RESOURCE AND PATIENT MANAGEMENT SYSTEM

Electronic Clinical Quality Measures (eCQM) Export Tool

(BQRE)

Technical Manual

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Office of Information Technology
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Preface

Electronic Clinical Quality Measures (eCQM) is a component of the Certified Electronic Health Record Technology (CEHRT) necessary for participating in a variety of CMS programs. While Performance Measures assess how the RPMS CEHRT is used, Clinical Quality Measures (CQMs) measure the outcomes of patient care.

This manual describes the eCQM Export Tool technical details (namespace BQRE).

BQRE is a browser-enabled graphical user interface (GUI) for the Indian Health Service (IHS) deployed locally on an application server for extracting eCQM measures data from IHS sites. It provides functionality to extract Quality Reporting Document Architecture (QRDA) CAT-I files that can be submitted/uploaded to the eCQM Engine to generate QRDA CAT-III files to submit to reporting entities.

1.0 Introduction

This manual provides IHS site managers with a technical description of the eCQM Export Tool. Please note that this is a browser-accessible application installed on an IHS site's local application server. There are no Resource and Patient Management System (RPMS) routines, files, menus, cross references, globals, or other necessary information required to effectively manage the system.

The assigned namespace is BQRE, although there are no official RPMS components.

There are no file number ranges for this package.

2.0 Implementation and Maintenance

2.1 General Information

The eCQM Export Tool is a browser-accessible application that is installed locally at an IHS Site (or Area Office) on an application server. The application will communicate with the local RPMS site via the Ensemble web services. The application may be configured to communicate with a centrally deployed eCQM Engine or a locally deployed eCQM Engine.

There are two potential configurations for the eCQM setup as follows:

- **BQRE/ECQM local install**: Do not install on the same server as BPRM. The EQCM Application (IIS) and Database (RavenDB) and BQRE can be installed on the same machine.
- **BQRE local/ECQM central option**: BQRE can be installed on the BPRM application server.

2.2 System Requirements

The following resources are required for a locally deployed standalone application server for BQRE:

- Application server (Windows operating system [OS])
- Microsoft.Net Core Runtime version 2.1+ and above (https://www.microsoft.com/net/download)
- 2.4 Ghz+ quadcore 8-12 GB RAM – 60 GB free space

2.3 Package-wide Variables

There are no package-wide variables.

2.4 Security Keys

Table 2-1: Security key names and descriptions

Key Name	Description
APCLZMENU	The existing APCL security key should be assigned to BQRE users who perform the role of Quality Coordinator and export QRDA CAT-I files to the local application server repository or to the eCQM Engine (centrally deployed).
BUSAZRPT	The existing BUSA security key should be assigned to BQRE users who perform the role of Quality Auditor and review the BQRE events performed by Quality Coordinators.

3.0 Routine Descriptions

No RPMS routines are released with this application.

4.0 File and Tables

4.1 File List

The file list is not applicable.

4.2 File Access

File access is not applicable.

4.3 Cross References

Cross references are not applicable.

5.0 External Relations

Table 5-1: RPMS external packages with minimum version and patch

RPMS Package	Minimum Version and Patch
BCQM	Version 1.0 Patch 4
BMW	Version 2016.2
BJPC	Version 2.0 Patch 22
BGO	Version 1.1 Patch 24
DTS	Cycle 23

5.1 Callable Routines

Callable routines are not applicable.

5.2 Published Entry Points

Published entry points are not applicable.

5.3 Exported Options

Exported options are not applicable.

6.0 Internal Relations

Internal relations are not applicable.

7.0 Archiving and Purging

Archiving and purging are not applicable.

8.0 Documentation Resources

This section describes a few methods to generate online technical documentation.

The sections below do not apply as there are no RPMS components.

8.1 System Documentation

Online VPS system documentation can be generated through the use of several Kernel options, including, but not limited to:

- %INDEX
- Menu Management
- Inquire Option
- Print Option File
- VA FileMan
- Data Dictionary Utilities
- List File Attributes

For more option listings and further information about other utilities that supply online technical information, see the Decentralized Hospital Computer Program (DHCP) Kernel Reference manual.

8.1.1 %INDEX

The %INDEX option analyzes the structure of a routine to determine in part, if the routine adheres to RPMS programming standards. The output can include the following components:

- Compiled list of errors and warnings
- Routine listing
- Local variables
- Global variables
- Naked globals
- Label references
- External references
- Running %INDEX for a specified set of routines allows users to discover any deviations from RPMS programming standards that exist, and to see how routines interact with one another (i.e., which routines call or are called by other routines).
- To run %INDEX for the VPS system:

- At the "Routine(s)?" prompt, type the <<CC>> namespace.

8.1.2 Inquire Options

The Inquire menu management option provides the following information about a specified option:

- Option name
- Menu text
- Option description
- Type of option
- Lock (if any)

8.1.3 Print Option File

The Print Option File utility generates a listing of options from the Option file (#19). Users can print all of the entries or a single option or range of options.

8.1.4 List File Attributes

This VA FileMan option allows users to generate documentation pertaining to files and file structure. The standard format of this option provides the following data dictionary information for a specified file:

- File name and description
- Identifiers
- Cross-references
- Files pointed to by the file specified
- Files that point to the file specified
- Input, print, and sort templates

In addition, the following applicable data is supplied for each field in the file:

- Field name, number, title, and description
- Global location
- Help prompt
- Cross-references
- Input transform
- Date last edited
- Notes

Using the Global Map format of this option generates an output that lists the following information:

- All cross-references for the file selected
- Global location of each field in the file
- Input, print, and sort templates

8.2 Online Help

In addition to system documentation, RPMS includes special help displays for most menu options and data entry prompts. Typing **?** at the "Select . . . Option" prompt displays information related to the current option, where

Typing . . .	**Displays . . .**
one question mark (?)	a list of all options accessible from the current option.
two question marks (??)	a list of all accessible options and their formal names
three question marks (???)	a brief description for each option in a menu.
one question mark (?) followed by an option name (?OPTION)	extended help, if available, for that option

9.0 SAC Requirements and Exemptions

There are no applicable SAC requirements and exemptions.

Appendix A: GUI Components

A.1 Authentication

Users of the BQRE Export Tool must be RPMS users with valid RPMS credentials. The login screen will authenticate user credentials to the local RPMS instance via Ensemble web service calls. Only those RPMS users with security keys listed in the earlier section can access the eCQM Export Tool functionality.

A.2 Application Server Specification

For the BQRE/ECQM Local install option, do not install on the same server as BPRM. However, the ECQM Application (IIS) and Database (RavenDB) and BQRE could be installed on ***one*** machine. The minimum specification for that server is Windows OS with Microsoft .NET Core Runtime version 2.1+ and above with 2.4 Ghz+ quadcore with 8-12 GB RAM and 60 GB free space.

For the BQRE local / ECQM central option, the BQRE could be installed on BPRM application server. The minimum specification for that server is Windows OS with Microsoft .NET Core Runtime version 2.1+ and above with 2.4 Ghz+ quadcore with 8-12 GB RAM and 60 GB free space.

A.3 Browser Specification

Users with network access to the local application server must access the tool via Google Chrome or Microsoft Internet Explorer 11 or higher.

A.4 Web Application Specification

The web application was created with Microsoft.Net technology C#. It renders the web pages in HTML5.

A.5 Database Specification

The BQRE Export Tool employs a LiteDB database to produce the QRDA CAT-I files generated during the export process.

A.6 API Token

The eCQM Export Tool will communicate securely with the eCQM Engine which is centrally deployed by IHS. Each RPMS site utilizing the eCQM Export Tool must register with the eCQM Engine. As part of this onboarding process, the eCQM Engine generates an API Token that can be sent securely to the eCQM Export Tool and imported. This API Token will be sent with each QRDA CAT-I file submitted to the eCQM Engine to authenticate the source of the file and ensure it is valid to import and process.

Glossary

API Token

Unique token code/value generated by the eCQM Engine to identify the source of the QRDA CAT-I files to be processed.

BQRE

Namespace for the eCQM Export Tool

eCQM

Electronic clinical quality measures

QRDA – CAT I

Quality Reporting Document Architecture Category-I Format of export data to be sent to the eCQM Engine; contains personally identifiable data.

QRDA – CAT III

Quality Reporting Document Architecture Category-III Format of processed export data to be sent to the reporting entities; contains personally identifiable data.

Acronym List

Acronym	Term Meaning
CEHRT	Certified Electronic Health Record Technology
CMS	Centers for Medicare and Medicaid Services
CQM	Clinical Quality Measure
IHS	Indian Health Service
IIS	Internet Information Service
OS	Operating System
QRDA	Quality Reporting Document Architecture
RPMS	Resource and Patient Management System
SSL	Secure Sockets Layer
WCF	Windows Communication Foundation

Contact Information

If you have any questions or comments regarding this distribution, please contact the OIT Help Desk (IHS).

Phone: (888) 830-7280 (toll free)

Web: https://www.ihs.gov/helpdesk/

Email: support@ihs.gov