality of healthcare services provided by eligible clinicians (EC), eligible hospitals (EH), and critical access hospitals (CAH). The results of these measures are instrumental in calculating a quality score, a key indicator of our system's effectiveness. This process is vital in ensuring that our healthcare system consistently delivers effective, safe, efficient, patient-centered, equitable, and timely care.

eCQM performance rates are used by various governing bodies to evaluate programs, and in the case of Centers for Medicare & Medicaid Services (CMS), payments for Medicare services may be affected.

eCQMs measure many aspects of patient care, including:

- Patient and Family Engagement
- Patient Safety
- Care Coordination
- Population/Public Health
- Efficient Use of Healthcare Resources
- Clinical Process/Effectiveness

Indian Health Service Resource Patient Management System Certified Electronic Health Records generate patient-based files containing the data needed to create CQM reports in a standardized format. These are called Quality Reporting Data Architecture Category I (QRDA I) files.

The ECQM Engine is not just a tool; it's a comprehensive solution. As a browser-enabled graphical user interface for the Indian Health Service (IHS), it extracts data from multiple QRDA I files and generates QRDA Category III (QRDA III) aggregated report files that can be submitted to CMS. The ECQM Engine also produces human-readable reports that can be used in quality improvement activities at individual sites. With its robust and all-encompassing capabilities, the ECQM Engine is a reliable and powerful solution for your reporting needs.

## 1.0 Introduction

This User Manual provides information on how to use the Electronic Clinical Quality Measure Engine (namespace: ECQM) application.

### 1.1 eCQM Overview

eCQMs are a component of the ONC Certification Criteria for Health IT necessary for participating in various CMS programs.

Each year, CMS makes updates to the eCQMs approved for CMS programs to reflect changes in:

- Evidence-based medicine
- Code sets
- Measure logic

A total of 13 EH/CAH eCQMs, 2 EH/CAH Hybrids, and 25 EC eCQMs were selected and are listed in Table 1-1, Table 1-2, and Table 1-3.

Table 1-1: IHS–Selected EH/CAH eCQM

CMS ID	Measure Type	Measure
CMS009v11 (retired)	Process	Exclusive Breast Milk Feeding
CMS071v13	Process	Anticoagulation Therapy for Atrial Fibrillation/Flutter
CMS072v12	Process	Antithrombotic Therapy By End of Hospital Day 2
CMS104v12	Process	Discharged on Antithrombotic Therapy
CMS108v12	Process	Venous Thromboembolism Prophylaxis
CMS190v12	Process	Intensive Care Unit Venous Thromboembolism Prophylaxis
CMS334v5	Outcome	Cesarean Birth
CMS506v6	Process	Safe Use of Opioids–Concurrent Prescribing
CMS816v3	Outcome	Hospital Harm–Severe Hypoglycemia
CMS819v2	Outcome	Hospital Harm–Opioid-Related Adverse Events
CMS871v3	Outcome	Hospital Harm–Severe Hyperglycemia
CMS986v2	Intermediate Clinical Outcome	Global Malnutrition Composite Score
CMS1028v2	Outcome	Severe Obstetric Complications

Table 1-2: IHS Selected EH/CAH Hybrid

<b>CMS ID</b>	<b>Measure Type</b>	<b>Measure</b>
CMS 529v4	Hybrid-Cohort Administrative	Core Clinical Data Elements for the Hybrid Hospital-Wide (All-Condition, All-Procedure) Risk-Standardized Mortality Measure (HWM)
CMS 844v4	Hybrid-Cohort Administrative	Core Clinical Data Elements for the Hybrid Hospital-Wide Readmission (HWR) Measure with Claims and Electronic Health Record Data

Table 1-3: IHS–Selected EC eQMs

<b>CMS ID</b>	<b>Measure Type</b>	<b>Measure</b>
CMS002v13	Process	Preventative Care and Screening: Screening for Depression and Follow-Up Plan
CSM022v12	Process	Preventative Care and Screening: Screening for High Blood Pressure and Follow-up Documented
CMS050v12	Process	Closing Referral Loop: Receipt of Specialist Report
CMS069v12	Process	Preventative Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan
CMS117v12	Process	Childhood Immunization Status
CMS122v12	Intermediate Clinical Outcome	Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)
CMS124v12	Process	Cervical Cancer Screening
CMS125v12	Process	Breast Cancer Screening
CMS130v12	Process	Colorectal Cancer Screening
CMS131v12	Process	Diabetes: Eye Exam
CMS137v12	Process	Initiation and Engagement of Alcohol and Other Drug Dependence Treatment
CMS138v12	Process	Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention
CMS139v12	Process	Falls: Screening for Future Fall Risk
CMS144v12	Process	Heart Failure: Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction
CMS145 v12	Process	Coronary Artery Disease (CAD): Beta-Blocker Therapy-Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF) less than or equal to 40%
CMS154v12	Process	Appropriate Treatment for Upper Respiratory Infection (URI)
CMS155v12	Process	Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents
CMS156v12	Process	Use of High-Risk Medications in Older Adults
CMS159v12	Outcome	Depression Remission at Twelve Months

CMS ID	Measure Type	Measure
CMS160v7 (retired)	Process	Depression Utilization of the PHQ-9 Tool
CMS165v12	Intermediate Clinical Outcome	Controlling High Blood Pressure
CMS177v12	Process	Child and Adolescent Major Depressive Disorder: Suicide Risk Assessment
CMS347v7	Process	Statin Therapy for the Prevention and Treatment of Cardiovascular Disease
CMS349v6	Process	HIV Screening

**Note:** The measures not updated for 2024 and are not eligible to submit to CMS.

CMS009v11 uses logic from 2023.

CMS160v7 uses logic from 2019.

## 1.2 More Information

The following websites provide additional CQM information:

- CMS: <https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/ClinicalQualityMeasures.html>
- eCQI Resource Center: <https://ecqi.healthit.gov/>
- U.S. National Library of Medicine Value Set Authority Center: <https://vsac.nlm.nih.gov/>
- Agency for Healthcare Research and Quality: <https://ushik.ahrq.gov/>

## 2.0 ECQM Engine

The Electronic Clinical Quality Measure ECQM Engine is a Web application that receives QRDA I and generates QRDA III files. There are two versions of the ECQM Engine available. One version is a centralized service hosted out of the IHS/OIT Albuquerque Data Center for Federal Sites authenticating through the D1 and for Tribal/Urban Sites authenticating through D1/E1. The other version is a locally, site-installed application to be used by Tribal and Urban Sites authenticating through their directory server (LDAP).

Central installation eliminates the need for initial site installation and future patching. There will be no need to monitor the availability of new patches/versions and no need to provision new or occupy existing site server resources. On the other hand, a local site install does not need Tribal/Urban sites to review and enter into the legal agreement, including BAA and ISA. Sites do not need to worry about the risk of server/resource bandwidth constraints during the peak reporting times. Sites will have control of their system's availability, thus avoiding system outages and overseeing their timetable.

The ECQM Engine receives securely transmitted QRDA I files in XML format for clinical quality measure calculations. It then authenticates users against a directory service with LDAP (Lightweight Directory Access Protocol), one example of which is Microsoft Active Directory. This authentication is necessary to support sites in various locations, including the Federal D1 network, the Tribal E1 network, and others outside the D1/E1 boundaries.

Access to the ECQM Engine features is dependent on the role assigned to the user. Table 2-1 Shows the roles available in the ECQM Engine.

Table 2-1: ECQM Engine Role Definition

ECQM Role	Definition
Super Admin	An individual who performs the following ECQM functions: <ul style="list-style-type: none"> <li>• Install the Engine for the first time using D1/E1 credentials</li> <li>• Specify Super Auditor (other than self)</li> <li>• Create Site accounts</li> <li>• Specify Site Admin User</li> <li>• Specify Site Auditor (other than Site Admin User)</li> </ul>
Super Auditor	An individual who tracks and monitors all activities performed

ECQM Role	Definition
Site Admin	An individual who performs the following ECQM functions: <ul style="list-style-type: none"> <li>• Upload QRDA I zip files</li> <li>• Setup compute/reporting groups</li> <li>• Download reports/results</li> <li>• Manage provider lists</li> <li>• Delete/Purge data</li> </ul>
Site Auditor	An individual who tracks and monitors site activities

## 2.1 Log In/Log Out

1. Open your internet browser (Google Chrome® Version 80 or higher) and type in the **IP address** of the server where the ECQM application has been installed (<https://IPaddressOFecqmApplicationServer>).
2. The **Login** screen displays.

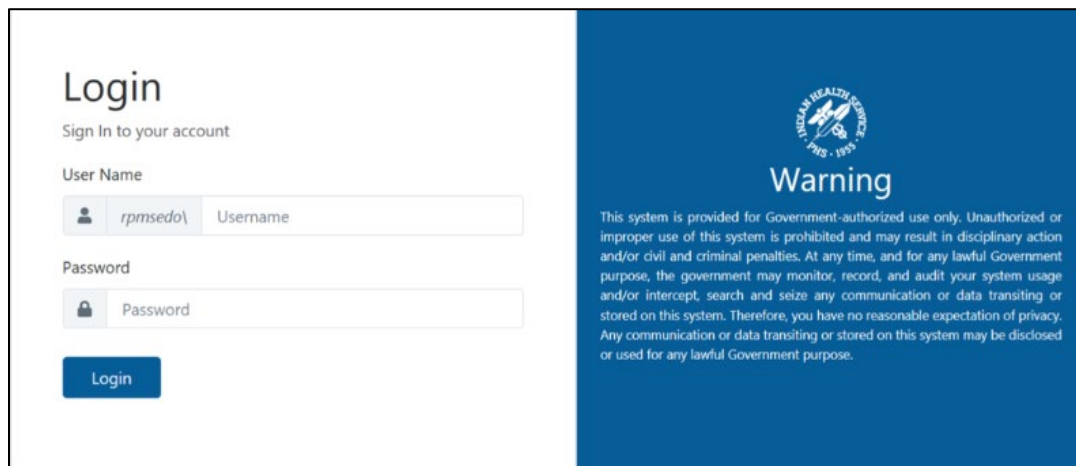



Figure 2-1: ECQM Engine Login Screen

3. Enter your **User Name** and **Password**.
4. To log out, click the Logout () icon and select **Logout**.

## 2.2 Super Admin Menu Options

The Engine Super Admin installs the ECQM Engine for the first time using their D1/E1 credentials. The Super Admin creates sites and defines users in the system.



## 2.2.1 Sites

Use the **Sites** tab to define/modify site information. Only Super Admin users have access to create sites. The Super Admin creates each site with a distinct profile based on the information in the QRDA I file and the identifying information used to create the QRDA III files.

The screenshot shows the 'Sites' management interface. At the top right is a 'Register Site' button. Below is a table with the following data:

Name	Abbreviation	Performance Year	NPI	TIN	MCN/CCN	Teams	Update
DEMO HOSPITAL	DM	2020	1234554321	123456789	CMS1234		

Below the table are 'Prev', '1', and 'Next' navigation buttons.

Figure 2-2: Sites screen

### 2.2.1.1 Create Site

1. Click the **Register Site** button to register a new site.

The 'Register' form is divided into three sections:

- New Site Information:**
  - Name: IHS Test Site
  - Abbreviation: ITS
  - TIN: 123123123 (Tax Identification Number)
  - NPI: 1234567890 (National Provider Identifier)
  - CCN: HSZ8 (CMS Certification Number)
- Address:**
  - Street: 12345 Meadow Lane
  - City: Albuquerque
  - State: NM
  - Zip Code: 89701
- Legal Authenticator:**
  - First Name: AUTH
  - Last Name: TEST

At the bottom are 'Save Changes' and 'Cancel' buttons.

Figure 2-3: Register screen

2. On the **Register** screen, populate the following fields (all fields are required).

3. Under **New Site**:
  - a. Enter a **Name** (maximum of 50 characters).
  - b. Enter an **Abbreviation** (maximum of 3 characters).
  - c. Enter a **TIN** (9-digit numeric, no dash required).
  - d. Enter an **NPI** (10-digit numeric).
  - e. Enter **CCN** (Certification Number).
4. Under **Address**:
  - a. Enter a **Street**.
  - b. Enter a **City**.
  - c. Enter a **State**.
  - d. Enter a **Zip Code** (5 or 9 digits).
5. Under **Legal Authentication**:
  - a. Enter a **First Name**.
  - b. Enter a **Last Name**.

**Note:** The Legal Authenticator is the person associated with the QRDA submission. This could be the site's Quality Coordinator or Health Records Management officer. This is a required field.

6. Click **Save Changes**.
7. Click **Cancel** to exit the **Register** screen.

### 2.2.1.2 Modify Site

1. Click the **Update** button next to the site to update/modify the site information.

### Update

2013 DEMO HOSPITAL

<p>Name</p> <input style="width: 90%;" type="text" value="2013 DEMO HOSPITAL"/>	<p>Abbreviation</p> <input style="width: 90%;" type="text" value="DH"/>
<p>TIN</p> <input style="width: 90%;" type="text" value="888888888"/> <p style="font-size: small;">Tax Identification Number</p>	<p>NPI</p> <input style="width: 90%;" type="text" value="9114113001"/> <p style="font-size: small;">National Provider Identifier</p>
<p>CCN</p> <input style="width: 90%;" type="text" value="800890"/> <p style="font-size: small;">CMS Certification Number</p>	

---

### Address

Street

City

State

Zip Code



---

### Performance Year/Certification Id

<p>Performance Year</p> <input style="width: 90%;" type="text" value="2024"/>	<p>EHR Certification Id</p> <input style="width: 90%;" type="text" value="0015CWD0UCD0JL"/>
	<p style="font-size: small;">CMS EHR Certification Id</p>

---

### Legal Authenticator

<p>First Name</p> <input style="width: 90%;" type="text" value="Jane"/>	<p>Last Name</p> <input style="width: 90%;" type="text" value="Doe"/>
---	---

Figure 2-4: Update Site screen

2. Click the fields to update the site, address, and legal authenticator information on the **Update** screen.
3. Select the correct **Performance Year** based on the current reporting period.
4. Update **CMS EHR Certification ID** based on current reporting period.
5. Click **Save Changes** or click **Cancel** to discard any changes.

### 2.2.2 Users

Select the **Users** tab to create, modify, or deactivate users. Only Super Admin users can create user profiles, including other Super Admin users, Super Auditor users, Site Admin users, etc. Super Admin users cannot be Super Audit users. See Table 2-1 for the list of roles available.

### 2.2.2.1 Create User

Use the **Register User** button to create, modify, or deactivate a user.

1. Click the **Register User** button to create a user.

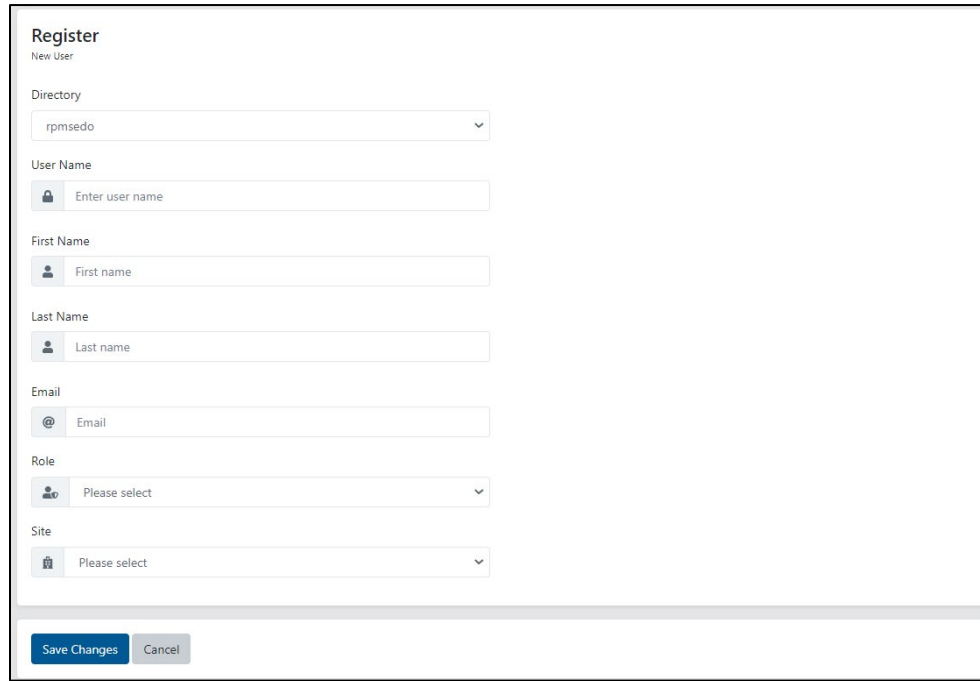


Figure 2-5: Register User screen

2. On the **Register** screen:
  - a. Select **Directory** from the list (this is the server directory).
  - b. Enter a **User Name**.
  - c. Enter a **First Name**.
  - d. Enter a **Last Name**.
  - e. Enter an **Email**.
  - f. Select a **Role**.
  - g. Select **Site**.
3. Click **Save Changes**.
4. Click **Cancel** to discard all changes.

### 2.2.2.2 Modify User

1. Click the **Update** button next to a user to modify or update.

**Update**  
Update User

User Name  
rpsedo christine.zavala

First Name  
Christine

Last Name  
Zavala

Email  
christine.zavala@ihs.gov

Role  
site admin

Sites

- All Sites
- 2013 DEMO HOSPITAL
- 2020 test
- 2022 DEMO CLINIC
- 2023 test
- CZ TEST SITE
- Demo Clinic
- ECQM TEST

Save Changes Cancel

Figure 2-6: Update User screen

2. Only the **User Name**, **Role**, and **Site** can be edited.
3. Click **Save Changes** or click **Cancel** to discard all changes.

### 2.2.2.3 Deactivate a User

Click the **Deactivate** button next to a user who needs to be deactivated.

### 2.2.2.4 Reactivate a User

1. Click the **Activate** button next to the user to reactivate that user.
2. Click the **Update** button to review information and make changes as needed.
3. Click **Save Changes** to save the changes or click **Cancel** to discard all changes.

### 2.2.2.5 Users Filter

1. Enter username in the search box to view a specific user.
2. Select a Site from the list to view users for the selected site only.
3. Select a Role from the list to view users with the selected role.
4. Use a combination of the three filters to narrow the list further.

## 2.2.3 Diagnostic

Only users in the Super Admin role can view the Diagnostic tab. It was initially created for the package development team to troubleshoot issues reported by site users but may deliver valuable insights for Super Admins.

Job Id	Created On	Site	Type	Status
ae911ec3-b810-4c19-adee-b20fda11d79f	10/15/2020 5:35:37 PM	DEMO HOSPITAL	Compute/Job	Complete
070a712c-2d87-4c22-9abf-cdd82f35b179	10/15/2020 5:35:37 PM	DEMO HOSPITAL	Compute/Job	Complete
839b32a0-03c6-4f63-8a00-d4f9e43395ee_0	10/15/2020 5:35:31 PM	DEMO HOSPITAL	PatientImportJob	Complete
ada5128b-edb2-4f3f-997e-77a6709f7adb	10/14/2020 9:52:52 PM	DEMO HOSPITAL	Compute/Job	Complete
019e5e87-b4aa-47ae-9f68-b5731b7fc768	10/14/2020 9:52:52 PM	DEMO HOSPITAL	Compute/Job	Complete
a451a1f1-7f27-47d5-952e-a999882a9d6a_0	10/14/2020 9:52:51 PM	DEMO HOSPITAL	PatientImportJob	Complete
d2e8c9e5-55c1-4c45-b271-212a72b274bd	10/14/2020 8:34:01 PM	DEMO HOSPITAL	Compute/Job	Complete
ec13e2e8-3010-4f05-8076-83cb1e23dc95	10/14/2020 8:34:01 PM	DEMO HOSPITAL	Compute/Job	Complete
49c8fcc9-fc6c-48c7-8e95-ac5b2cb68d07_0	10/14/2020 8:33:59 PM	DEMO HOSPITAL	PatientImportJob	Complete
bf31ef85-83ed-4c38-8d81-ae7c976d285	10/13/2020 10:45:26 PM	DEMO HOSPITAL	Compute/Job	Complete
633749e5-ba64-46b1-b5be-57722e127348	10/13/2020 10:45:26 PM	DEMO HOSPITAL	Compute/Job	Complete
e76784a1-d2f4-4990-b0cb-5cb7ab5e83a3_0	10/13/2020 10:45:25 PM	DEMO HOSPITAL	PatientImportJob	Complete
375afe90-5da8-44b9-b97f-c697e35ae109	10/13/2020 10:35:58 PM	DEMO HOSPITAL	Compute/Job	Complete
5c0b87ef-08ee-4333-8e30-5a3ba24d3dd0	10/13/2020 10:31:09 PM	DEMO HOSPITAL	Compute/Job	Complete

Figure 2-7: Diagnostic tab

The tab displays information about ECQM jobs that are currently running, have completed running, are scheduled to run, or have errored out related to patient import, QRDA III Export, and computation. The list can be filtered using the filter options.

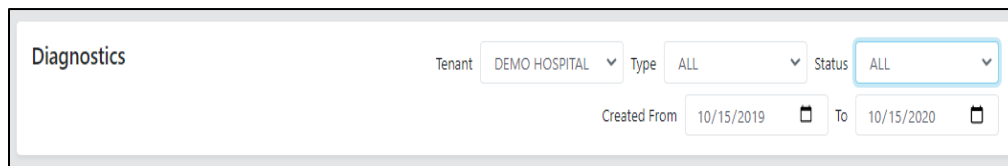


Figure 2-8: Diagnostics tab–Filter Options

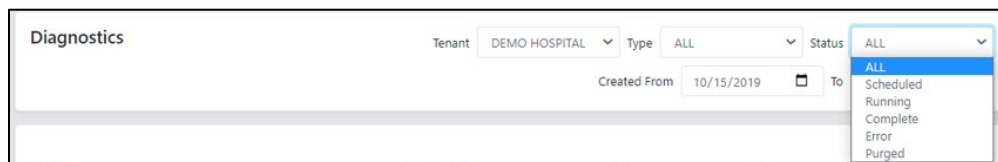


Figure 2-9: Diagnostics tab–Job Status

The **Diagnostics** tab also allows for filtering by job type.

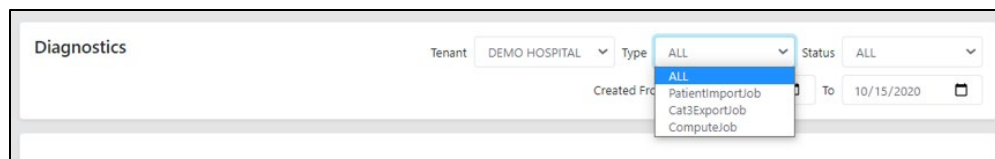



Figure 2-10: Diagnostic tab—Job Type

## 2.3 Site Admin Menu Options

Site Admins upload QRDA I zip files, download reports and results, define the reporting groups (Teams), and update their site information. Site Admins manage the patient data and provider lists.

### 2.3.1 Dashboard

Use the **Dashboard** tab to view previously generated reports. Site Admin users will default to their Dashboard upon log-in. Based on the selected team and reporting period, the dashboard displays the selected team's individual measures and calculations. Calculations will include percentage or average time, numerator counts, denominator counts, and stratifications for each measure.

The icon (  ) for each measure displays further detail about the measure. The **Detail** window provides more information on the selected measure. It will show the list of patients and which population criteria are met for each patient. Users will also have the option to download the data in Excel or PDF format.

New calculations will be performed when a new QRDA CAT I file(s) is imported, a new Team is created, or changes are made to existing Teams.

1. Click the **Teams** list to view a specific Team's measure calculation.
2. Select the **Team** from the list.

**Note:** Both active and inactive teams will be displayed in the list. Any inactive team will display (Inactive) next to the team's name. Calculations will only be performed on active teams.

3. Select **Year** (current year is defaulted) or one of the quarter options (Q1, Q2, Q3, or Q4).
4. The dashboard displays the measures and their calculations.



Report Date: 9/20/2021 7:02:53 PM Team: EH - EH - Eligible Hospital Year: Q1 Q2 Q3 Q4


**CMS104v9**  
Clinical Process Effectiveness  
Discharged on Antithrombotic Therapy  
Subject: Episode  
Scoring: Proportion (Higher is Better)

TITLE	PERCENTAGE	NUMERATOR	DENOMINATOR	EXCLUSION	EXCEPTION
Discharged on Antithrombotic Therapy	31.25 %	5	26	9	1


**CMS26v6**  
Patient and Family Engagement  
Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver  
Subject: Episode  
Scoring: Proportion (Higher is Better)


TITLE	PERCENTAGE	NUMERATOR	DENOMINATOR	EXCLUSION	EXCEPTION
Home Management Plan of Care (HMPC) Document Given to Patient/Caregiver	50.00 %	2	4	0	0

Figure 2-11: Dashboard example

5. Click the icon () to display the measure description, calculation summary, and list of patients that met the measure criteria.

- IPOP is Initial Population
- DENOM is Denominator
- NUMER is Numerator
- DENEX is Denominator Exclusion
- DENEXCEP is a Denominator Exception.

A green circle with a check mark () under each column means the patient met that population criteria.

A red circle with a red X () means the patient did not meet that population criteria.

- NUMER/DENOM counts the number of patients that met the numerator criteria and the number of patients that met the denominator criteria. The Denominator subtracts the number of patients that met the denominator exclusion/exception.

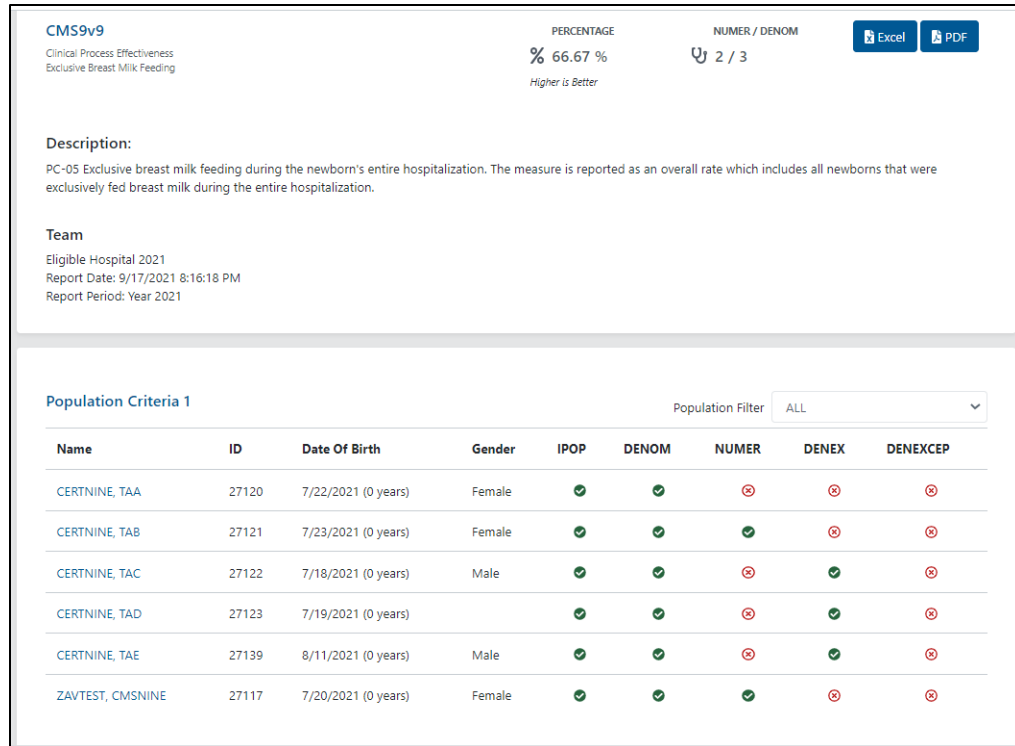



Figure 2-12: Measure Detail Screen example


- Select options from the Population Filter drop-down list to filter patients by measure criteria. For example, selecting IN DENEX from the list displays patients included in Denominator Exclusion only.

- Click the **Excel** () button to generate the list of patients in Excel format. The Excel document is named automatically. The name format is the Team name, followed by the measure number and version, for example, Eligible Hospital-CMS9v11.xlsx.

	A	B	C	D	E	F	G	H	I	J
1	<b>Name</b>	<b>IEN</b>	<b>DOB</b>	<b>Gender</b>	<b>Race</b>	<b>Ethnicity</b>	<b>Denominator</b>	<b>Denominator Exclusion</b>	<b>Numerator</b>	<b>Denominator Exception</b>
2	ZAVTEST, CMSNINE	27117	7/20/2021	F	1002-5	2186-5	True	False	True	False
3	CERTNINE, TAA	27120	7/22/2021	F	1002-5	2186-5	True	False	False	False
4	CERTNINE, TAB	27121	7/23/2021	F	2054-5	2186-5	True	False	True	False
5	CERTNINE, TAC	27122	7/18/2021	M	2106-3	2186-5	True	True	False	False
6	CERTNINE, TAD	27123	7/19/2021	UN	2106-3	2186-5	True	True	False	False
7	CERTNINE, TAE	27139	8/11/2021	M	1002-5	2186-5	True	True	False	False

Figure 2-13: Sample Excel content

**Note:** If the QRDA I file imported is anonymized, patients' last and first names are replaced by XXX.

Click the **PDF** () button to generate a PDF summary report in PDF format. The PDF document is named automatically. The name format is the Team name, followed by the measure number and version, for example, Eligible Hospital-CMS9v11.xlsx.

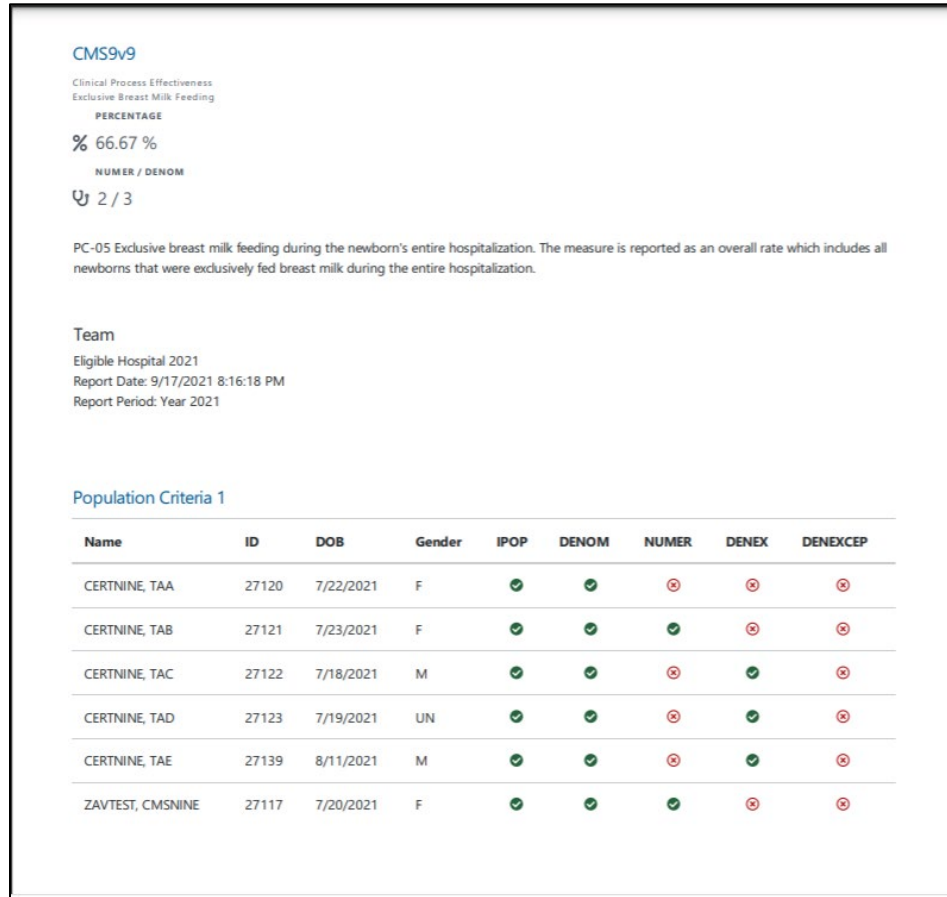


Figure 2-14: Sample PDF

- Click the patient's name for the patient-specific measure detail and the general eCQM information.

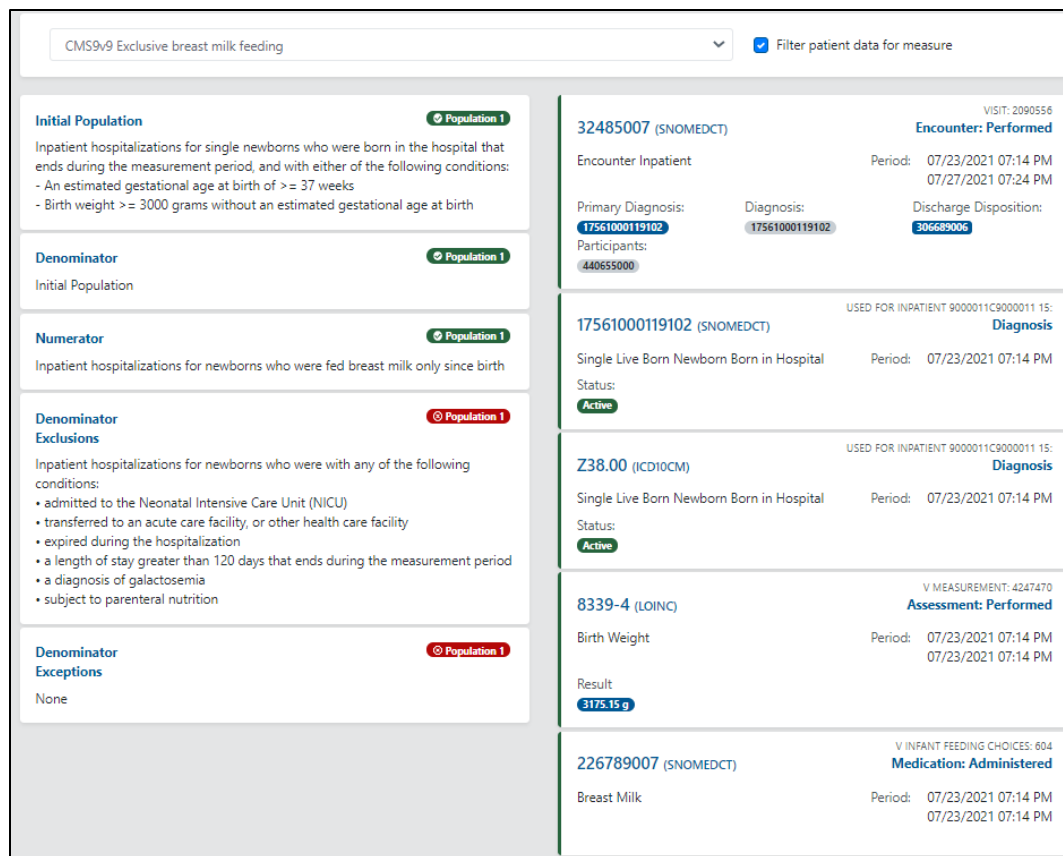





Figure 2-15: Patient-specific Measure Detail

**Note:** The general eCQM information for each population criterion is on the left. The green indicator (  ) means that the patient met that population criteria, and the red (  ) means that the patient did not meet that population criteria. On the right are all patient data that was captured. A green on the left side of the data box means that the data meets one of the values set for the selected measure. Red means the data is not associated with the measure selected.

9. Select the **Filter patient data for measure** (  ) check box to show only the data used for the selected measure.
10. Click the **Dashboard** tab to display back the main dashboard.

## 2.3.2 Imports

Use the **Imports** tab to upload the QRDA I zip files. The **Imports** screen also displays historical imports if available.

The **Import Patients** screen displays the scheduled date/time of when the files are uploaded, the job ID, the file name, and the status.

The screenshot shows the 'Import Patients' interface. At the top right, there is a 'Status' dropdown menu and a blue button labeled 'Import Patients'. Below this is a table with the following columns: Job Id, Scheduled On, Updated On, File, and Status. The table contains 20 rows of data, each representing a job. The 'Status' column for all rows shows a green button labeled 'Complete'. At the bottom of the table, there are 'Prev', '1', and 'Next' navigation buttons.

Job Id	Scheduled On	Updated On	File	Status
54574e3f-48b9-4f37-be51-240a5e772c08_0	10/1/2020 7:17:00 PM	10/1/2020 7:17:01 PM	a0efd654-437d-45dd-bafd-55e00d627dcd_0.zip	Complete
949b41be-07be-4a8b-b7ca-aff041a8fdbbc_0	10/1/2020 6:59:53 PM	10/1/2020 6:59:53 PM	abbd566c-1809-428a-ab09-eafeefa17d42_0.zip	Complete
9f6fa348-07bf-4f05-a8ed-40074d8b6f77_0	10/1/2020 5:50:11 PM	10/1/2020 5:50:11 PM	e23e2d45-d5e9-470e-a25c-2b081a4afa11_0.zip	Complete
258db429-e2aa-45a2-bb80-8edb7df819ce_0	10/1/2020 4:15:51 PM	10/1/2020 4:15:51 PM	b9aee72c-29ff-4079-a274-6daec0c6f49b_0.zip	Complete
da29cf1d-23ca-4453-a47f-a909a2faa3f8_0	10/1/2020 3:56:04 PM	10/1/2020 3:56:04 PM	41fbf816-db79-4f9c-bd1b-087cccef6132_0.zip	Complete
2eba7093-fcc9-462e-896c-d30dec01c64e_0	10/1/2020 3:55:02 PM	10/1/2020 3:55:03 PM	41fbf816-db79-4f9c-bd1b-087cccef6132_0.zip	Complete
9c20074a-ef60-4f0f-ba16-58e87f179d26_0	10/1/2020 3:53:56 PM	10/1/2020 3:53:56 PM	298067ee-015e-456b-8f5b-064201b25981_0.zip	Complete
4b0c18b9-3f01-438c-9258-538cd742949e_0	10/1/2020 3:50:10 PM	10/1/2020 3:50:10 PM	bc2f5b18-8b84-4de9-80d1-45eb632e8bd4_0.zip	Complete
55317b2d-f05f-45fb-9dbf-363670cec903_0	10/1/2020 3:45:57 PM	10/1/2020 3:45:57 PM	bc2f5b18-8b84-4de9-80d1-45eb632e8bd4_0.zip	Complete
d68240f9-c78c-4e9d-b35e-48b6c5b7a435_0	10/1/2020 3:40:43 PM	10/1/2020 3:40:43 PM	6f6c0ede-e431-4073-8615-dc24379da32b_0.zip	Complete
924d87ce-2841-45eb-9899-17b01f7cdb67_0	10/1/2020 3:07:57 PM	10/1/2020 3:07:58 PM	9c3ee75e-5da4-45b4-a563-cee22797f4c_0.zip	Complete
5ff96af5-1fb4-4dad-bd97-72090548792a_0	10/1/2020 2:42:58 PM	10/1/2020 2:42:58 PM	1d363717-ed99-4d53-9694-b216f6b31740_0.zip	Complete
0cf40737-d362-48f7-9d44-38404f5793d9_0	10/1/2020 2:32:19 PM	10/1/2020 2:32:19 PM	ba71bde9-5fb3-4963-8840-4807c6a1d228_0.zip	Complete
3616b82d-dbba-43ba-92cd-a8fc95acc83_0	10/1/2020 2:26:38 PM	10/1/2020 2:26:38 PM	ba71bde9-5fb3-4963-8840-4807c6a1d228_0.zip	Complete
38921c4e-8e75-4a35-9a30-85962c1e4b62_0	10/1/2020 2:18:04 PM	10/1/2020 2:18:04 PM	efa79c2b-89c7-4e28-9d8b-643801af5efe_0.zip	Complete
dc6e783c-95e2-488b-8831-3cb2aa8c0479_0	10/1/2020 2:17:14 PM	10/1/2020 2:17:14 PM	efa79c2b-89c7-4e28-9d8b-643801af5efe_0.zip	Complete
d6fa5455-cbaf-49c5-81fd-3e29eefae2e7_0	10/1/2020 2:07:29 PM	10/1/2020 2:07:29 PM	7bfs44f0-7d49-4612-9169-a26ff07a80ff_0.zip	Complete
5339cfc9-e4d6-4275-9440-6d8be4a58e6f_0	10/1/2020 1:56:06 PM	10/1/2020 1:56:10 PM	2bff9235-362a-4b87-a8e3-77ffff9af346c_0.zip	Complete

Figure 2-16: Imports Screen

1. Click the **Import Patients** button to upload QRDA I zip files. Users can upload multiple files.
2. Navigate to where the zip files are located, then drag and drop the zip file to the **Import Patients** window. Alternatively, click inside the **Import Patients** window and navigate to the QRDA I zip file location. Then select a file and click **Open**.

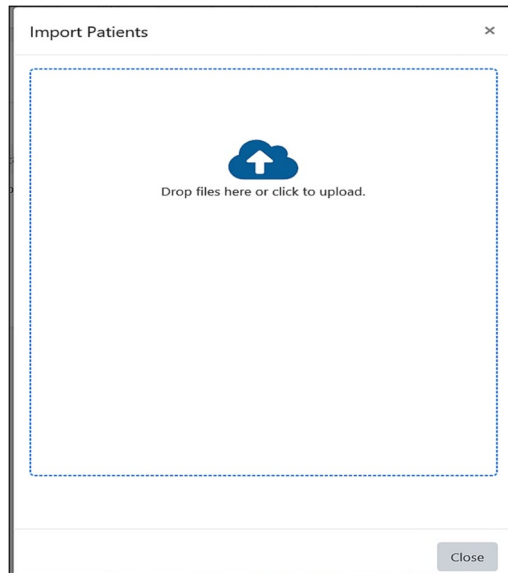


Figure 2-17: Import Patient's window

3. Once a file is uploaded, a green indicator will appear.

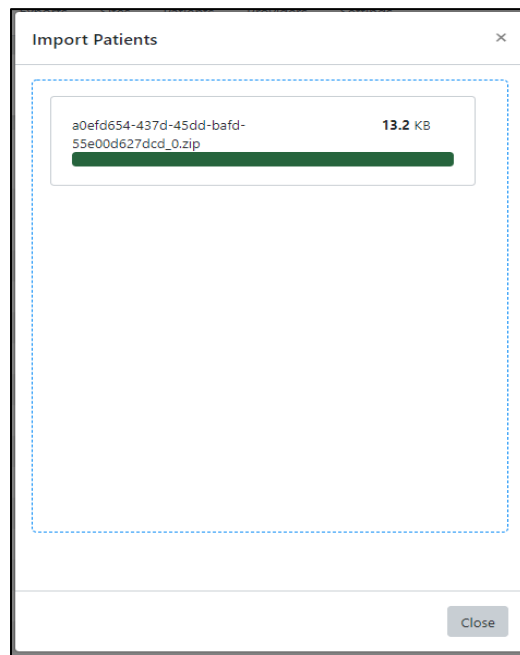


Figure 2-18: Import is complete

4. Click **Close**.

**Note:** All files must be completed before closing the **Import Patient** window.

5. The uploaded files are displayed in the **Imports** window.

6. The status will display **Complete** once the upload is done.
7. To view the results and calculations, click the **Dashboard** menu option and select the appropriate Team and Year/Quarter.
8. Use the Status box to view a specific status. For example, select **Error** to view only imports with an **Error** status. Select the blank option in the list to view all imports again.

### 2.3.3 Submissions

Use the **Submissions** tab to export QRDA I and QRDA III files. The **Submissions** screen displays the scheduled date/time of when the export started, the job ID, and the status.

Job Id	Description	Scheduled On	Updated On	Status	
Eligible Hospital 2021-Year-09-20-21-193027	Eligible Hospital 2021	9/20/2021 7:30:27 PM	9/20/2021 7:30:27 PM	Complete	QRDA III
Eligible Professional 2021-Year-09-20-21-193016	Eligible Professional 2021	9/20/2021 7:30:16 PM	9/20/2021 7:30:17 PM	Complete	QRDA I QRDA III

Figure 2-19: Submissions Tab

1. Click the **New Submission** button to start a new export.
2. Select the **Team** and **Submission Quarter** from the drop-down menu on the New Submission (QRDA I/III) window (Figure 2-20).
3. The current Performance Year is defaulted.
4. Select the **Include Patient QRDA I** checkbox if QRDA I files also need to be generated. This is optional.

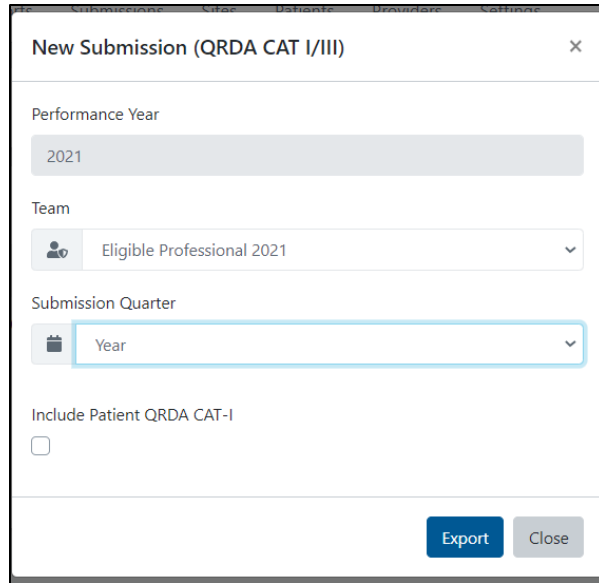


Figure 2-20: New Submissions Export Screen

5. Click the **Export** button to start the process.

**Note:** If the selected Team or year has no calculations available, the message in Figure 2-21 displays to the user.

Export Measure Results Not Found for selected Team/Year

Figure 2-21: Error message

6. The **Status** column will display **Running**, and once done, the **Status** column will display **Complete**.

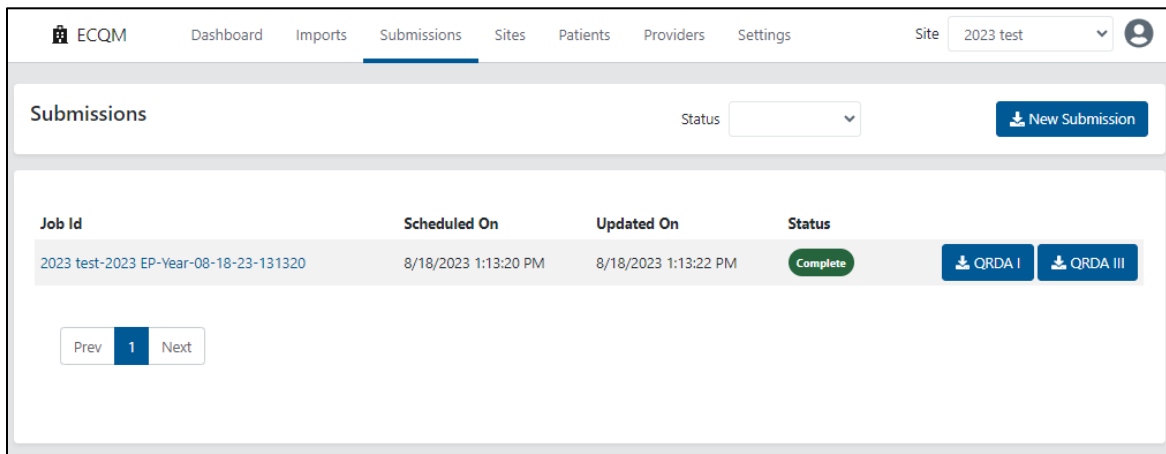


Figure 2-22: ECQM, QRDA I, and QRDA III Buttons



7. Click the **QRDA I** button to download files.
8. Click the **QRDA III** button to download files.
9. Use the **Status** box to view specific status. For example, select **Error** to view only exports with an **Error** status. Select the blank option in the list to view all exports again.

## 2.3.4 Sites

Use the **Sites** tab to modify the site's information and create/update teams. The site Admin can only be linked to one site and has access to that site only.

### 2.3.4.1 Create Teams

Teams are units of eCQM computation identified by a name. They contain a selection of measures and, optionally, a list of providers. eCQMs are computed for all the active teams configured for the site. Three types of teams can be created: EC, EH, and HYBRID.

The EC Team selects the 26 EP measures (not including two retired measures), and the EH Team provides a selection of 13 EH measures. The HYBRID team provides a selection of 2 EH/CAH measures. When a new site is created, the teams are automatically created but marked as INACTIVE. The Engine Site Admin must activate the teams for the ECQM to perform calculations. The predefined Teams (EH, EC, and HYBRID) are created for the current Computation/Performance Year. Sites can modify these teams or create new ones for the new performance year.

To create a new team:

1. Click the **Team** icon.
2. Click **Register Team** to create a new team.
3. Select either **EP**, **EH**, or **HYBRID** from the menu.
4. Enter the **Team Name** (maximum of 30 characters).
5. Current **Computation/Performance Year** is defaulted.
6. Select the **Active** check box.
7. Select the **QRDA I CMS Program** from the list. The options include the following:
  - HQR\_PI
  - HQR\_IQR
  - HQR\_\_PI\_IQR

- HQR\_IQR\_VOL
8. Select the **QRDA III CMS Program** from the list. The options include the following:
- MIPS\_INDIV
  - MIPS\_GROUP
  - CPCPLUS
  - MIPS\_VIRTUALGROUP

**Note:** The Quality Coordinator/Manager should know which options to select for the QRDA I and QRDA III CMS Program based on the site goals and site quality program. The selected option is used for QRDA I and QRDA III export.

9. If the user selects **EP** from the list of Register Teams, the **Providers** search box is available. Adding providers to the team is optional.
- a. Enter a partial name of the provider to be added.
  - b. Select the correct provider from the returned list.

**Note:** Adding a provider means that, for EC Measure calculation, the result will be limited to only that patient data for which the selected provider is designated as the service provider in the QRDA I export data. Users can only search providers in the Providers tab.

10. Select the **All Measures** check box to add or select individual measures to include the measures.
11. Click **Save Changes**.

### Register EP Team

Name

Computation/Performance Year

Active

QRDA I CMS Program

CMS Program for QRDA CAT-I submission

QRDA III CMS Program

CMS Program for QRDA CAT-III submission

---

**Providers**

---

**Measures**

<input type="checkbox"/> All Measures
<input type="checkbox"/> CMS117v9 Childhood Immunization Status
<input type="checkbox"/> CMS122v9 Diabetes: Hemoglobin A1c (HbA1c) Poor Control (> 9%)
<input type="checkbox"/> CMS124v9 Cervical Cancer Screening
<input type="checkbox"/> CMS125v9 Breast Cancer Screening
<input type="checkbox"/> CMS127v9 Pneumococcal Vaccination Status for Older Adults
<input type="checkbox"/> CMS130v9 Colorectal Cancer Screening

Figure 2-23: Register EP Team screen

### Register EH Team

Name

Computation/Performance Year

Active

QRDA I CMS Program

CMS Program for QRDA CAT-I submission

QRDA III CMS Program

CMS Program for QRDA CAT-III submission

---

**Measures**

<input type="checkbox"/> All Measures
<input type="checkbox"/> CMS104v9 Discharged on Antithrombotic Therapy
<input type="checkbox"/> CMS105v9 Discharged on Statin Medication
<input type="checkbox"/> CMS108v9 Venous Thromboembolism Prophylaxis
<input type="checkbox"/> CMS111v9 Median Admit Decision Time to ED Departure Time for Admitted Patients
<input type="checkbox"/> CMS190v9 Intensive Care Unit Venous Thromboembolism Prophylaxis
<input type="checkbox"/> CMS71v10 Anticoagulation Therapy for Atrial Fibrillation/Flutter
<input type="checkbox"/> CMS72v9 Antithrombotic Therapy By End of Hospital Day 2
<input type="checkbox"/> CMS9v9 Exclusive Breast Milk Feeding


Figure 2-24: Register EH Team screen

Figure 2- 25: Register Hybrid Team screen

### 2.3.4.2 Modify Teams

1. Click the **Team** icon.
2. Click the **Update** button next to a team to modify a team.
3. Modify the **Name** as appropriate.
4. Modify the **QRDA I and QRDA III CMS Program** as appropriate.
5. Select or clear **Measures**, as needed.
6. Click **Save Changes**.

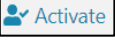
### 2.3.4.3 Activate/Inactivate Teams

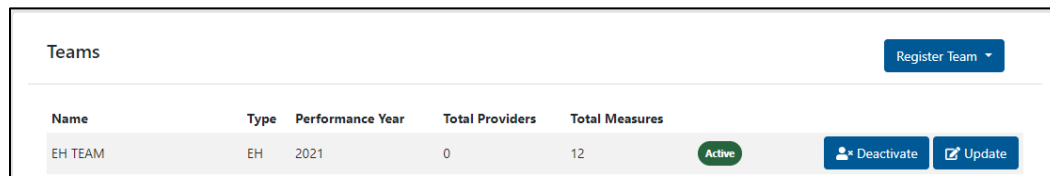
1. Click the **Team** icon.
2. Click the **Deactivate** (  ) icon next to an active team to inactivate. The page refreshes, and the Team displays as **Inactive**.

Name	Type	Performance Year	Total Providers	Total Measures		
EH TEAM	EH	2021	0	12	Inactive	<input type="button" value="Activate"/> <input type="button" value="Update"/>

Figure 2-26: Team screen–Inactive Team

**Note:** The user can also inactivate a team by clicking the Update icon, clearing the **Active** check box, and clicking **Save Changes**.

3. Click the **Activate** () icon next to the inactive team to reactivate the team. The page refreshes, and the Team will display as **Active**.



The screenshot shows a table with the following data:

Name	Type	Performance Year	Total Providers	Total Measures	Active	Deactivate	Update
EH TEAM	EH	2021	0	12	<input checked="" type="checkbox"/>		

Figure 2-27: Team screen–Active Team

**Note:** A user can also reactivate a team by clicking the Update icon, clearing the **Active** check box, and then selecting **Save Changes**.

#### 2.3.4.4 Update Sites

Refer to Section 2.2.1.2 on how to modify site information.

#### 2.3.5 Patients

Use the **Patients** tab to view the list of patients loaded in ECQM. The list includes Name, ID (IEN), DOB, Gender, Race, and Ethnicity. From the Patients tab, users can check if a patient qualifies for a particular measure.

1. Select a patient from the list or enter a **patient name** or **IEN** in the search box.
2. Select a measure from the list.
3. Click the **Filter patient data** for the measure check box to show only data used for the selected measure.

**CERTNINE, TAB**

DFN: 27121

DOB: 7/23/2021

Race: Black/African American

Gender: Female

Ethnicity: Not Hispanic/Latino

CMS9v9 Exclusive breast milk feeding Filter patient data for measure

<p><b>Initial Population</b> <span style="float: right;">Population 1</span></p> <p>Inpatient hospitalizations for single newborns who were born in the hospital that ends during the measurement period, and with either of the following conditions:</p> <ul style="list-style-type: none"> <li>- An estimated gestational age at birth of &gt;= 37 weeks</li> <li>- Birth weight &gt;= 3000 grams without an estimated gestational age at birth</li> </ul>	<p><b>32485007 (SNOMEDCT)</b> <span style="float: right;">VISIT: 2090556 Encounter: Performed</span></p> <p>Encounter Inpatient <span style="float: right;">Period: 07/23/2021 07:14 PM 07/27/2021 07:24 PM</span></p> <p>Primary Diagnosis: <b>17561000119102</b> <span style="float: right;">Diagnosis: 17561000119102 Discharge Disposition: 306689006</span></p> <p>Participants: <b>440655000</b></p>
<p><b>Denominator</b> <span style="float: right;">Population 1</span></p> <p>Initial Population</p>	<p><b>17561000119102 (SNOMEDCT)</b> <span style="float: right;">USED FOR INPATIENT 9000011C9000011 15: Diagnosis</span></p> <p>Single Live Born Newborn Born in Hospital <span style="float: right;">Period: 07/23/2021 07:14 PM</span></p> <p>Status: <b>Active</b></p>
<p><b>Numerator</b> <span style="float: right;">Population 1</span></p> <p>Inpatient hospitalizations for newborns who were fed breast milk only since birth</p>	<p><b>Z38.00 (ICD10CM)</b> <span style="float: right;">USED FOR INPATIENT 9000011C9000011 15: Diagnosis</span></p> <p>Single Live Born Newborn Born in Hospital <span style="float: right;">Period: 07/23/2021 07:14 PM</span></p> <p>Status: <b>Active</b></p>
<p><b>Denominator Exclusions</b> <span style="float: right;">Population 1</span></p> <p>Inpatient hospitalizations for newborns who were with any of the following conditions:</p> <ul style="list-style-type: none"> <li>• admitted to the Neonatal Intensive Care Unit (NICU)</li> <li>• transferred to an acute care facility, or other health care facility</li> <li>• expired during the hospitalization</li> <li>• a length of stay greater than 120 days that ends during the measurement period</li> <li>• a diagnosis of galactosemia</li> <li>• subject to parenteral nutrition</li> </ul>	<p><b>8339-4 (LOINC)</b> <span style="float: right;">V MEASUREMENT: 4247470 Assessment: Performed</span></p> <p>Birth Weight <span style="float: right;">Period: 07/23/2021 07:14 PM 07/23/2021 07:14 PM</span></p> <p>Result: <b>3175.15 g</b></p>
<p><b>Denominator Exceptions</b> <span style="float: right;">Population 1</span></p> <p>None</p>	<p><b>226789007 (SNOMEDCT)</b> <span style="float: right;">V INFANT FEEDING CHOICES: 604 Medication: Administered</span></p> <p>Breast Milk <span style="float: right;">Period: 07/23/2021 07:14 PM 07/23/2021 07:14 PM</span></p>


Figure 2-28: Sample Measure Detail from the Patients tab

### 2.3.6 Providers

Providers included as service providers in the automatic transmission of the QRDA I zip files from the eCQM Extraction Tool (BQRE) will be added automatically in the **Providers** tab. Providers can also be added manually, although it is not recommended. When manually adding a provider, the NPI must be entered correctly. Any providers added through this menu will be available for selection when creating a Team for EC.

1. Click the **Add Provider** button to add a new provider.
2. On the **Add Provider** screen:
  - a. Enter the provider’s **First Name**.
  - b. Enter the provider’s **Last Name**.
  - c. Enter the provider’s **NPI** (10 digits).

**Note:** The provider must have a valid NPI.

3. Click **Add**.
4. Click **Close** to cancel.
5. Use the Search Lookup to find a provider.
  - a. Enter the provider's name (LastName, FirstName format) or the NPI number.
  - b. Click the **Search** () icon or press Enter.
6. The list of matching providers will be displayed.
7. To view the list of all providers again, click the **Providers** tab or clear out the search and press Enter.

### 2.3.7 Settings

Use the **Settings** tab to delete or purge imported patient data. This action will permanently delete imported patient data, exports, and providers. Teams will not be deleted, and providers who were added to Teams will not be deleted. The user will have to delete them manually under Teams.

**Warning:** This process cannot be undone.

1. Click the **Delete** button to start the deletion process.
2. A warning message displayed (Figure 2-28). Click the **Delete Patient Data** button to continue.

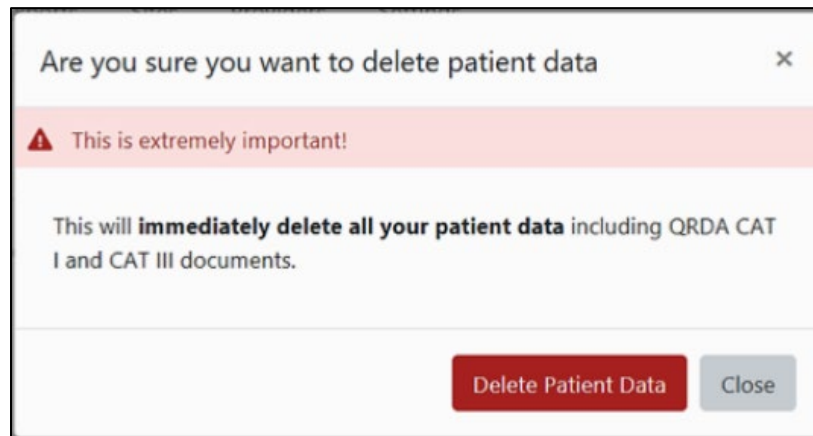


Figure 2-29: Delete Warning Message

3. Click the **Import** menu options. Any import jobs have been cleared.
4. Click the **Export** menu options. Any export jobs have been cleared.
5. Click the **Dashboard** menu options. The dashboard has been cleared.

## 2.4 Super Auditor Menu Options

The Super Auditor monitors the actions taken by all users in ECQM, such as creating sites, defining users and teams, logging in, and logging out. The Super Auditor can search or filter by user, event type, and date range. The Super Auditor role is created by the Super Admin.

### Audit

User Name

Category

Type

Event

From Date

To Date

Sort By

Time	User	Category	Type	Event	Description	
10/16/2020 11:55:59 AM	RP	\LA	Authentication	Login	Login	Authentication Succeeded
10/16/2020 11:55:48 AM	RP	\LA	Authentication	Login	Login	Authentication Failed:
10/16/2020 11:50:52 AM	RP		Authentication	Logout	Logout	Signout
10/16/2020 11:36:50 AM	RP		Configuration	Query	Sites	
10/16/2020 11:36:45 AM	RP		Authentication	Login	Login	Authentication Succeeded
10/16/2020 11:36:08 AM	RP		Authentication	Logout	Logout	Signout
10/16/2020 11:22:06 AM	RP		Authentication	Login	Login	Authentication Succeeded
10/16/2020 11:09:23 AM	RP		Configuration	Query	Teams	
10/16/2020 11:09:21 AM	RP		Configuration	Query	Sites	
10/16/2020 11:09:05 AM	RP		Configuration	Query	Sites	
10/16/2020 11:03:36 AM	RP		Authentication	Login	Login	Authentication Succeeded
10/16/2020 10:27:58 AM	RP		Authentication	Logout	Logout	Signout
10/16/2020 10:25:26 AM	RP		Authentication	Login	Login	Authentication Succeeded
10/16/2020 10:13:44 AM	RP		Configuration	Query	Sites	
10/16/2020 10:13:43 AM	RP		Authentication	Login	Login	Authentication Succeeded
10/16/2020 7:08:29 AM	RP	\WAY	Authentication	Login	Login	Authentication Succeeded

Figure 2-30: Super Auditor screen

To filter actions in the **Audit** screen:

1. Enter the User Name. (The format is **domain\username**)
2. Select a **Category** from the list. The options include the following:
  - Authentication
  - PatientData
  - Configuration
3. Select the **Type**. The options include the following:



- Login
  - Logout
  - Delete
  - Create
  - Update
  - Activate
  - Deactivate
  - Query
  - Upload
  - Download
  - Schedule
4. Enter the **Event**. Examples of events are as follows:
- Login
  - Logout
  - Sites
  - Teams
  - QRDA
  - QRDA I
  - QRDA III
  - Patient Data Upload
  - Delete
5. Enter the **From Date** and **To Date**.
6. Select **Sort By**:
- Time Descending
  - Time Ascending
  - Category
  - Type
  - Event
7. Click the **Filter** button.

## 2.5 Site Auditor Menu Options

The Site Auditor monitors site-related actions such as site log-in/log-out, site update, team update, download of QRDA I and QRDA III, and patient data upload. The Site Auditor can search or filter by user, event type, and date range. Super Admins create the Site Auditor role.

The screenshot shows the 'Audit' screen with the following fields and controls:

- User Name:** Text input field with placeholder 'User Name'.
- Category:** Dropdown menu.
- Type:** Dropdown menu.
- Event:** Text input field with placeholder 'Event'.
- From Date:** Date picker showing '10/15/2020'.
- To Date:** Date picker showing '10/15/2020'.
- Sort By:** Dropdown menu showing 'Time Descending'.
- Filter:** Blue button to execute the search.

Below the filters is a table with the following columns: Time, User, Category, Type, Event, and Description.

Time	User	Category	Type	Event	Description
10/15/2020 7:27:27 PM	RI	A	Configuration	Query	Teams
10/15/2020 7:27:27 PM	RI	A	Configuration	Update	Teams
10/15/2020 7:26:13 PM	RI	A	Configuration	Query	Teams
10/15/2020 7:26:13 PM	RI	A	Configuration	Update	Teams
10/15/2020 7:22:59 PM	RI	A	Configuration	Query	Teams
10/15/2020 7:22:57 PM	RI	A	Configuration	Query	Teams
10/15/2020 7:22:55 PM	RI	A	Configuration	Query	Sites
10/15/2020 7:10:03 PM	RI	A	PatientData	Download	QRDAI
10/15/2020 7:08:10 PM	RI	A	PatientData	Schedule	QRDA
10/15/2020 7:00:21 PM	RI	N	Authentication	Login	Login Authentication Succeeded
10/15/2020 6:59:25 PM	RI	A	PatientData	Upload	Patient Data Upload
10/15/2020 6:44:45 PM	RI	N	PatientData	Upload	Patient Data Upload
10/15/2020 6:33:20 PM	RI	N	PatientData	Upload	Patient Data Upload
10/15/2020 6:33:09 PM	RI	N	Authentication	Login	Login Authentication Succeeded
10/15/2020 6:31:26 PM	RI	A	Configuration	Query	Teams
10/15/2020 6:31:23 PM	RI	A	Configuration	Query	Teams

Figure 2-31: Site Auditor screen

To filter actions in the **Audit** screen:

1. Enter the **User Name** (format is domain\username).
2. Select a **Category** from the list. The options include the following:
  - Authentication
  - PatientData
  - Configuration
3. Select the **Type**. The options include the following:
  - Login
  - Logout
  - Delete

- Create
  - Update
  - Activate
  - Deactivate
  - Query
  - Upload
  - Download
  - Schedule
4. Enter the **Event**. Examples of events are as follows:
    - Login
    - Logout
    - Sites
    - Teams
    - QRDA
    - QRDA-I
    - QRDA-III
    - Patient Data Upload
    - Delete
  5. Enter the **From Date** and **To Date**.
  6. Select **Sort By**:
    - Time Descending
    - Time Ascending
    - Category
    - Type
    - Event
  7. Click the **Filter** button.

## Appendix A Rules of Behavior

The Resource and Patient Management System (RPMS) is a United States Department of Health and Human Services, Indian Health Service (IHS) information system for *OFFICIAL USE ONLY*. The RPMS system is subject to monitoring; therefore, no expectation of privacy shall be assumed. Individuals found performing unauthorized activities are subject to disciplinary action, including criminal prosecution.

Per IHS policy, all RPMS users (Contractors and IHS Employees) will be provided a copy of the Rules of Behavior (ROB) and must acknowledge that they have received and read them before being granted access to an RPMS system.

- For a listing of general ROB for all users, see the most recent edition of the *IHS General User Security Handbook* (SOP 06-11a).
- For a listing of system administrators/managers' rules, see the most recent edition of the *IHS Technical and Managerial Handbook* (SOP 06-11b).

Both documents are available at this IHS website:

<https://home.ihs.gov/security/index.cfm>

<p><b>Note:</b> Users must be logged on to the IHS D1 Intranet to access these documents.</p>
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The ROB listed in the following sections are specific to RPMS.

### A.1 All RPMS Users

In addition to these rules, each application may include additional ROB that may be defined within that application's documentation (e.g., Dental, Pharmacy).

#### A.1.1 Access

RPMS users shall:

- Only use data for which you have been granted authorization.
- Only give information to personnel who have access authority and have a need to know.
- Always verify a caller's identification and job purpose with your supervisor or the entity provided as an employer before providing any information system access, sensitive or nonpublic agency information.
- Be aware that personal use of information resources is authorized on a limited basis within the provisions of *Indian Health Manual* Part 8, "Information Resources Management," Chapter 6, "Limited Personal Use of Information Technology Resources."

RPMS users shall not:

- Retrieve information for someone who does not have the authority to access the information.
- Access, research, or change any user account, file, directory, table, or record not required to perform their *official* duties.
- Store sensitive files on a PC hard drive, portable devices, or media if access to the PC or files cannot be physically or technically limited.
- Exceed their authorized access limits in RPMS by changing information or searching databases beyond the responsibilities of their jobs or by divulging information to anyone not authorized to know that information.

### A.1.2 Information Accessibility

RPMS shall restrict access to information based on the type and identity of the user. However, regardless of the type of user, access shall be restricted to the minimum level necessary to perform the job.

RPMS users shall:

- Access only those documents they created and those other documents to which they have a valid need-to-know and to which they have expressly granted access through an RPMS application based on their menus (job roles), keys, and FileMan access codes. Some users may be afforded additional privileges based on their functions, such as system administrator or application administrator.
- Acquire written preauthorization by IHS policies and procedures before interconnecting or transferring data from RPMS.

### A.1.3 Accountability

RPMS users shall:

- Behave ethically, technically proficient, informed, and trustworthy.
- Log out of the system whenever they leave the vicinity of their personal computers (PC).
- Be alert to threats and vulnerabilities in the security of the system.
- Report all security incidents to their local Information System Security Officer (ISSO).
- Differentiate tasks and functions to ensure that no person has sole access to or control of essential resources.
- Protect all sensitive data entrusted to them as part of their government employment.

- Abide by all Department and Agency policies, procedures, and guidelines related to ethics, conduct, behavior, and information technology (IT) information processes.

#### A.1.4 Confidentiality

RPMS users shall:

- Be aware of the sensitivity of electronic and hard copy information and protect it accordingly.
- Store hard copy reports/storage media containing confidential information in a locked room or cabinet.
- Erase sensitive data on storage media before reusing or disposing of the media.
- Protect all RPMS terminals from public viewing at all times.
- Abide by all Health Insurance Portability and Accountability Act (HIPAA) regulations to ensure patient confidentiality.

RPMS users shall not:

- Allow confidential information to remain on the PC screen when someone who is not authorized to access that data is nearby.
- Store sensitive files on a portable device or media without encrypting.

#### A.1.5 Integrity

RPMS users shall:

- Protect their systems against viruses and similar malicious programs.
- Observe all software license agreements.
- Follow industry standard procedures for maintaining and managing RPMS hardware, operating system software, application software, database software, and database tables.
- Comply with all copyright regulations and license agreements associated with RPMS software.

RPMS users shall not:

- Violate federal copyright laws.
- Install or use unauthorized software within the system libraries or folders.
- Users may not use freeware, shareware, or public domain software on/with the system without their manager's written permission and without first scanning it for viruses.

### A.1.6 System Logon

RPMS users shall:

- Have a unique User Identification/Account name and password.
- Be granted access based on authenticating the account name and password entered.
- Be locked out of an account after five successive failed login attempts within a specified period (e.g., one hour).

### A.1.7 Passwords

RPMS users shall:

- Change passwords a minimum of every 90 days.
- Create passwords with a minimum of eight characters.
- If the system allows, use a combination of alpha-numeric characters for passwords, with at least one uppercase letter, one lowercase letter, and one number. If possible, it is recommended that a unique character be used in the password.
- Change vendor-supplied passwords immediately.
- Protect passwords by committing them to memory or storing them safely (do not store passwords in login scripts or batch files).
- Change passwords immediately if the password has been seen, guessed, or otherwise compromised, and report the compromise or suspected compromise to their Information System Security Officer (ISSO).
- Keep user identifications (IDs) and passwords confidential.

RPMS users shall not:

- Use common words found in any dictionary as a password.
- Use obvious readable passwords or passwords that incorporate personal data elements (e.g., user's name, date of birth, address, telephone number, or social security number; names of children or spouses; favorite band, sports team, or automobile; or other personal attributes).
- Share passwords/IDs with anyone or accept using another's password/ID, even if offered.
- Reuse passwords. A new password must contain no more than five characters per eight characters from the previous password.
- Post passwords.
- Keep a password list in a prominent place, such as under keyboards, in desk drawers, or in any other location where it might be disclosed.

- Give a password out over the phone.

### A.1.8 Backups

RPMS users shall:

- Plan for contingencies such as physical disasters, loss of processing, and disclosure of information by preparing alternate work strategies and system recovery mechanisms.
- Make backups of systems and files on a regular, defined basis.
- If possible, store backups away from the system in a secure environment.

### A.1.9 Reporting

RPMS users shall:

- Contact and inform their ISSO that they have identified an IT security incident and begin the reporting process by providing an IT Incident Reporting Form regarding this incident.
- Report security incidents as detailed in the *IHS Incident Handling Guide* (SOP 05-03).

RPMS users shall not:

- Assume that someone else has already reported an incident. The risk of an incident going unreported far outweighs the possibility that an incident gets reported more than once.

### A.1.10 Session Timeouts

The RPMS system implements system-based timeouts, which allow users to exit a prompt after 5 minutes of inactivity.

RPMS users shall:

- Utilize a screen saver with password protection set to suspend operations at no greater than 10 minutes of inactivity. This will prevent inappropriate access and viewing of any material displayed on the screen after some period of inactivity.

### A.1.11 Hardware

RPMS users shall:

- Avoid placing system equipment near obvious environmental hazards (e.g., water pipes).
- Keep an inventory of all system equipment.



- Keep records of maintenance/repairs performed on system equipment.

RPMS users shall not:

- Eat or drink near system equipment.

### A.1.12 Awareness

RPMS users shall:

- Participate in organization-wide security training as required.
- Read and adhere to security information pertaining to system hardware and software.
- Take the annual information security awareness.
- Read all applicable RPMS manuals for the applications used in their jobs.

### A.1.13 Remote Access

Each subscriber organization establishes its policies for determining which employees may work at home or in other remote workplace locations. Any remote work arrangement should include policies that:

- Are in writing.
- Provide remote user authentication through ID and password or other acceptable technical means.
- Outline the work requirements, security safeguards, and procedures the employee must follow.
- Ensure adequate storage of files, removal, and non-recovery of temporary files created in processing sensitive data, virus protection, and intrusion detection, and provide physical security for government equipment and sensitive data.
- Establish mechanisms to back up data created and stored at alternate work locations.

Remote RPMS users shall:

- Remotely access RPMS through a virtual private network (VPN) whenever possible. Direct dial-in access must be justified and approved in writing, and industry best practices or government procedures must secure its use.

Remote RPMS users shall not:

- Disable any encryption for network, internet, and Web browser communications.

## A.2 RPMS Developers

RPMS developers shall:

- When writing or revising code, always be mindful of protecting the confidentiality, availability, and integrity of RPMS.
- Always follow the IHS RPMS Programming Standards and Conventions (SAC) when developing for RPMS.
- Only access information or code within the namespaces they have been assigned as part of their duties.
- Remember that all RPMS code is the property of the U.S. Government, not the developer.
- Not access live production systems without obtaining appropriate written access and shall only retain that access for the shortest period possible to accomplish the task that requires the access.
- Observe the separation of duties, policies, and procedures to the fullest extent possible.
- Document or comment on all changes to any RPMS software when the change or update is made. Documentation shall include the programmer's initials, change date, and reason for the change.
- Release their certified applications using checksums or other integrity mechanisms to assure the integrity of the routines within their RPMS applications.
- Follow industry best standards for systems assigned to develop, maintain, and abide by all Department and Agency policies and procedures.
- Document and implement security processes whenever available.

RPMS developers shall not:

- Write any code that adversely impacts RPMS, such as backdoor access, "Easter eggs," time bombs, or any other malicious code, or make inappropriate comments within the code, manuals, or help frames.
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Release any sensitive agency or patient information.

## A.3 Privileged Users

Personnel with significant access to processes and data in RPMS, such as system security administrators, systems administrators, and database administrators, have added responsibilities to ensure its secure operation.

Privileged RPMS users shall:

- Verify that any user requesting access to any RPMS system has completed the appropriate access request forms.
- Ensure that government and contractor personnel understand and comply with license requirements. End users, supervisors, and functional managers are ultimately responsible for this compliance.
- Advise the system owner on matters concerning information technology security.
- Assist the system owner in developing security plans, risk assessments, and supporting documentation for the certification and accreditation process.
- Ensure that any changes to RPMS that affect contingency and disaster recovery plans are conveyed to the person responsible for maintaining continuity of operations plans.
- Ensure that adequate physical and administrative safeguards are operational within their areas of responsibility and that access to information and data is restricted to authorized personnel on a need-to-know basis.
- Verify that users have received appropriate security training before allowing access to RPMS.
- Implement applicable security access procedures and mechanisms, incorporate appropriate levels of system auditing, and review audit logs.
- Document and investigate known or suspected security incidents or violations and report them to the ISSO, Chief Information Security Officer (CISO), and systems owner.
- Protect the supervisor, superuser, or system administrator passwords.
- Avoid instances where the same individual is responsible for several functions (e.g., transaction entry, and transaction approval).
- Watch for unscheduled, unusual, and unauthorized programs.
- Help train system users on the appropriate use and security of the system.
- Establish protective controls to ensure the system's accountability, integrity, confidentiality, and availability.
- Replace passwords when a compromise is suspected. Delete user accounts as quickly as possible when the user is no longer authorized in the system. Passwords forgotten by their owner should be replaced, not reissued.
- Terminate user accounts when a user transfers or has been terminated. If the user has the authority to grant authorizations to others, review these other authorizations. Retrieve any devices used to gain access to the system or equipment. Cancel login IDs and passwords and delete or reassign related active and backup files.

- If the system is left on and unattended, use a suspend program to prevent an unauthorized user from logging on with the current user's ID.
- Verify the user's identity when resetting passwords. This can be done in person or by having the user answer a question that can be compared to one in the administrator's database.
- Shall follow industry best standards for systems they are assigned to and abide by all Department and Agency policies and procedures.

Privileged RPMS users shall not:

- Access any files, records, systems, etc., that are not explicitly needed to perform their duties
- Grant any user or system administrator access to RPMS unless proper documentation is provided.
- Release any sensitive agency or patient information.

# Glossary

## **Admission Orderable Items**

Site- or facility-defined items that indicate a patient's admission.

## **Clinical Quality Measures**

Standardized metrics that measure and track the quality of health care services by ECs, EH, and CAH.

## **Meaningful Use**

The use of Certified EHR Technology (CEHRT) to:

- Improve quality, safety, efficiency, and reduce health disparities
- Engage patients and family
- Improve care coordination and population and public health
- Maintain privacy and security of patient health information

## Acronym List

Acronym	Meaning
CAH	Critical Access Hospital
CEHR	Certified Electronic Health Record
CEHRT	Certified Electronic Health Record Technology
CMS	Centers for Medicare & Medicaid Services
CQM	Clinical Quality Measures
eCQM	Electronic Clinical Quality Measures
EC	Eligible Clinician
ECQM	Electronic Clinical Quality Measure Engine
ED	Emergency Department
EH	Eligible Hospital
EHR	Electronic Health Records
IHS	Indian Health Service
ISSO	Information System Security Officer
IT	Information Technology
LDAP	Lightweight Directory Access Protocol
ONC	Office of the National Coordinator for Health Information Technology
QRDA	Quality Reporting Document Architecture
QRDA I	QRDA Category I (Patient Data) File
QRDA III	QRDA Category III (Aggregated Data) File
RPMS	Resource and Patient Management System

## Contact Information

If you have any questions or comments regarding this distribution, please contact the IHS IT Service Desk.

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