RESOURCE AND PATIENT MANAGEMENT SYSTEM

iCare Population Management GUI

(BQI)

Addendum to the Technical Manual

Version 2.3 Patch 4
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Table of Contents

Preface

The purpose of the Technical Manual is to provide technical information about the iCare Population Management (BQI) Graphical User Interface (GUI) package. The BQI package is designed to enable clinical case managers and providers to track, monitor, administer, and report on clinical care delivered to patients.

1.0 Introduction

The iCare Population Management GUI (BQI) software is a component of the Indian Health Service (IHS) Resource and Patient Management System (RPMS) that provides case management functions. Case management provides a mechanism to inform healthcare providers about single or multiple disease states and conditions and allows them to follow-up clinical interventions. RPMS applications can assist healthcare providers in identifying high-risk patients, proactively tracking care reminders and the health status of individuals or populations, providing appropriate care by embedding evidence-based guidelines, and reporting outcomes. Appropriate case management improves the delivery of care, as well as the outcome. In addition, there are documented fiscal benefits when appropriate case management is introduced into the healthcare business process model.

The Technical Manual provides IHS site managers with a technical description of the BQI routines, files, menus, cross references, globals, and other necessary information required to effectively manage the iCare Population Management GUI system.

All routines, files, options, keys and remote procedure calls (RPC) are namespaced starting with the letters BQI. The file number range for this package is 90505–90509.99.

BQI incorporates the Human Immunodeficiency Virus (HIV) Management System (HMS). The routines and files associated with the HMS are namespaced BKM and the file number range is 90450 – 90459.99.

BQI provides the first interface to Care Management Event Tracking (CMET) functionality. The CMET functionality allows sites to track specific events and follow them to completion. In CMET, the events that can be tracked are related to women's health. CMET offers users the ability to track an event, enter findings, recommend follow-up events, and create and document patient notifications.

2.0 Orientation

The iCare package has no RPMS menu options for users. The only RPMS preparation specifically needed to run iCare is to install the Kernel Installation and Distribution System (KIDS) package, assign the appropriate Remote Procedure Call (RPC) menu option to users, and set up the appropriate background jobs. The rest of the iCare package is run and managed on the personal computer client. See the Installation Guide for details on server and client installation and configuration.

Interaction between iCare and the RPMS system is accomplished entirely through the use of RPCs. All RPCs in this package begin with the namespace letters BQI.

3.0 Implementation and Maintenance

The iCare system is designed to work with RPMS through a Windows® GUI application.

3.1 General Information

Table 3-1 shows the prerequisite patch requirements for successfully installing iCare.

Table 3-1: Prerequisite patch requirement

Package and Version	Associated Patch Designation(s)	Brief Patch Description
ICARE MANAGEMENT SYSTEM Version 2.3	BQI*2.3*2	iCARE Version 2.3 Patch 2
BMXNET ADO.NET DATA PROVIDER Version 4.0	BMX*4.0*3	BMXNET Version 4.0 Patch 3
IHS CLINICAL REPORTING Version 13.0	BGP*13.0*1	IHS CLINICAL REPORTING Version 13.0 Patch 1
IHS USER SECURITY AUDIT Version 1.0	IHS USER SECURITY AUDIT 1.0	MU Audit functionality
IHS MU PERFORMANCE REPORTS Version 1.0	APCM*1.0*2	MU PERFORMANCE Patch 2

3.2 System Requirements

Table 3-2 shows the versions of other packages that must be installed for iCare to work properly.

Table 3-2: System requirements

Module	Minimum Version	Recommended Version
VA FileMan (DI)	v22.0 Patch 1017	
VA Kernel (XU)	v8.0 Patch 1017	
BMXNet (BMX)	v4.0 Patch 3	v4.0 Patch 3
IHS/VA Utilities (XB)	v3.0 through Patch 11	
Patient Information Management System (PIMS)	v5.3 through Patch 1016	
IHS Clinical Reporting (BGP)	v13.0 Patch 1	v13.0 Patch 1
PCC Data Entry (APCD)	v2.0 through Patch 10	
PCC Health Summary (APCH)	v2.0 through Patch 17	
QMAN (AMQQ)	v2.0 through Patch 21	

Module	Minimum Version	Recommended Version
Taxonomy (ATX)	v5.1 through Patch 10	
HIV Management System (BKM)	v2.1	v2.1 Patch 2
IHS Asthma Register (BAT)	v1.0	
IHS PCC Suite (BJPC)	v2.0 Patch 9	
Referred Care Info System (BMC)	v4.0 Patch 7	
Patient Registration (AG)	v7.1 Patch 10	
Immunization (BI)	v8.5 Patch 4	
EHR	v1.1 Patch 10	
iCare Management System (BQI)	v2.3 through Patch 2	v2.3 Patch 2
IHS User Security Audit (BUSA)	v1.0	v1.0
IHS MU Performance Reports (APCM)	v1.0 through Patch 2	v1.0 Patch 2

3.3 Package-wide Variables

There are no package-wide BQI variables in RPMS.

3.4 Security Keys

Users already having keys AMHZ SUICIDE FORM ENTRY and/or APCDZ SUICIDE FORMS will be assumed to have access to view suicide forms in iCare.

Table 3-3 lists the security keys which govern iCare that can be assigned to users.

Table 3-3: Security Keys

Key Name	Description
BQIZCMED	Assigned to iCare users who are allowed to edit care management data. This includes editing existing RPMS register data.
BQIZMGR	Assigned to users who will manage the iCare system. It should not be given to the general RPMS user population.
BQIZTXED	Assigned to the small group of iCare users who are allowed to add and delete entries from site-specified taxonomies, such as Lab and Medication, and should not be given to the general RPMS user population.

Key Name	Description
BQIZMUMGR	Assigned to the person who has been designated as the Meaningful Use (MU) Coordinator.
BQIZIPCMGR	Assigned to the person who has been designated as the Improving Patient Care Collaborative (IPC) Coordinator.
BQIZEMPHLTH	Allows users to create and view an Employee Health Panel to monitor certain information about employees. Because of the sensitivity of the data, it should not be given to the general RPMS user population.

4.0 Menu Diagram

There are no RPMS menus in the BQI system. Client menus are discussed in detail in the *BQI User Manual.*

5.0 Routine

5.1 Routine List

Table 5-1 lists the iCare routines being released in this version of iCare and does not include all iCare routines.

Table 5-1: Routine List

BQI23P4	BQI23PU3	BQICAHLO	BQICMLST	BQICMUTL	BQIDCAH
BQIDCAH1	BQIDCAH2	BQIDCAH3	BQIDCAH4	BQIDCAH5	BQIDCAH6
BQIDCAPC	BQIDCAPH	BQIDCASN	BQIDCDF	BQIDCERV	BQIDCINP
BQIDCMPR	BQIDCREM	BQIGPRA5	BQIIPBNL	BQIIPMNU	BQIIPMON
BQIIPRVG	BQIIPSNG	BQIIPTBL	BQIIPTST	BQILKSMD	BQILYDEF
BQIMTCR1	BQIMTCRD	BQIMTCRT	BQIMUDCQ	BQIMUDFC	BQIMUDFH
BQIMUDPR	BQIMUEXP	BQIMUFAC	BQIMUFCH	BQIMUMON	BQIMUPER
BQIMUPRH	BQIMUPRS	BQIMUPRV	BQIMUTAB	BQIMUUPD	BQIMUUSR
BQINIGH1	BQINIGH2	BQINIGH3	BQINIGHT	BQINOTR	BQINOTT
BQIPDSC1	BQIPDSCF	BQIPDSCM	BQIPLCR	BQIPLDS1	BQIPLDS2
BQIPLDSC	BQIPLFL	BQIPLLAY	BQIPLPM	BQIPLPP	BQIPLUS1
BQIPLUSR	BQIPTFHS	BQIPTINS	BQIPTPRC	BQIRGASP	BQIRGASU
BQIRGCOP	BQIRGDMS	BQIRGPG	BQIRGPL	BQIRLB	BQIRMDR
BQIRMDR1	BQIRMPL	BQIRPL	BQIRPLN	BQIRRPT	BQISYDIV
BQISYKEY	BQISYSIT	BQITASK2	BQITASK3	BQITASK6	BQITASK7
BQITD05	BQITD06	BQITD11	BQITD13	BQITDVAL	BQITIUTX
BQITMPLE	BQITMPLL	BQITMPLS	BQITRRSK	BQITRSK	BQITRUTL
BQITUIX	BQITUTL	BQIUL2	BQIUL3	BQIULPT	BQIUTB
BQIUTB2	BQIUTB3	BQIUTB4	BQIVFCHC	BQIVFTLK	

5.2 Routines with Description

Table 5-2 describes each routine in this version of iCare.

Table 5-2: Routines with Descriptions

Routine	Description
BQI23P4	Post-installation program to set up iCare in RPMS

Routine	Description
BQI23PU3	Pre-installation program to clean out existing data
BQICAHLO	Community Alert HL7® segment builder
BQICMLST	Builds list of Care Mgmt measures to display
BQICMUTL	Care Management Utility program
BQIDCAH	Ad hoc panel definition search program
BQIDCAH1	Continuation program for BQIDCAH
BQIDCAH2	Continuation program for BQIDCAH
BQIDCAH3	Continuation program for BQIDCAH
BQIDCAH4	Continuation program for BQIDCAH
BQIDCAH5	Continuation program for BQIDCAH
BQIDCAH6	Continuation program for BQIDCAH
BQIDCAPC	Finds scheduled visits by clinic stop code
BQIDCAPH	Finds scheduled visits by hospital location
BQIDCASN	Finds all patients who are assigned to designated providers/case managers
BQIDCDF	Retrieves a predefined panel definition
BQIDCERV	Finds Emergency Room Visits
BQIDCINP	Finds Inpatients events
BQIDCMPR	Finds patients where the user is either a primary or a primary/secondary provider on a visit
BQIDCREM	Calculates emergency room flags
BQIGPRA5	Includes BQI GET GPRA Aggregate RPC
BQIIPBNL	Generic IPC Bundle Logic program
BQIIPMNU	Modified IPC Monthly calculation program by provider instead of by measure
BQIIPMON	IPC Monthly calculation program by measure
BQIIPRVG	Calculates value for the Revenue Generated measure
BQIIPSNG	Single provider calculation for IPC
BQIIPTBL	Program that manages IPC tables
BQIIPTST	Special routine for IPC beta testing
BQILKSMD	SNOMED search program
BQILYDEF	Program that addresses default layouts, a feature which will be included in a future version of iCare
BQILYUTL	Program that includes layout template utilities

Routine	Description
BQIMTCR1	Finds Definition Detail results to display in the Definition Detail tab
BQIMTCRD	Gets the Definition Detail Data
BQIMTCRT	Definition Detail Utilities
BQIMUDCQ	MU EP Clinical Quality Measures by Division
BQIMUDFC	MU HOSP Performance Measures by Division
BQIMUDFH	MU HOSP Performance Measures by Division hover help
BQIMUDPR	MU EP Performance Measures by Division
BQIMUEXP	MU CQM Export
BQIMUFAC	Program to retrieve Facility Performance data
BQIMUFCH	Program to retrieve Facility Performance hover help
BQIMUMON	Program that calculates MU CQ data monthly
BQIMUPER	Retrieves the MU CQ dates that have calculated
BQIMUPRH	Program to retrieve Provider Performance hover help
BQIMUPRS	Program to calculate a single provider's clinical quality measures
BQIMUPRV	Program to retrieve the Provider Performance data
BQIMUTAB	Program to retrieve meaningful use table data
BQIMUUPD	Update MU Performance version
BQIMUUSR	Program to manage MU User Preferences
BQINIGH1	Continuation program of the nightly job
BQINIGH2	Continuation program for the nightly job
BQINIGH3	Continuation program for the nightly job
BQINIGHT	Nightly job to update flags, National Measures, diagnosis categories, and reminders
BQINOTR	Reminder Notification Log
BQINOTT	iCare Notification program
BQIPDSC1	Panel descriptions definition continued
BQIPDSCF	Program to determine panel description
BQIPDSCM	Program to format Panel Generated Description
BQIPLCR	Program to create and update panel definitions

Routine	Description
BQIPLDS1	Continuation of the program to generate a panel description based upon defined parameters
BQIPLDS2	Continuation of the program to generate a panel description based upon defined parameters
BQIPLDSC	Panel Description Utility
BQIPLFL	Program to set a panel's filter definitions
BQIPLLAY	Panel Layouts program
BQIPLPM	Program to get or update a panel's parameters
BQIPLPP	Program to populate a panel based upon the definition and the parameters
BQIPLUS1	User Preferences continued
BQIPLUSR	Program to get or update a user's preferences
BQIPTFHS	Patient Family History
BQIPTINS	Retrieve patient insurance information
BQIPTPRC	Patient ICD-9 Procedures
BQIRGASP	Refreshes a patient's selected care management item
BQIRGASU	Asthma Care Management utilities
BQIRGCOP	COPD Care Management
BQIRGDMS	Diabetes Care Management
BQIRGPG	Prenatal Care Management
BQIRGPL	Program that returns register data for a panel or list of patients
BQIRLB	Patient Labs
BQIRMDR	Program to identify active reminders for patients and update ^BQIPAT with this information
BQIRMDR1	Continuation program for active patient reminders
BQIRMPL	Reminders display by panel
BQIRPL	Problem List display
BQIRPLN	Problem Notes Display
BQIRRPT	Reports List
BQISYDIV	Site Parameters Division RPCs
BQISYKEY	Program that manages iCare security keys

Routine	Description
BQISYSIT	Program that returns background job status as well as iCare site parameters; additional remote procedure to retrieve the current status of a patch is included
BQITASK2	Scheduled Task Program
BQITASK3	Scheduled Task Program
BQITASK6	Scheduled Task Program
BQITASK7	Scheduled Task Program
BQITD05	CVD Significant Risk Tag program
BQITD06	CVD At Risk program
BQITD11	PreDM Metabolic Syndrome program
BQITD13	Pregnancy tag program
BQITDVAL	Dx Tag Validation Program
BQITIUTX	Get TIU Document Text
BQITMPLE	Template Handling
BQITMPLL	Template list RPC
BQITMPLS	Program that manages template lists
BQITRRSK	Best Practice Prompts Risk Factors
BQITRSK	CVD Risk Factors
BQITRUTL	Best Practice Prompts Utilities
BQITUIX	Build Taxonomy Program
BQITUTL	Diagnostic Tag Utility Program
BQIUL2	Miscellaneous BQI utilities
BQIUL3	Miscellaneous BQI utilities
BQIULPT	Miscellaneous patient utilities program
BQIUTB	Utility program to retrieve table values for iCare
BQIUTB1	Additional table retrieval program
BQIUTB2	Program to get the list of reminders and V files
BQIUTB3	Program to retrieve the taxonomy list associated with a type of taxonomy ICD Diagnosis, Medication, Current Procedural Terminology (CPT), etc.
BQIUTB4	Additional table values for iCare
BQIVFCHC	Program that retrieves a list of choices for a specified file and field within PCC
BQIVFTLK	Looks up value for specified field and returns identifying information for V file entry

5.3 Function List

5.3.1 $$AGE^BQIAGE

The $$AGE^BQIAGE program is copied from the computed AGE field (2,.033) that calculates the age of a person based on the date of birth (DOB) (2,.03) and either the current date (DT) or the date of death (DOD) (2,.351). The computed AGE has been modified to use another date passed into this function instead of just the previous two dates, DT, and DOD (i.e., age as of the date passed). A qualifier may also be passed indicating that years (YRS), days (DYS), and months (MOS) should be returned.

- Input Parameter Description:
  - D0: Patient IEN
  - PDATE: Other date to compare against patient's DOB
  - QUAL: Include qualifier (YRS, DYS, MOS)
- Output Description:
- Patient’s age

5.3.2 $$CDEF^BQICEVW

Returns the Care Management source default fields.

- Input Parameter Description: N/A but assumes the value of CARE is defined.
  - CARE: The value of a View Source entry
- Output Description:
  - Returns a list of codes of data elements that can be viewed

5.3.3 $$CVW^BQICEVW

Retrieves a list of the fields for a Customized Care Management view.

- Input Parameter Description:
  - CARE: The value of a View Source entry
  - OWNR: Assumes the user
  - PLIEN: Assumes the panel
- Output Description:
  - Returns a list of codes of data elements that can be viewed

5.3.4 $$DFNC^BQICEVW

Returns the standard display order for a Care Management source.

- Input Parameter Description: N/A but assumes the value of CARE is defined.
  - CARE: The value of a View Source entry
- Output Description:
  - Returns a list of codes of data elements that can be viewed

5.3.5 $$SFNC^BQICEVW

Returns the standard sort order for a Care Management source.

- Input Parameter Description: N/A but assumes the value of CARE is defined.
  - CARE: The value of a View Source entry
- Output Description:
  - Returns a list of codes of data elements that can be viewed

5.3.6 $$TMPL^BQICEVW

Checks if a layout template is used for a panel.

- Input Parameter Description:
  - CARE: The value of a View Source entry
  - Assumes the owner of the panel and the panel IEN.
- Output Description:
  - Returns a 0 if no layout template is being used or a 1 if a layout template is being used

5.3.7 $$FND^BQICMUTL

Determines what logic to pass to $$ITM^BQICMUTL to return the last entry for a specific data element for a specified Care Management source.

- Input Parameter Description:
  - CRN - Care Mgmt Source IEN
  - COLN - Column IEN
  - BQDFN - Patient IEN
- Output Description:
  - Returns the information about the most recent result value as 1 ^ Visit date ^ ^ Visit internal entry number ^ associated V file internal entry number ^ Result Value ^ “refusal” (if applicable)

5.3.8 $$FTAG^BQICMUTL

Determines what logic to pass to $$ITM^BQICMUTL to return the last entry for a specific data element for a specified Diagnostic Tag.

- Input Parameter Description:
  - TGN - Dx Tag IEN
  - COLN - Column IEN
  - BQDFN - Patient IEN
- Output Description:
  - Returns the information about the most recent result value as 1 ^ Visit date ^ ^ Visit internal entry number ^ associated V file internal entry number ^ Result Value ^ “refusal” (if applicable)

5.3.9 $$ITM^BQICMUTL

Contains the logic to find the most recent visit for a request item and is called by $$FND^BQICMUTL.

- Input Parameter Description:
  - TMFRAME - Time frame to search data for
  - BQDFN - Patient internal entry number
  - FREF - File to search in
  - RREF - Search file table file
  - TIEN - Item to search on
  - TAX - Taxonomy name
- Output Description:
  - Returns the information about the most recent result value as 1 ^ Visit date ^ ^ Visit internal entry number ^ associated V file internal entry number ^ Result Value ^ “refusal” (if applicable)

5.3.10 $$CDEF^BQICMVW

Returns the Care Management source default fields.

- Input Parameter Description:
  - N/A
- Output Description:
  - Returns a string of required and default fields delimited by $C(29). All optional fields are excluded.

5.3.11 $$CVW^BQICMVW

Returns the customized Care Management view for a panel.

- Input Parameter Description:
  - CARE: The value of a View Source entry
- Output Description:
  - Returns a list of codes of data elements that were customized

5.3.12 $$DFNC^BQICMVW

Returns the standard display fields for the Care Management view.

- Input Parameter Description:
  - N/A
- Output Description:
  - Returns a string of required and default fields delimited by $C(29). All optional fields are excluded

5.3.13 $$SFNC^BQICMVW

Returns the standard sort order for the Care Management view.

- Input Parameter Description:
  - N/A
- Output Description:
  - Returns a string of required and default fields delimited by $C(29). All optional fields are excluded

5.3.14 $$TMPL^BQICMVW

Checks if a layout template is used for a panel.

- Input Parameter Description:
  - CARE: The value of a View Source entry
- Output Description:
  - Returns a 0 if no layout template is being used or a 1 if a layout template is being used

5.3.15 $$LSET^BQIDCAH3

Returns a list of lab result codes if the lab test result is a “set of codes”.

- Input Parameter Description:
  - LN: Lab test IEN
- Output Description:
  - Returns the set of codes from the Data Dictionary

5.3.16 $$FILN^BQIDCDF

Returns the file number associated with a parameter of a predefined panel.

- Input Parameter Description:
  - SOURCE: Predefined panel name
  - PNAME: Parameter name
- Output Description:
  - Returns the table file number

5.3.17 $$MPF^BQIDCDF

Returns the mapping flag for a data element that is “mapped”.

- Input Parameter Description:
  - SOURCE: Predefined panel name
  - PNAME: Parameter name
- Output Description:
  - Returns 1:Yes, maps to another parameter OR 0:No, doesn't map to another parameter

5.3.18 $$MPN^BQIDCDF

Returns the map parameter name for a data element that is “mapped”.

- Input Parameter Description:
  - SOURCE: Predefined panel name
  - PNAME: Parameter name
- Output Description:
  - For example: RFROM and RTHRU are mapped to RANGE

5.3.19 $$PEXE^BQIDCDF

Returns the special executable code that creates the generated description for the parameter.

- Input Parameter Description:
  - SOURCE: Predefined panel name
  - PNAME: Parameter name
- Output Description:
  - Standard MUMPS code

5.3.20 $$PMAP^BQIDCDF

Returns the MAP TO parameter name.

- Input Parameter Description:
  - SOURCE: Predefined panel name
  - PNAME: Parameter name
- Output Description:
  - For example: RFROM and RTHRU are mapped to RANGE

5.3.21 $$PORD^BQIDCDF

Returns the parameter DESCRIPTION ORDER.

- Input Parameter Description:
  - SOURCE: Predefined panel name
  - PNAME: Parameter name
- Output Description:
  - Numeric value

5.3.22 $$PP^BQIDCDF

Returns the IEN of a predefined panel.

- Input Parameter Description:
  - SOURCE: Predefined panel name
- Output Description:
  - • Returns the predefined panel IEN

5.3.23 $$PTYP^BQIDCDF

Returns the parameter type associated with a parameter of a predefined panel (“D” for Date; “R” for Relative Date; “N” for Numeric; “T” for Table; “C” for Choice; “X” for Text).

- Input Parameter Description:
  - SOURCE: Predefined panel name
  - PNAME: Parameter name
- Output Description:
  - Returns the parameter type

5.3.24 $$MEAS^BQIDCUTL

Returns the most recent V Measurement value for a specified measurement

- Input Parameter Description:
  - BQDFN: Patient IEN
  - • MEAS: Measurement
- Output Description:
  - Returns 0 if no value found or 1^Visit Date (text)^Result^Visit IEN^Measurement IEN^Visit Date (fileman) if value found

5.3.25 $$FPAT^BQIFLAG

Checks if the patient has an active flag for the user and the user preferences.

- Input Parameter Description:
  - PDFN: Patient’s DFN
  - OWNR: DUZ of panel’s owner
  - BQIPREF: Array of owner’s preferences
  - TYPE: “A”ll, “S”hown, or “H”idden
- Output Description:
  - QFLG: Returns “1” if patient has an active flag

5.3.26 $$HME^BQIGPUTL

Returns home site from the BGP SITE PARAMETERS file.

- Input Parameter Description:
  - N/A

- Output Description:
  - BHOME: Returns the site (pointer to LOCATION FILE, #9999999.06)

5.3.27 $$LKP^BQIGPUTL

Returns the internal entry number in the ICARE SITE PARAMETERS file associated with the identified GPRA year.

- Input Parameter Description:
  - BQIGYR: The GPRA year, e.g. 2006
- Output Description:
  - Returns the IEN associated with BQIGYR

5.3.28 $$MEAS^BQIGPUTL

Returns the reverse direction value for a CRS measure. Normal or blank is “NO” is bad (red). If reverse, then “NO” is good (green).

- Input Parameter Description:
  - GCODE – The CRS measure code which is CRS year_IEN
- Output Description:
  - Returns the “R” for reverse or blank

5.3.29 $$SPM^BQIGPUTL

Returns the IEN within the ICARE SITE PARAMETERS file.

- Input Parameter Description:
  - N/A
- Output Description:
  - Returns the IEN associated with ICARE SITE PARAMETERS file (#90508)

5.3.30 $$CVW^BQIGPVW

Returns the customized view for National Measures using mnemonics to identify the associated field.

- Input Parameter Description:
  - N/A
- Output Description:

  - Returns the field IEN, the template name (if the template name exists), the definition (if the definition exists), the type which is "G", DISPLAY which is a string of mnemonics identifying the display order sub-delimited by $C(29), SORT which is a string of mnemonics identifying the sort order, and SDIR which is a string of mnemonics identifying the sort direction

5.3.31 $$DFNC^BQIGPVW

Returns the standard display order for National Measures using mnemonics to identify the associated field.

- Parameter Description:
  - N/A
- Output Description:
  - DVALUE: String of mnemonics identifying the display order sub-delimited by $C(29)

5.3.32 $$GDEF^BQIGPVW

Returns the default National GPRA fields.

- Input Parameter Description:
  - N/A
- Output Description:
  - GVALUE: String of codes identifying the specific GPRA field delimited by $C(29)

5.3.33 $$SFNC^BQIGPVW

Returns the standard National Measures sort order using mnemonics to identify the associated field.

- Input Parameter Description:
  - N/A
- Output Description:
  - SVALUE: String of mnemonics identifying the standard sort order sub-delimited by $C(29)

5.3.34 $$TMPL^BQIGPVW

Checks if a layout template is used for a panel.

- Input Parameter Description:
  - CARE: The value of a View Source entry
  - Assumes the owner of the panel and the panel IEN.
- Output Description:
  - Returns a 0 if no layout template is being used or a 1 if a layout template is being used

5.3.35 $$TPN^BQILYUTL

Returns the IEN for the provided external template name.

- Input Parameter Description:
  - OWNR: The owner of the template
  - TEMPL: The template name (ex. “Patient List Default”)
- Output Description:
  - The IEN of the template

5.3.36 $$CURPGL^BQIMUTAB

Gets the site’s preferred performance report global to be used for MU tabs in iCare.

- Input Parameter Description:
  - N/A
  - Output Description:
- Output Description:
  - Returns a performance report name

5.3.37 $$CURPRT^BQIMUTAB

Get the site’s current performance report routine to be used for MU API in iCare.

- Input Parameter Description:
  - N/A
- Output Description:
  - Returns a routine name

5.3.38 $$CURREP^BQIMUTAB

Gets the site’s current performance report

- Input Parameter Description:
  - N/A
- Output Description:
  - Returns a performance report name

5.3.39 $$PRFPGL^BQIMUTAB

Gets the site's preferred performance report global to be used for MU tabs in iCare.

- Input Parameter Description:
  - REPORT: the MU report
  - Output Description:
- Output Description:
  - Returns a routine name

5.3.40 $$DUP^BQINOTF

Checks for a duplicate iCare notification message.

- Input Parameter Description:
  - USR: User IEN
  - SUBJECT: notification message subject
  - DATE: Date of the message
- Output Description:
  - Returns a "1" if not a duplicate message, a zero if duplicate message on the same day.

5.3.41 $$LBRS^BQIPDSC1

Specialized panel description API to return Lab Result description.

- Input Parameter Description:
  - LBVAL: lab result parameter value
- Output Description:
  - Description using words such as "greater than" instead of the symbol ">"

5.3.42 $$TRUNC^BQIPDSCM

Truncates a descriptive value to 255 characters.

- Input Parameter Description:
  - VAL: description value
- Output Description:
  - Shorter description ending with ". . ."

5.3.43 $$PCAT^BQIPLDF

Returns panel category/folder.

- Input Parameter Description:
  - OWNR: Owner IEN
  - PLIEN: Panel IEN
- Output Description:
  - The IEN of the category/folder for the owner

5.3.44 $$ADDAP^BQIPLDS1

Returns associated parameters text for a multiple filter.

- Input Parameter Description:
  - FNM: Filter name defined in the PARAMETERS SUB-FIELD of file #90506
  - VALUE: Value associated with the filter name
- Output Description:
  - VALS: Generated description for The $$ filter

5.3.45 $$FILTER^BQIPLDS1

Returns filter description that will be incorporated in the generated panel description.

- Input Parameter Description:
  - OWNR: Owner internal entry number
  - PLIEN: Panel internal entry number
- Output Description:
  - FDESC: Filter description, for example:
  - Gender M; Age between 30 years and 32 years; Diagnostic Tag Hypertension, Obese

5.3.46 $$CSTA^BQIPLRF

Returns the current auto-populate status value.

- Input Parameter Description:
  - USR: Owner internal entry number
  - PLIEN: Panel internal entry number
- Description:
  - Returns the status: 1:Currently Running; 2:Pending; or null if completed

5.3.47 $$LCK^BQIPLRF

Attempts to lock a panel.

- Input Parameter Description:
  - USR: Owner internal entry number
  - PLIEN: Panel internal entry number
- Output Description:
  - Returns a "1" if it was able to lock the panel
  - Returns a "0" in the first piece and the user internal entry number and name of the user who currently has the panel locked in the second and third pieces, respectively

5.3.48 $$CVW^BQIPLRVW

Returns the customized view for reminders for a panel.

- Input Parameter Description:
  - N/A but assumes user (DUZ, Owner, and Panel IEN).
- Output Description:
  - Returns the field IEN, the template name (if the template name exists), the definition (if the definition exists), the type which is "G", DISPLAY which is a string of mnemonics identifying the display order sub-delimited by $C(29), SORT which is a string of mnemonics identifying the sort order and SDIR which is a string os mnemonics identifying the sort direction.

5.3.49 $$TMPL^BQIPLRVW

The $$ function checks if a layout template is used for a panel.

- Input Parameter Description:
  - Assumes the owner of the panel and the panel IEN.
- Output Description:

- Returns a 0 if no layout template is being used or a 1 if a layout template is being used

5.3.50 $$CKSHR^BQIPLSH

The $$ function checks the write status of a shared user.

- Input Parameter Description:
  - OWNR: Owner IEN
  - PLIEN: Panel IEN
- Output Description:
  - Returns “1” if it is okay to write to the panel; “0” if it is not okay to write to the panel.

5.3.51 $$OWNR^BQIPLUSR

The $$ function checks to see if the user who has signed into iCare is already in the ICARE USER File (#90505) and, if not, it creates an entry for The $$ user.

- Input Parameter Description:
  - USR: User’s internal entry number
  - Output Description:
- Returns “1” if user already exists in iCare or if the user was successfully added to iCare; “0” if there was an error adding the user to iCare

5.3.52 $$CPFL^BQIPLUTL

The $$ function determines if the passed owner and panel contain a panel filter value and, if so, it attempts to lock those panels.

- Input Parameter Description:
  - OWNR: Owner internal entry number
  - PLIEN: Panel internal entry number
- Output Description:
  - Returns a “1” if it was able to lock the panel; if unsuccessful, it returns the panel filter information and the name of who has the record locked (if available)

5.3.53 $$DFNC^BQIPLVW

Returns the standard display order using mnemonics to identify the associated field.

- Input Parameter Description:
  - N/A
- Output Description:
  - DVALUE: String of mnemonics identifying the display order subdelimited by $C(29).

5.3.54 $$SFNC^BQIPLVW

Returns the standard sort order using mnemonics to identify the associated field.

- Input Parameter Description:
  - N/A
- Output Description:
  - SVALUE: String of mnemonics identifying the standard sort order subdelimited by $C(29).

5.3.55 $$CVW^BQIPLVWC

The $$ function returns the customized view for a panel.

- Input Parameter Description:
  - N/A but assumes user (DUZ, Owner and Panel IEN).
- Output Description:
  - Returns the field IEN, the template name (if the template name exists), the definition (if the definition exists), the type which is “G”, DISPLAY which is a string of mnemonics identifying the display order sub-delimited by $C(29), SORT which is a string of mnemonics identifying the sort order, and SDIR which is a string of mnemonics identifying the sort direction.

5.3.56 $$TMPL^BQIPLVWC

Checks if a layout template is used for a panel.

- Input Parameter Description:
  - Assumes the owner of the panel and the panel IEN.
- Output Description:
  - Returns a 0 if no layout template is being used or a 1 if a layout template is being used

5.3.57 $$ETHN^BQIPTDMG

Returns the ethnicity of a patient.

- Input Parameter Description:
  - DFN - Patient IEN
  - FLD – Field in multiple to retrieve from
- Output Description:
  - Returns the ethnicity IEN_$C(28)_ethnic name

5.3.58 $$RCE^BQIPTDMG

Returns the race of a patient.

- Input Parameter Description:
  - DFN - Patient IEN
  - FLD – Field in multiple to retrieve from
- Output Description:
  - Returns the race IEN_$C(28)_racial name

5.3.59 $$IMM^BQIREM

Returns the immunization due/last information for immunization reminders.

- Input Parameter Description:
  - IDFN: Patient internal entry number
  - IMIEN: Immunization internal entry number
- Output Description:
  - Returns the RECOMMENDED DATE DUE (9002084.1,.04) and DATE PAST DUE (9002084.1,.05) fields from the BI PATIENT IMMUNIZATIONS DUE FILE for display in the Reminders section of iCare

5.3.60 $$VAL^BQIRMDR1

Gets the name of a reminder given the reminder code

- Input Parameter Description:
  - CODE: code value of a reminder
- Output Description:

  - Reminder name with the type of reminder; HS (health summary), EHR (electronic health record), HMS (HIV management system), and CMET (care management event tracking).

5.3.61 $$RDEF^BQIRMPL

Returns the reminders default.

- Input Parameter Description:
  - N/A
- Output Description:
  - String of mnemonics identifying the fields.

5.3.62 $$FIND^BQISCHED

Returns the IEN for an option.

- Input Parameter Description:
  - X: Option name, for example "BQI UPDATE TASK."
- Output Description:
  - X: The IEN of the option.

5.3.63 $$BP^BQITBMI

Gets the Mean Blood Pressure value for a specific patient and time frame.

- Input Parameter Description:
  - BDFN: Patient IEN
  - TMFRAME: Timeframe in relative date format
- Output Description:
  - Returns systolic, diastolic, and visit IEN data

5.3.64 $$OB^BQITBMI

Checks if a patient is classified as obese.

- Input Parameter Description:
  - BDFN: Patient IEN
  - BBMI: Patient BMI value
  - AGE: Age of patient
- Output Description:

- Returns “1” if the patient is obese, “0” if the patient is not obese, and “0^Outside Data Check Limits” if the patient’s BMI is either less than the ERROR LOW or greater than the ERROR HIGH.

5.3.65 $$OBMI^BQITBMI

Calculates the Body Mass Index (BMI) for a specific patient and associated date range and returns the BMI, patient’s age, and the height and weight visit internal entry numbers used to calculate the BMI.

- Input Parameter Description:
  - BDFN: Patient IEN
  - TMFRAME: Time frame in relative date format
- Output Description:
  - Returns the patient’s BMI, age, height visit IEN and weight visit IEN

5.3.66 $$TYP^BQITD031

Returns a “V” for visit or “P” for problem to identify the type of event that contributed to the CVD Known diagnosis tag. The $$ is significant, as the logic specifies that only a single active problem can be included as part of the criteria for tagging.

- Input Parameter Description:
  - DFN: Patient IEN
  - DX: Diagnosis
  - TMREF: Temporary global that contains criteria for determining diagnosis tag eligibility
- Output Description:
  - LTYP: “P” for problem or “V” for visit

5.3.67 $$PAT^BQITDGN

Checks if a patient meets the criteria for a diagnosis category.

- Input Parameter Description:
  - BQARY: Array of taxonomies and other information
  - TGLOB: Global where data is to be stored and passed back to calling routine. Structure: TGLOB(DFN,"CRITERIA",criteria, or taxonomy,visit, or problem IEN) = date/time
  - PTDFN: Patient internal entry number

  - KEEP: Keep the temporary global when passed from another logic definition
- Output Description:
  - Returns a 1 if the patient meets the criteria and the passed global is updated with the qualifying criteria and associated visit/problem information

5.3.68 $$ACST^BQITDUTL

Determines if a status is considered active for diagnostic tags.

- Input Parameter Description:
  - STAT: Status code (“A” for accepted; “N” for not accepted)
- Output Description:
  - Returns a 1 and the associated status if the status is active

5.3.69 $$ATAG^BQITDUTL

Determines if a particular Diagnostic tag is active for a patient.

- Input Parameter Description:
  - RDFN: Patient IEN
  - RTAG: Diagnostic internal entry number
- Output Description:
  - Returns the current status and associated effective date for the tag

5.3.70 $$CTAG^BQITDUTL

Find the current status of a Diagnostic tag.

- Input Parameter Description:
  - DFN: Patient IEN
  - TAG: Diagnostic tag internal entry number
- Output Description:
  - Returns the status of the tag; “P”ending, “A”ccepted, etc.

5.3.71 $$WC^BQITDWC

Returns the most waist circumference for a patient in a specified timeframe.

- Input Parameter Description:
  - BQDFN: Patient IEN

  - TMFRAME: timeframe to search
- Output Description:
  - Returns ^^ if no value found or Result^Visit IEN^Measurement IEN if value found

5.3.72 $$CLN^BQITRUT1

Returns the most recent visit for a specified clinic.

- Input Parameter Description:
  - TMFRAME: timeframe to search
  - BQDFN: Patient IEN
  - CLINIC: Clinic
- Output Description:
  - Returns 0 if no value found or 1^Visit Date^^Visit IEN^ if value found

5.3.73 $$FED^BQITRUTL

Returns the most recent V Pt Education value for a specified education topic.

- Input Parameter Description:
  - TMFRAME: timeframe to search
  - BQDFN: Patient IEN
  - TOP: Education topic
- Output Description:
  - Returns 0 if no value found or 1^Visit Date^^Visit IEN^Pt Education IEN if value found

5.3.74 $$LAB^BQITRUTL

Checks for a laboratory test result with the designated value or range of values.

- Input Parameter Description:
  - TMFRAME: Time frame used to search data
  - RECENT: 1 = Only check most recent lab; 0 = Check all within time frame
  - BQDFN: Patient internal entry number
  - TAX: Laboratory taxonomy to search
  - RESULT: Laboratory result to check for
  - OPER: Operand to use for result check

  - RES2: If range, the other result value
  - OPER2: If range, the other result operand
- Output Description:
  - 1 ^ Visit date ^ lab result ^ Visit internal entry number ^ V LAB internal entry number

5.3.75 $$TAX^BQITRUTL

Determines if the patient has an entry that matches the criteria supplied.

- Input Parameter Description:
  - TMFRAME: Time frame to search for data
  - TAX: Taxonomy
  - NIT: Number of iterations
  - PTDFN: Patient IEN
  - FREF: File number reference
  - PRB: If Active Problem okay
  - SAME: If NIT is allowed for the same day or not (1 equals same day okay)
- Output Description:
  - 1 ^ Visit date ^ ^ Visit or Problem internal entry number ^ associated V file internal entry number

5.3.76 $$GDXN^BQITUTL

Gets IEN of a Diagnosis Category definition.

- Input Parameter Description:
  - DEF: Diagnosis Category definition name
- Output Description:
  - Returns the internal entry number of the category definition

5.3.77 $$MEAS^BQITUTL

Returns the most recent V Measurement value for a specified measurement.

- Input Parameter Description:
  - BQDFN: Patient IEN
  - MEAS: Measurement
- Output Description:

  - Returns 0 if no value found or 1^Visit Date^Result^Visit IEN^Measurement IEN if value found

5.3.78 $$PLID^BQIUG1

Returns a unique identifier for the panel using the following algorithm: OWNER_IEN concatenated with the PANEL_IEN padded out to four digits with leading zeroes.

- Input Parameter Description:
  - OWNR: Owner IEN
  - PLIEN: Panel IEN
- Output Description:
  - PLID: Unique Panel identifier

5.3.79 $$DATE^BQIUL1

Converts standard date/time to a FileMan date/time.

- Input Parameter Description:
  - DATE: Date/time in standard format
- Output Description:
  - Returns the date/time in FileMan format or a null if it was unsuccessful

5.3.80 $$FMTE^BQIUL1

Converts FileMan Date/Time to “MMM DD,CCYY HH:MM:SS” format.

- Input Parameter Description:
  - Y: FileMan date/time (e.g. 3051024.123456)
- Output Description:
  - Returns the Date/Time in External format (e.g. OCT 24,2005 12:34:56)

5.3.81 $$FMTMDY^BQIUL1

Converts FileMan date to MM/DD/YYYY format.

- Input Parameter Description:
  - DATE: Date in FileMan format
- Output Description:
  - Returns the date in MM/DD/YYYY format

5.3.82 $$HRN^BQIUL1

Checks to see if patient has any active Health Record Numbers (HRNs).

- Input Parameter Description:
  - BQIDFN: Patient IEN
- Output Description:
  - Returns a "1" if the patient has at least one active HRN

5.3.83 $$PROB^BQIUL1

Returns the date and time of the problem. Since not all dates exist or are required data entry, the hierarchy is DATE ENTERED and then DATE LAST MODIFIED.

- Input Parameter Description:
  - PIEN: IEN of problem
- Output Description:
  - Returns the problem date in FileMan format

5.3.84 $$STRIP^BQIUL1

Removes one or more trailing characters at the end of a string.

- Input Parameter Description:
  - STR: String of data
  - VAL: Delimiter character
- Output Description:
  - Returns the string without the trailing characters

5.3.85 $$TKO^BQIUL1

Takes off the ending character at the end of a string.

- Input Parameter Description:
  - STR: String of data
  - VAL: Character to be removed
- Output Description:
  - STR: Same STR without the trailing character(s)

5.3.86 $$TRIM^BQIUL1

Removes one or more leading characters in a string.

- Input Parameter Description:
  - STR: String of data
  - VAL: Character to be removed from the string
- Output Description:
  - Returns the same string of data without the leading character(s)

5.3.87 $$VTHR^BQIUL1

Finds the most recent visit in the last three years for patient.

- Input Parameter Description:
  - BQIDFN: Patient IEN
- Output Description:
  - 1 ^ Visit IEN ^ Visit date

5.3.88 $$PTR^BQIUL2

Finds a different value for a pointer other than .01.

- Input Parameter Description:
  - FIL: FileMan File Number
  - FLD: FileMan Field Number
  - VAL: Code Value
  - VPEC: Field other than .01 from which to get the data
- Output Description:
  - Returns the other value of the pointer field

5.3.89 $$SCD^BQIUL2

Finds a description for a “set of codes” code.

- Input Parameter Description:
  - STRNG: String of the “set of codes”
  - VAL: the code whose description is being asked for
- Output Description:
  - Returns the description value of the code

5.3.90 $$STC^BQIUL2

- Finds a value for a "set of codes" code.
- Input Parameter Description:
  - FIL: FileMan File Number
  - FLD: FileMan Field Number
  - VAL: Code Value
- Output Description:
  - Returns the external value of the code

5.3.91 $$ICD0^BQIUL3

Returns the value of a piece of the ICD PROCEDURE file (#80.1).

- Input Parameter Description:
  - VAL: ICD PROCEDURE IEN
  - IDT: ICD PROCEDURE date
  - PC: Piece of the string returned by ICD API that is being requested
- Output Description:
  - The piece of data in the string returned by the ICD API that corresponds with the data originally retrieved directly from ^ICD0

5.3.92 $$ICD9^BQIUL3

Returns the value of a piece of the ICD DIAGNOSIS file (#80).

- Input Parameter Description:
  - VAL: ICD DIAGNOSIS IEN
  - IDT: ICD DIAGNOSIS date
  - PC: Piece of the string returned by ICD API that is being requested
- Output Description:
  - The piece of data in the string returned by ICD API that corresponds with the data originally retrieved directly from ^ICD9

5.3.93 $$ICDD^BQIUL3

Returns the description of a specified ICD-9 code (procedure or diagnosis).

- Input Parameter Description:
  - FILE: number of the file 80 or 80.1

  - VAL: internal entry number of the value
  - IDT: date (default would be today)
- Output Description:
  - Returns the description of the ICD-9 code

5.3.94 $$CALR^BQIULPT

Determines if the patient has community alerts associated with his/her community of residence.

- Input Parameter Description:
  - DFN: Patient IEN
- Output Description:
  - Returns a “Y” if there are associated community alerts, “N” if there are none

5.3.95 $$DPCP^BQIULPT

Retrieves the patient's designated primary care provider’s name. The function checks the Designated Provider Management System first for the patient's primary care provider; otherwise, it uses the Primary Care Provider field in the patient’s file.

- Input Parameter Description:
  - DFN: Patient internal entry number
- Output Description:
  - Returns the internal entry number and the provider name associated with the patient’s primary care provider

5.3.96 $$FLG^BQIULPT

Obtains flag indicator for a specific user and panel.

- Input Parameter Description:
  - USR: User IEN
  - PANEL: Panel IEN
  - DFN: Patient IEN
- Output Description:
  - FLG: Returns a “Y” if the patient has an active flag

5.3.97 $$HRNL^BQIULPT

Gets a patient’s HRNs

- Input Parameter Description:
  - DFN: Patient internal entry number
- Output Description:
  - Returns a list of HRNs (HRN – location abbreviation) for the patient; a leading asterisk indicates that the HRN is inactive

5.3.98 $$MFLAG^BQIULPT

If the patient was manually added to a panel, returns the current manual flag status.

- Input Parameter Description:
  - USR: User IEN
  - PANEL: Panel IEN
  - DFN: Patient IEN
- Output Description:
  - Returns an "A" if the patient was manually added, an "R" if the patient was manually remove or a blank if the patient was automatically added to the panel based on the associated criteria

5.3.99 $$PFLNG^BQIULPT

Returns the preferred language of the patient.

- Input Parameter Description:
  - DFN: Patient IEN
- Output Description:
  - PVAL: the text of the preferred language

5.3.100 $$SENS^BQIULPT

Checks to see if patient is designated as Sensitive and returns a flag (Y or N) to indicate if the patient is Sensitive.

- Input Parameter Description:
  - DFN: Patient IEN
- Output Description:
  - FLAG: Returns a "Y" if the patient is sensitive, an "N" if not

5.3.101 $$KEYCHK^BQIULSC

Checks to see if the security key was assigned to the user.

- Input Parameter Description:
  - KEY: Security key — If security key is not numeric, it is assumed that the security key was passed by name.
  - USER: User internal entry number
- Output Description:
  - Returns a “1” if the security key is assigned to the user, or a “0” if not.

6.0 Files and Tables

6.1 File List

Table 6-1 contains a list of new files

Table 6-1: File List

File #	Filename	Description
90506.71	ICARE MU TABS	Table to handle MU tabs in iCare
90506.9	ICARE TIMEFRAMES	Table to define relative timeframes
90509.4	ICARE REMINDER NOTIFICATIONS	Reminder Notification Log

6.2 File Access

Table 6-2 contains the FileMan access to new files.

Table 6-2: File Access

File #	Filename	GL	RD	WR	LYG	DD	DEL
90506.71	ICARE MU TABS	^BQI(90506.71,	@	@	@	@	@
90506.9	ICARE TIMEFRAMES	^BQI(90506.9,	@	@	@	@	@
90509.4	ICARE REMINDER NOTIFICATIONS	^BQI(90509.4,	@	@	@	@	@

6.3 Cross References

90506.71 (iCare MU Tabs)

.01 Code

B Regular type cross reference.

90506.9 (iCare Timeframes)

.01 Name

B Regular type cross reference.

.02 Old Timeframe

E Regular type cross reference.

.03 From

F Regular type cross reference.

1 Definition Variable (Multiple)

C Regular type cross reference.

90509.4 (iCare Reminder Notifications)

.01 Patient

B Regular type cross reference.

.01;.09 Patient,Reminder

C New Style cross reference

.01;.04 Patient,Date

D New Style cross reference.

6.4 Table File

Global: ^BQI(90506.71,

Table 6-3: Table File: 90506.71 iCare MU Tabs

Field #	Field Name	Subscript	Piece	Type
.01	CODE	D0,0	1	F
.02	TEXT	"	2	F
.03	TYPE	"	3	S

Global: ^BQI(90506.9,

Table 6-4: File: 90506.9 iCare Timeframes

Field #	Field Name	Subscript	Piece	Type
.01	NAME	D0,0	1	F
.02	OLD TIMEFRAME	"	F	F
.03	FROM	"	3	F
.04	THRU	"	4	F
.05	EXECUTABLE	"	5	F
1	DEFINITION VARIABLE (90506.91)	D0,1,D1,0	1	

Field #	Field Name	Subscript	Piece	Type
.01	DEFINITION VARIABLE	“	1	F
.02	DISPLAY ORDER	“	2	N

Global: ^BQI(90509.4,

Table 6-5: File: 90509.4 iCare Reminder Notifications

Field #	Field Name	Subscript	Piece	Type
.01	PATIENT	D0,0	1	P
.02	PREFERRED REMINDER METHOD	"	2	S
.03	NOTIFICATION	"	3	S
.04	DATE/TIME CREATED	"	4	D
.05	WHO CREATED	"	5	P
.06	TIU NOTE	"	6	P
.07	PT WELLNESS HANDOUT	"	7	P
.08	ELIGIBLE PROVIDER (EP)	"	8	P
.09	REMINDER	"	9	F
.1	DATE DUE	"	10	D
.11	DATE COMPLETED	"	11	D
.12	IMMUNIZATION LETTER	"	12	P
1	ADDITIONAL REMINDERS (90509.41)	D0,1,D1,0	1	
.01	ADDITIONAL REMINDERS	“	1	F
.02	DATE DUE	"	2	D
.03	DATE COMPLETED	"	3	D

6.5 Callable Routines

Table 6-6 lists the remote procedures added in this version and the associated tag and routine called by the remote procedure. The tags and routines in this table are considered callable entry points, but are only available through the GUI interface.

Table 6-6: Callable Routines

Name	Tag	Routine
BQI GET ED TOPIC ITEMS	MTIT	BQIUTB4
BQI GET MATCH CRITERIA COLUMN	COL	BQIMTCRT
BQI GET MATCH CRITERIA DATA	EN	BQIMTCRD
BQI GET MATCH CRITERIA DROP	TAB	BQIMTCRT
BQI GET MU CURRENT PERF	GCUR	BQIMUTAB
BQI GET PICKLIST ITEMS	PKIT	BQIUTB4
BQI GET SITE DIVISIONS	GET	BQISYDIV
BQI GET TEMPLATE USE	TMUSE	BQITMPLE
BQI GET USER DIVISIONS	USR	BQISYDIV
BQI GET USER VERSION	UGVMCH	BQIPLUS1
BQI MU CQM BY DIV HOVER	CQM	BQIMUDFH
BQI MU CQM BY DIVISION	CQM	BQIMUDFC
BQI MU GET PERF PERIODS	PPER	BQIMUPER
BQI MU GET PROV CQM	PROV	BQIMUDCQ
BQI MU GET PROV CQM EXPORT	CQM	BQIMUPRE
BQI MU GET PROV CQM HOVER	HOV	BQIMUDCQ
BQI MU GET PROV EXPORT	EN	BQIMUPRE
BQI MU GET PROV HOVER	HOV	BQIMUDPR
BQI MU GET PROVIDER	PROV	BQIMUDPR
BQI MU PERF BY DIV HOVER	PERF	BQIMUDFH
BQI MU PERF BY DIVISION	PERF	BQIMUDFC
BQI MU PERF REPORT	MURP	BQIMUTAB
BQI NOTIFICATION INITIAL	INIT	BQINOTT
BQI PAT DIABETES AUDIT REPORT	AUD	BQIRGDBA
BQI REFRESH REMINDER NOTIFY	REF	BQINOTR
BQI SET MU CURRENT PERF	UCUR	BQIMUTAB

Name	Tag	Routine
BQI SET SITE DIVISIONS	UPD	BQISYDIV
BQI SET TEMPLATE DFLT	DFLT	BQITMPLE
BQI SET USER VERSION	USVMCH	BQIPLUS1
BQI SNOMED SEARCH	SEARCH	BQILKSMD
BQI TRIGGER NOTIFICATION	NOT	BQINOTT
BQI UPDATE REMINDER NOTIFY	UPD	BQINOTR

6.6 Published Entry Points

There is a new published entry points for this version of iCare. The published entry points (PEP) is to log a reminder notification entry for Meaning Use performance measures.

LOG^BQINOTR(DFN,NTYP,TIUP,IMML,PWHN,REM,PROV) ;PEP – Log a notification entry

; Input

; DFN – Patient IEN

; NTYP – Notification Type LETTER, EMAIL, and PHONE

; TIUP – TIU note IEN

; IMML – Immunization letter IEN

; PWHN – Patient Wellness Handout IEN

; REM – Reminder e.g. IMMUNIZATIONS if from immunization package

; PROV – Provider IEN (if needed)

7.0 Internal Relations

All functions within iCare work independently.

There are no documented internal relations in BQI.

8.0 External Relations

8.1 8.1 External Calls

The iCare Population Management GUI external calls are shown in Figure 8-1 and Figure 8-2.

```
Routine             is Invoked by:
   ^%DT                |dd90505,|dd90505.01,|dd90505.012,|dd90505.015
                       |dd90505.03,|dd90505.04,|dd90505.12,|dd90505.152
                       |dd90505.16,|dd90505.17,|dd90505.4,|dd90505.431
                       |dd90505.44,|dd90505.45,|dd90505.6,|dd90505.631
                       |dd90505.64,|dd90505.65,|dd90505.66,|dd90505.67
                       |dd90505.68,|dd90508,|dd90508.01,|dd90508.019
                       |dd90508.223,|dd90509.4,|dd90509.41
   NOW^%DTC            BQIRPL
   ^%ZIS               BQIIPTST
   ^%ZISC              BQIIPTST
   ^%ZTER              BQICMLST,BQIDCDF,BQIGPRA5,BQIIPTBL,BQILKSMD,BQILYDEF
                       BQIMTCRD,BQIMTCRT,BQIMUDCQ,BQIMUDFC,BQIMUDFH,BQIMUDPR
                       BQIMUFAC,BQIMUFCH,BQIMUPRH,BQIMUPRV,BQIMUTAB,BQIMUUSR
                       BQINOTR,BQINOTT,BQIPLCR,BQIPLFL,BQIPLLAY,BQIPLPM,BQIPLPP
                       BQIPLUSR,BQIPTFHS
   ^%ZTER              BQIPTINS,BQIPTPRC,BQIRGPL,BQIRLB,BQIRMDR,BQIRMPL,BQIRPL
                       BQIRRPT,BQISYDIV,BQISYKEY,BQISYSIT,BQITASK3,BQITDVAL
                       BQITIUTX,BQITMPLE,BQITMPLS,BQIUTB,BQIVFCHC,BQIVFTLK
   ^%ZTLOAD            BQIIPTST,BQIMUMON,BQINIGH3,BQINIGHT,BQIRMDR,BQITASK6
                       BQITASK7
   KILL^%ZTLOAD        BQI23P4
   OPTION^%ZTLOAD      BQI23P4
   PCLEAR^%ZTLOAD      BQI23P4
   STAT^%ZTLOAD        BQINIGH3,BQISYSIT
   $$ADDPROB^APCDALV2  BQIRPL
   $$DELPROB^APCDALV2  BQIRPL
   $$DEPPL^APCHS9B1    BQIRGDMS
   $$DEPSCR^APCHS9B1   BQIRGDMS
   $$CHOL^APCHS9B2     BQIRGDMS
   $$HDL^APCHS9B2      BQIRGDMS
   $$TCHOL^APCHS9B2    BQIRGDMS
   $$TRIG^APCHS9B2     BQIRGDMS
   $$FLU^APCHS9B3      BQIRGDMS
   $$SELF^APCHS9B3     BQIRGDMS
   $$TD^APCHS9B3       BQIRGDMS
   $$CMSFDX^APCHS9B4   BQIRGDMS
   $$DFE^APCHS9B4      BQIRGDMS
   $$DNKA^APCHS9B4     BQIRGDMS
   $$EYE^APCHS9B4      BQIRGDMS
   $$PAP^APCHS9B4      BQIRGDMS
   $$ACE^APCHS9B5      BQIRGDMS
   $$PNEU^APCHS9B5     BQIRGDMS
   $$PPD^APCHS9B5      BQIRGDMS
   $$PPDS^APCHS9B5     BQIRGDMS
   $$CHEST^APCHS9B6    BQIRGDMS
   $$DENTAL^APCHS9B6   BQIRGDMS
   $$EKG^APCHS9B7      BQIRGDMS
   FMH^APCHSAS1        BQIRGASU
   $$LASTSEV^APCHSAST  BQIRGASU
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   $$LASTACON^APCHSMAS BQIRGASU
   $$GVHMR^APCHSMU     BQIRMDR
   $$LASTITEM^APCHSMU  BQIRGASU
   $$LASTMAM^APCLAPI1  BQIRGDMS
   $$LASTFLU^APCLAPI4  BQIRGASU
   $$LASTNAP^APCLAPI6  BQIMTCRD
   $$LASTPLR^APCLAPI6  BQIMTCRD,BQIRPLN
   $$LASTPLU^APCLAPI6  BQIRPL
   $$START1^APCLDF     BQITRUTL
   $$CLINIC^APCLV      BQIRGDMS
   $$PRIMPOV^APCLV     BQIRGDMS
   $$ICD^ATXCHK        BQIRGDMS
   FHCHK^AUPNSICD      BQINIGH1
   ^AUPNVMS2           BQINIGH1
   COMPUTE^BARDRST     BQIIPRVG
   $$HEP^BDMD413       BQIRGDMS
   ALLDP^BDPAPI        BQIULPT
   GETCATS^BGOEDTPR    BQIUTB4
   GETITEMS^BGOEDTPR   BQIUTB4
   BQI^BGPMUEHD        BQITASK6
   BQI^BGPMUEPD        BQIIPMON,BQIIPSNG,BQIMUPRS
   IMMFORC^BIRPC       BQINOTR
   $$STRIP^BIUTL5      BQINOTR
   $$ACTMED^BKMQQCR4   BQIRGASU,BQIRGCOP
   GETFCRS^BMXRPC10    BQISYDIV
   ^BQI23PU3           BQI23P4
   $$AGE^BQIAGE        BQIDCAH1,BQIRMDR,BQIRMDR1,BQITD05,BQITD06,BQITDVAL
   ^BQICAEXP           BQINIGH2
   ^BQICALRT           BQINIGH2
   FND^BQICASPL        BQIULPT
   ^BQICASUI           BQINIGH2
   MIC^BQICAUTL        BQITRUTL
   $$CDEF^BQICEVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$CVW^BQICEVW       BQIPLLAY
   $$DFNC^BQICEVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$SFNC^BQICEVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$TMPL^BQICEVW      BQIPLLAY
   $$NRPC^BQICMDNM     BQIRMPL
   $$FND^BQICMUTL      BQIMTCRD,BQINOTR,BQIRGPL
   $$FTAG^BQICMUTL     BQIMTCRD,BQIRGPL
   $$ITM^BQICMUTL      BQICMUTL
   $$CDEF^BQICMVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$CVW^BQICMVW       BQIPLLAY
   $$DFNC^BQICMVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$SFNC^BQICMVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$TMPL^BQICMVW      BQIPLLAY
   FIL^BQICMVW         BQIPLLAY
   ACHK^BQIDCAH1       BQIDCAH
   BEN^BQIDCAH1        BQIDCAH
   DIAG^BQIDCAH1       BQIDCAH
   RANGE^BQIDCAH1      BQIDCAH,BQIDCAPC,BQIDCAPH,BQIDCASN,BQIDCERV,BQIDCINP
                       BQIDCREM,BQIPDSC1,BQIPDSCM
   VIS^BQIDCAH2        BQIDCAH
   $$LSET^BQIDCAH3     BQIPDSCF
   CPT^BQIDCAH3        BQIDCAH
   LAB^BQIDCAH3        BQIDCAH
   MED^BQIDCAH3        BQIDCAH
   MLR^BQIDCAH4        BQIDCAH
   MND^BQIDCAH4        BQIDCAH
   NAC^BQIDCAH4        BQIDCAH
   NAM^BQIDCAH4        BQIDCAH
```

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NDC^BQIDCAH4        BQIDCAH
NRV^BQIDCAH4        BQIDCAH
PROB^BQIDCAH4       BQIDCAH
DOB^BQIDCAH5        BQIDCAH
EDU^BQIDCAH5        BQIDCAH
ETHN^BQIDCAH5       BQIDCAH
GEN^BQIDCAH5        BQIDCAH
PCOMM^BQIDCAH5      BQIDCAH
PLANG^BQIDCAH5      BQIDCAH
RACE^BQIDCAH5       BQIDCAH
ALGY^BQIDCAH6       BQIDCAH
REM^BQIDCAH6        BQIDCAH
$$FILN^BQIDCDF      BQIPDSCF,BQIPDSCM,BQIPLDS1,BQIPLDSC
$$MPF^BQIDCDF       BQIPLPM
$$MPN^BQIDCDF       BQIPLPM
$$PEXE^BQIDCDF      BQIPDSCF,BQIPDSCM
$$PMAP^BQIDCDF      BQIPDSCF,BQIPDSCM
$$PORD^BQIDCDF      BQIPDSC1,BQIPDSCF,BQIPLDS2
$$PP^BQIDCDF        BQIDCASN,BQIMTCRT,BQIPDSCF,BQIPDSCM,BQIPLDS1,BQIPLDSC
                    BQIPLFL,BQIPLPM,BQIPLPP
$$PTYP^BQIDCDF      BQIPDSCF,BQIPDSCM,BQIPLDS1,BQIPLDSC,BQIPLFL,BQIPLPM
                    BQIPLPP
$$MEAS^BQIDCUTL     BQIRGASU
PROB^BQIDCUTL       BQIRGASU
VISIT^BQIDCUTL      BQIRGASU
$$FPAT^BQIFLAG      BQIULPT
RET^BQIFLAG         BQIULPT
UPU^BQIFLAG         BQIPLCR
CNTP^BQIFLG         BQIPLCR
FND^BQIFLG          BQINIGHT
GVAL^BQIGPRA1       BQIULPT
COMP^BQIGPRA5       BQINIGHT
GCHK^BQIGPUPD       BQINIGHT
$$HME^BQIGPUTL      BQI23P4,BQIIPBNL,BQIIPMNU,BQIIPMON,BQIIPRVG,BQIMUFAC
                    BQIMUFCH,BQIMUMON,BQIMUPRS,BQINIGHT,BQITASK6,BQITASK7
$$LKP^BQIGPUTL      BQICMLST,BQIGPRA5,BQIIPTBL,BQINIGHT,BQIULPT
$$MEAS^BQIGPUTL     BQIIPTBL
$$SPM^BQIGPUTL      BQICMLST,BQIIPTBL,BQIMUPER,BQINIGHT,BQIPLUS1,BQISYSIT
                    BQIULPT
GFN^BQIGPUTL        BQICMLST,BQIGPRA5,BQIIPTBL,BQIULPT
$$CVW^BQIGPVW       BQIPLLAY
$$DFNC^BQIGPVW      BQILYDEF,BQIPLLAY,BQITMPLS
$$GDEF^BQIGPVW      BQILYDEF,BQIPLLAY,BQITMPLS
$$SFNC^BQIGPVW      BQILYDEF,BQIPLLAY,BQITMPLS
$$TMPL^BQIGPVW      BQIPLLAY
FIL^BQIGPVW         BQIPLLAY
EN^BQIIPMON         BQIIPTST
EN^BQIIPSNG         BQIIPMNU
^BQIIPUTL           BQIIPTBL
STORF^BQIIPUTL      BQIIPBNL,BQIIPMON,BQIIPRVG
STORP^BQIIPUTL      BQIIPBNL,BQIIPMON,BQIIPRVG,BQIIPSNG
SAV^BQILYDEF        BQITMPLS
$$TPN^BQILYUTL      BQILYDEF,BQIMTCRD,BQIRGPL,BQIRMPL,BQITMPLS
EN^BQIMSLST         BQIUTB,BQIUTB2
EN^BQIMUEXP         BQI23P4,BQITASK6
HOS^BQIMUEXP        BQI23P4,BQITASK6
CQ^BQIMUMON         BQINIGH3,BQINIGHT
PF^BQIMUMON         BQINIGH3,BQINIGHT
MON^BQIMUPRS        BQITASK6
PMON^BQIMUPRS       BQITASK7
NUM^BQIMUSIT        BQINIGHT
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   $$CURPGL^BQIMUTAB   BQIMUPRS,BQITASK7
   $$CURPRT^BQIMUTAB   BQIMUPRS,BQITASK7
   $$CURREP^BQIMUTAB   BQIMUPER,BQIMUPRS,BQIMUUSR,BQITASK7
   $$PRFPGL^BQIMUTAB   BQIMUDFC,BQIMUDFH,BQIMUDPR,BQIMUFAC,BQIMUFCH,BQIMUPRH
                       BQIMUPRV,BQIMUTAB
   GTM^BQIMUTIM        BQIMUDCQ,BQIMUDFC,BQIMUDFH,BQIMUDPR,BQIMUFAC,BQIMUFCH
                       BQIMUPRH,BQIMUPRV
   EN^BQIMUUPD         BQI23P4,BQINIGHT
   KHRF^BQIMUUPD       |dd90505.641
   KXRF^BQIMUUPD       |dd90505.441
   SHRF^BQIMUUPD       |dd90505.641
   SXRF^BQIMUUPD       |dd90505.441
   AST^BQINIGH1        BQINIGHT
   COMM^BQINIGH1       BQIUTB
   FHDX^BQINIGH1       BQIUTB
   MEAS^BQINIGH1       BQINIGHT
   ARM^BQINIGH2        BQINIGHT
   CMA^BQINIGH2        BQINIGHT
   IMM^BQINIGH2        BQINIGHT
   NGHT^BQINIGH2       BQINIGHT
   JBC^BQINIGH3        BQINIGHT
   NJBY^BQINIGH3       BQI23P4
   $$DUP^BQINOTF       BQIRMDR
   ADD^BQINOTF         BQIPLPP,BQIRMDR
   UPD^BQINOTF         BQIPLCR
   COMP^BQINOTR        BQIRMDR
   $$LBRS^BQIPDSC1     BQIPDSCF
   FILTER^BQIPDSCF     BQIPDSCM
   $$TRUNC^BQIPDSCM    BQIPDSCF
   DESC^BQIPDSCM       BQI23P4,BQINIGH2,BQIPLFL,BQIPLPM,BQIPLPP
   MAP^BQIPDSCM        BQIPDSCF
   APMTC^BQIPLCR       BQIPLPP
   APT^BQIPLCR         BQIPLPP
   CNTP^BQIPLCR        BQIPLPP
   DPT^BQIPLCR         BQIPLPP
   $$PCAT^BQIPLDF      BQIPDSCM
   $$ADDAP^BQIPLDS1    BQIPLDS2,BQIPLDSC
   $$FILTER^BQIPLDS1   BQIPLDSC
   PSVST^BQIPLDS1      BQIPLDSC
   POP^BQIPLPP         BQINIGH2
   $$CSTA^BQIPLRF      BQINIGH2
   $$LCK^BQIPLRF       BQINIGH2
   NNOTF^BQIPLRF       BQINIGH2
   STA^BQIPLRF         BQINIGH2,BQIPLPP
   ULK^BQIPLRF         BQINIGH2
   $$CVW^BQIPLRVW      BQIPLLAY
   $$TMPL^BQIPLRVW     BQIPLLAY
   FIL^BQIPLRVW        BQIPLLAY
   $$CKSHR^BQIPLSH     BQIPLFL,BQIPLPM,BQIPLPP
   $$OWNR^BQIPLUSR     BQIPLCR
   $$CPFL^BQIPLUTL     BQINIGH2
   CPFLU^BQIPLUTL      BQINIGH2
   KXRF^BQIPLUTL       |dd90505.115,|dd90505.1151
   PFILL^BQIPLUTL      BQINIGH2
   PFILU^BQIPLUTL      BQINIGH2
   SXRF^BQIPLUTL       |dd90505.115,|dd90505.1151
   $$DFNC^BQIPLVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$SFNC^BQIPLVW      BQILYDEF,BQIPLLAY,BQITMPLS
   $$CVW^BQIPLVWC      BQIPLLAY
   $$TMPL^BQIPLVWC     BQIPLLAY
   FIL^BQIPLVWC        BQIPLLAY
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$$ETHN^BQIPTDMG     BQIDCAH5
$$RCE^BQIPTDMG      BQIDCAH5
$$IMM^BQIREM        BQIRMDR
PAT^BQIRGASP        BQINIGH1,BQITASK3
CHK^BQIRMDR         BQINIGHT
FIL^BQIRMDR         BQIRMDR1
FILE^BQIRMDR        BQIRMDR1
PAT^BQIRMDR         BQINIGHT
$$VAL^BQIRMDR1      BQIMTCRD
CMET^BQIRMDR1       BQIRMDR
CMT^BQIRMDR1        BQIRMDR
EHR^BQIRMDR1        BQIRMDR
EMR^BQIRMDR1        BQIRMDR
REA^BQIRMDR1        BQIRMDR
REG^BQIRMDR1        BQIRMDR
$$RDEF^BQIRMPL      BQILYDEF,BQIPLLAY,BQITMPLS
VUP^BQIRPL          BQIRPLN
EN^BQIRSPR          BQIVFTLK
^BQISCHED           BQI23P4
$$FIND^BQISCHED     BQI23P4,BQISYSIT
FND^BQISYDIV        BQI23P4
DXC^BQITASK         BQITASK2
GPR^BQITASK         BQITASK2
NPT^BQITASK         BQINIGH1,BQINIGHT
DZ^BQITASK1         BQIMUPRS,BQINIGHT,BQITASK6,BQITASK7
UPD^BQITAXX4        BQIUTB
$$BP^BQITBMI        BQITD11
$$OB^BQITBMI        BQITD05,BQITRSK
$$OBMI^BQITBMI      BQITD05,BQITD11
ABMI^BQITBMI        BQITD11,BQITRSK
ABP^BQITBMI         BQITD11
PPRB^BQITD03        BQITD05
PRB^BQITD03         BQITRSK
$$TYP^BQITD031      BQITRSK
$$PAT^BQITDGN       BQITD05,BQITD11
POP^BQITDGN         BQITD11,BQITRSK
PAT^BQITDPAT        BQINIGHT
EN^BQITDPRC         BQINIGHT
$$ACST^BQITDUTL     BQITDVAL
$$ATAG^BQITDUTL     BQIRGASU,BQITD05,BQITD06,BQITD11
$$CTAG^BQITDUTL     BQIMTCRD,BQIRGPL
$$WC^BQITDWC        BQITD11
AWC^BQITDWC         BQITD11
DEF^BQITHCH         BQITRSK
PAT^BQITHCH         BQITD05
DELTMP^BQITMPLE     BQILYDEF
DFLT^BQITMPLE       BQITMPLS
DTMPDEF^BQITMPLS    BQILYDEF
DTMPSET^BQITMPLS    BQILYDEF
DEF^BQITNPH         BQITRSK
PAT^BQITNPH         BQITD05
PAT^BQITRMT         BQINIGHT
POP^BQITRMT         BQITASK3
EN^BQITRSK          BQITD05
HYP^BQITRSK         BQITD05
$$CLN^BQITRUT1      BQITRRSK
$$FED^BQITRUTL      BQIRGASU,BQITRRSK
$$LAB^BQITRUTL      BQITRRSK
$$TAX^BQITRUTL      BQIRGASU,BQIRGCOP,BQITRRSK
BLDTAX^BQITUIX      BQITUTL
$$GDXN^BQITUTL      BQITD05,BQITD11,BQITRSK
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$$MEAS^BQITUTL      BQIRGCOP
ARY^BQITUTL         BQITD11,BQITRSK
BLD^BQITUTL         BQICMUTL,BQIDCAH3,BQIDCAH4,BQIDCAH5,BQIRGASU,BQIRGCOP
                    BQIRLB,BQITD05,BQITD11,BQITRRSK,BQITRSK,BQITRUTL
BLDSV^BQITUTL       BQITD11
GDF^BQITUTL         BQITD05,BQITD11
$$PLID^BQIUG1       BQIPLCR,BQIPLUSR
$$DATE^BQIUL1       BQI23P4,BQICMUTL,BQIDCAH,BQIDCAH1,BQIDCMPR,BQIMTCRD
                    BQIMUPER,BQINIGHT,BQIPDSCM,BQIPLDS1,BQIPLDSC,BQIPLFL
                    BQIPLPM,BQIPLPP,BQIPTFHS,BQIPTPRC,BQIRGASU,BQIRGDMS
                    BQIRLB,BQIRMDR,BQIRPL,BQIRPLN,BQITD11,BQITRRSK,BQITRSK
                    BQITRUTL,BQIULPT
$$FMTE^BQIUL1       BQICMUTL,BQIIPMON,BQIIPSNG,BQILYDEF,BQIMTCRD,BQIMUEXP
                    BQIMUMON,BQIMUPER,BQIMUPRS,BQINOTR,BQIPDSC1,BQIPDSCF
                    BQIPDSCM,BQIPLFL,BQIPLPM,BQIPTFHS,BQIPTINS,BQIPTPRC
                    BQIRGASU,BQIRGPL,BQIRLB,BQIRMPL,BQIRPL,BQIRPLN,BQISYSIT
                    BQITMPLS,BQITRRSK
$$FMTE^BQIUL1       BQITRUTL,BQIULPT
$$FMTMDY^BQIUL1     BQICMUTL,BQIMTCR1,BQIMTCRD,BQINOTR,BQIRGCOP,BQIRGDMS
                    BQIRGPL,BQIRMPL
$$HRN^BQIUL1        BQIDCAH,BQIDCAPC,BQIDCAPH,BQIDCMPR,BQIIPBNL,BQIIPMON
                    BQIIPSNG,BQINIGH1,BQINIGHT,BQIRMDR,BQITASK3
$$PROB^BQIUL1       BQICMUTL,BQIDCAH4,BQITRSK,BQITRUTL
$$STRIP^BQIUL1      BQIDCAH6,BQIUTB3
$$TKO^BQIUL1        BQICAHLO,BQICMUTL,BQILYDEF,BQIMTCR1,BQIMTCRD,BQIMUDFC
                    BQIMUDFH,BQINOTR,BQIPDSCF,BQIPDSCM,BQIPLDS1,BQIPLDS2
                    BQIPLDSC,BQIPLFL,BQIPLPM,BQIPTINS,BQIRGASP,BQIRGASU
                    BQIRGPL,BQIRMPL,BQISYKEY,BQISYSIT,BQITMPLS,BQIUL3
                    BQIULPT,BQIUTB2,BQIVFCHC
                    BQIVFTLK
$$TRIM^BQIUL1       BQIMUDCQ,BQIMUDFC,BQIMUDPR,BQIMUFAC,BQIMUFCH,BQIMUPRH
                    BQIMUPRV,BQIRPL
$$VTHR^BQIUL1       BQINIGH1,BQINIGHT,BQIRMDR,BQITASK3
$$PTR^BQIUL2        BQICMUTL,BQIUTB
$$SCD^BQIUL2        BQIPDSCF
$$STC^BQIUL2        BQIPDSCF
$$ICD0^BQIUL3       BQIPTPRC
$$ICD9^BQIUL3       BQIPTFHS,BQIRPL
$$ICDD^BQIUL3       BQIVFTLK
$$CALR^BQIULPT      BQIMTCRD,BQIRGPL,BQIRMPL
$$DPCP^BQIULPT      BQIIPTST
$$FLG^BQIULPT       BQIMTCRD,BQIPLCR,BQIRGPL,BQIRMPL
$$HRNL^BQIULPT      BQIIPTST
$$MFLAG^BQIULPT     BQIMTCRD,BQIRGPL,BQIRMPL
$$PFLNG^BQIULPT     BQIDCAH5
$$SENS^BQIULPT      BQIMTCRD,BQIPLCR,BQIRGPL,BQIRMPL
$$KEYCHK^BQIULSC    BQICMLST,BQIMTCRD,BQIMTCRT,BQIRGPL,BQIRMPL,BQIUTB
FH80^BQIUTB         BQIVFTLK
FHREL^BQIUTB        BQIVFTLK
TAB^BQIUTB          BQIPLLAY
TBL^BQIUTB          BQIVFTLK
IUSR^BQIUTB1        BQIUTB
APST^BQIUTB2        BQIUTB
CLIN^BQIUTB2        BQIUTB
DPCP^BQIUTB2        BQIUTB
EPLIST^BQIUTB2      BQIUTB
FLTR^BQIUTB2        BQIUTB
IPCAT^BQIUTB2       BQIUTB
MUT^BQIUTB2         BQIUTB
PRST^BQIUTB2        BQIUTB
UCL^BQIUTB2         BQIUTB
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   VFL^BQIUTB2          BQIUTB
   ALG^BQIUTB3          BQIUTB
   COD^BQIUTB3          BQIUTB
   CPT^BQIUTB3          BQIUTB
   DET^BQIUTB3          BQIUTB
   DIV^BQIUTB3          BQIUTB
   EMP^BQIUTB3          BQIUTB
   LAB^BQIUTB3          BQIUTB
   LABR^BQIUTB3         BQIUTB
   LANG^BQIUTB3         BQIUTB
   MED^BQIUTB3          BQIUTB
   PROB^BQIUTB3         BQIUTB
   ACM^BQIUTB4          BQIUTB
   EDACU^BQIUTB4        BQIUTB
   EDTYP^BQIUTB4        BQIUTB
   EDUC^BQIUTB4         BQIUTB
   EPICK^BQIUTB4        BQIUTB
   ETOP^BQIUTB4         BQIUTB
   EVTYP^BQIUTB4        BQIUTB
   FSPEC^BQIUTB4        BQIUTB
   IATYP^BQIUTB4        BQIUTB
   IDTYP^BQIUTB4        BQIUTB
   PRFC^BQIUTB4         BQIUTB
   TMFRAM^BQIUTB4       BQIUTB
   WARD^BQIUTB4         BQIUTB
   EN^BQIVFADD          BQIRPL
   $$SEARCH^BSTSAPI     BQILKSMD
   EN^BTPWPFND          BQINIGHT
   $$FLG^BTPWPPAT       BQIMTCRD,BQIRGPL,BQIRMPL
   $$EVT^BTPWRMDR       BQIRMDR1
   EN^DDIOL             BQIIPTST
   ^DIC                 BQI23PU3,BQIDCDF,BQIIPMNU,BQIIPMON,BQIIPRVG,BQILYDEF
                        BQIMUDCQ,BQIMUMON,BQIMUPRS,BQIMUUSR,BQINOTR,BQIPDSCF
                        BQIPLCR,BQIPLDS1,BQIPLUSR,BQIRGASP,BQIRMDR,BQISYKEY
                        BQITASK6,BQITASK7,BQITMPLE,BQITMPLS,BQITUTL,|dd90506.38
                        |dd90508.014
   $$FIND1^DIC          BQI23P4,BQICMLST,BQIDCAH,BQIDCASN,BQIMTCRD,BQIMTCRT
                        BQINIGH2,BQIPLCR,BQIRGPL,BQIRLB,BQIRMDR,BQITD05,BQITRRSK
                        BQITRSK,BQITRUTL,BQITUTL,BQIUTB4,BQIVFCHC
   FIND^DIC             BQIVFTLK
   FILE^DICN            BQI23PU3,BQIIPMNU,BQIIPMON,BQIIPRVG,BQILYDEF,BQIMUMON
                        BQIMUUSR,BQINIGH1,BQINIGH2,BQINOTR,BQIPLCR,BQIPLFL
                        BQIPLPM,BQIPTFHS,BQIRMDR,BQIRPLN,BQISYDIV,BQISYKEY
   DT^DICRW             BQIDCASN,BQIDCMPR,BQIDCREM,BQINIGH1,BQINIGHT,BQIUTB
   $$GET1^DID           BQIUTB,BQIVFTLK
   FIELD^DID            BQIDCAH3,BQIUL2,BQIUTB3,BQIVFTLK
   ^DIE                 BQINIGH2,BQIPLUS1,BQIPLUSR,BQIRMDR
   FILE^DIE             BQI23P4,BQI23PU3,BQIIPMNU,BQIIPMON,BQILYDEF,BQIMUMON
                        BQIMUPRS,BQIMUTAB,BQIMUUPD,BQIMUUSR,BQINIGH1,BQINIGH2
                        BQINIGH3,BQINIGHT,BQINOTR,BQIPLCR,BQIPLFL,BQIPLPM
                        BQIPLPP,BQIPLUS1,BQIPLUSR,BQIPTFHS,BQIRGASP,BQIRMDR
                        BQIRMDR1,BQIRPL,BQIRPLN
                        BQITASK3,BQITASK6,BQITASK7,BQITMPLE,BQITMPLS
   UPDATE^DIE           BQIPLUS1,BQIPLUSR
   WP^DIE               BQI23P4,BQINIGH1,BQINIGH2,BQIPLFL,BQIPLPM,BQIPLPP
   ^DIK                 BQI23P4,BQILYDEF,BQIMUUSR,BQINIGH1,BQINIGHT,BQIPLCR
                        BQIPLFL,BQIPLPM,BQIPTFHS,BQIRMDR,BQISYDIV,BQISYKEY
                        BQITASK3,BQITMPLE,BQITMPLS
   ENALL^DIK            BQI23PU3,BQIRMDR,BQIRMDR1
   IX^DIK               BQIMUPRS,BQIPLCR,BQITASK7
   IX1^DIK              BQINIGHT
```

```
   IXALL^DIK           BQIMUUPD
   $$IENS^DILF         BQI23P4,BQICMUTL,BQIDCAH,BQIDCAH1,BQIDCAPC,BQIDCAPH
                       BQIDCDF,BQIIPTBL,BQILYDEF,BQIMTCRD,BQIMTCRT,BQIMUMON
                       BQIMUPER,BQIMUUPD,BQIMUUSR,BQINIGH1,BQINIGH2,BQINIGHT
                       BQINOTR,BQIPDSC1,BQIPDSCF,BQIPDSCM,BQIPLCR,BQIPLDS1
                       BQIPLDSC,BQIPLFL,BQIPLPM
                       BQIPLPP,BQIPLUSR,BQIPTINS,BQIRGASP,BQIRGPL,BQIRMDR
                       BQIRMDR1,BQIRMPL,BQIRPL,BQIRPLN,BQIRRPT,BQITMPLE
                       BQITMPLS,BQIULPT,BQIUTB2,BQIVFCHC
   $$ROOT^DILFD        BQICMUTL,BQIGPRA5,BQIIPTBL,BQIMUTAB,BQINIGHT,BQITD05
                       BQITD11,BQITRSK,BQITRUTL,BQIUTB,BQIVFTLK
   $$VFIELD^DILFD      BQIRMDR,BQITD05,BQITRRSK,BQITRSK
   $$VFILE^DILFD       BQIUTB,BQIVFTLK
   ^DIM                |dd90506,|dd90506.03,|dd90506.04,|dd90506.3,|dd90506.31
                       |dd90506.5,|dd90506.51,|dd90508.221
   EN1^DIP             BQIIPTST
   $$GET1^DIQ          BQI23P4,BQICMLST,BQICMUTL,BQIDCAH,BQIDCAH1,BQIDCAH2
                       BQIDCAH6,BQIDCAPC,BQIDCAPH,BQIDCASN,BQIDCDF,BQIDCINP
                       BQIDCMPR,BQIDCREM,BQIGPRA5,BQIIPBNL,BQIIPMNU,BQIIPMON
                       BQIIPSNG,BQIIPTBL,BQILYDEF,BQIMTCR1,BQIMTCRD,BQIMTCRT
                       BQIMUEXP,BQIMUFAC
                       BQIMUFCH,BQIMUPER,BQIMUTAB,BQIMUUPD,BQIMUUSR,BQINIGH1
                       BQINIGH2,BQINIGHT,BQINOTR,BQIPDSC1,BQIPDSCF,BQIPDSCM
                       BQIPLCR,BQIPLDS1,BQIPLDSC,BQIPLFL,BQIPLPM,BQIPLPP
                       BQIPLUS1,BQIPLUSR,BQIPTFHS,BQIPTINS,BQIPTPRC,BQIRGASP
                       BQIRGASU,BQIRGPL,BQIRLB
                       BQIRMDR,BQIRMDR1,BQIRMPL,BQIRPL,BQIRPLN,BQIRRPT,BQISYSIT
                       BQITD05,BQITD06,BQITD11,BQITDVAL,BQITMPLE,BQITMPLS
                       BQITRRSK,BQITRSK,BQITRUTL,BQITUIX,BQITUTL,BQIULPT,BQIUTB
                       BQIUTB2,BQIUTB4,BQIVFCHC,BQIVFTLK
   GETS^DIQ            BQIPDSCF,BQITMPLS
   ^DIR                BQIIPTST
   ^DIWP               BQIPDSCM
```

Figure 8-1: External Calls

```
None of the generated taxonomy programs (CREATED BY ^ATXSTX) have EPs.
   $$ASPIRIN^APCHS9B1  BQIRGDMS                    Diabetic Care Summary Supplement
   BP^APCHS9B1         BQIRGDMS                    Diabetic Care Summary Supplement
   GETHWB^APCHS9B1     BQIRGDMS                    Diabetic Care Summary Supplement
   $$ACRATIO^APCHS9B2  BQIRGDMS                    Diabetic Care Summary Supplement
   $$CREAT^APCHS9B2    BQIRGDMS                    Diabetic Care Summary Supplement
   $$GFR^APCHS9B2      BQIRGDMS                    Diabetic Care Summary Supplement
   $$HBA1C^APCHS9B2    BQIRGDMS                    Diabetic Care Summary Supplement
   $$MICRO^APCHS9B2    BQIRGDMS                    Diabetic Care Summary Supplement
   $$NLHGB^APCHS9B2    BQIRGDMS                    Diabetic Care Summary Supplement
   $$TB^APCHS9B2       BQIRGDMS                    Diabetic Care Summary Supplement
   $$URIN^APCHS9B2     BQIRGDMS                    Diabetic Care Summary Supplement
   DETAIL^BEHOCACV     BQIDCAH6                    EHR routine
   $$GETNAME^BEHOPTP2  BQIPDSCM,BQIPLDSC           EHR routine
   PLSTLST^BEHOPTP2    BQIUTB2                     EHR routine
   $$CODEC^ICDCODE     BQICMUTL,BQIULPT,BQIUTB3    VA routine
   $$ICDD^ICDCODE      BQIUL3                      VA routine
   $$ICDDX^ICDCODE     BQIPDSCF,BQIUL3             VA routine
   $$ICDOP^ICDCODE     BQIUL3                      VA routine
   $$VST^ICDCODE       BQICMUTL,BQIULPT,BQIUTB3    VA routine
   ICDDX^ICDCODE       BQIPDSCF,BQIRPL             VA routine
   $$CODECS^ICDEX      BQICAHLO                    VA routine
   $$CSI^ICDEX         BQINIGH1,BQIUL3             VA routine
   $$ICDDX^ICDEX       BQINIGH1,BQIUL3             VA routine
```

```
   $$ICDOP^ICDEX       BQIUL3                          VA routine
   $$IMP^ICDEXA        BQIPDSCF                        VA routine
   $$ICDDATA^ICDXCODE  BQIPDSCF                        VA routine
   $$ICDDESC^ICDXCODE  BQIUL3                          VA routine
   $$CPT^ICPTCOD       BQIUL3                          VA routine
   $$HLDATE^HLFNC      BQICAHLO                        VA routine
   $$ADDMSG^HLOAPI     BQICAHLO                        VA routine
   $$ADDSEG^HLOAPI     BQICAHLO                        VA routine
   $$NEWBATCH^HLOAPI   BQICAHLO                        VA routine
   SET^HLOAPI          BQICAHLO                        VA routine
   $$SENDONE^HLOAPI1   BQICAHLO                        VA routine
   DELETE^HLOPURGE     BQINIGH2                        VA routine
   MAIN^PXRM           BQIRMDR1                        EHR routine
   $$PRIMVPRV^PXUTL1   BQIUL1,BQIULPT                  EHR routine
   GET4EDIT^TIUSRVR    BQITIUTX                        EHR routine
   TGET^TIUSRVR1       BQITIUTX                        EHR routine
VA Routines:
   $$CURRENT^USRLM     BQIMUDPR,BQIMUPRH,BQIMUPRV,BQIUTB
   $$LOWER^VALM1       BQICMLST,BQINIGH1,BQIRMDR1,BQIUTB
   $$PROVCLSC^XBFUNC1  BQIRGDMS
   ^XBGSAVE            BQIMUEXP
   $$DOW^XLFDT         BQIDCAH1,BQITASK6,BQITASK7
   $$DT^XLFDT          BQIGPRA5,BQINIGH2,BQINIGHT,BQIRMDR,BQIRPL,BQITD11
                       BQITRSK
   $$FMADD^XLFDT       BQI23P4,BQIDCAH1,BQIDCERV,BQIGPRA5,BQIMUMON,BQIMUPRS
                       BQINIGH1,BQINIGH2,BQINIGH3,BQINIGHT,BQIRGDMS,BQIRMDR
                       BQIRPL,BQISYDIV,BQITASK6,BQITASK7,BQITD11,BQITRSK
                       BQIULPT
   $$FMDIFF^XLFDT      BQITD11,BQITRSK
   $$FMTE^XLFDT        BQIGPRA5,BQIMUEXP,BQINIGHT,BQIPDSCF,BQIPDSCM,BQIPLDS1
                       BQIPLDSC,BQIRGDMS,BQIRPL,BQISYSIT,BQITRUTL
   $$HTE^XLFDT         BQIIPTST
   $$HTFM^XLFDT        BQISYSIT
   $$NOW^XLFDT         BQICAHLO,BQICMLST,BQIDCDF,BQIGPRA5,BQIIPMNU,BQIIPMON
                       BQIIPSNG,BQIIPTBL,BQILKSMD,BQILYDEF,BQIMTCRD,BQIMTCRT
                       BQIMUDCQ,BQIMUDFC,BQIMUDFH,BQIMUDPR,BQIMUEXP,BQIMUFAC
                       BQIMUFCH,BQIMUMON,BQIMUPRH,BQIMUPRS,BQIMUPRV,BQIMUTAB
                       BQIMUUSR,BQINIGH1
                       BQINIGH2,BQINIGH3,BQINIGHT,BQINOTR,BQINOTT,BQIPLCR
                       BQIPLFL,BQIPLLAY,BQIPLPM,BQIPLPP,BQIPLUSR,BQIPTFHS
                       BQIPTINS,BQIPTPRC,BQIRGASP,BQIRGPL,BQIRLB,BQIRMDR
                       BQIRMPL,BQIRPL,BQIRRPT,BQISYDIV,BQISYKEY,BQISYSIT
                       BQITASK3,BQITASK6,BQITASK7,BQITDVAL
                       BQITIUTX,BQITMPLE,BQITMPLS,BQIULPT,BQIUTB,BQIVFCHC
                       BQIVFTLK
   $$LEAP^XLFDT2       BQIDCAH1,BQIIPMNU,BQIIPMON,BQIIPRVG,BQIMUMON
   $$STRIP^XLFSTR      BQIDCAH1,BQIGPRA5,BQIPDSC1,BQITIUTX,BQIUL2
   $$UP^XLFSTR         BQIMUEXP,BQIPDSCF,BQIPDSCM,BQIPLDS1,BQIPLDSC,BQIRGDMS
                       BQIRMDR1,BQITRUTL,BQIUL2
   $$LAST^XPDUTL       BQICAHLO
   $$PATCH^XPDUTL      BQIMUTAB,BQIMUUPD,BQIRMDR,BQIRPL,BQISYSIT
   $$VERSION^XPDUTL    BQICAHLO,BQICMLST,BQICMUTL,BQIDCASN,BQIGPRA5,BQINIGH1
                       BQINIGHT,BQIPDSCF,BQIPTFHS,BQIPTPRC,BQIRGASU,BQIRPL
                       BQIRRPT,BQISYSIT,BQIUL3,BQIULPT,BQIUTB3,BQIVFTLK
   $$PROD^XUPROD       BQIIPTST,BQIMUEXP
   $$ACTIVE^XUSER      BQISYKEY
```

Figure 8-2: Routines not marked as entry point

8.2 Callable Routines–Published Entry Points

Table 8-1 provides a list of callable routines and their descriptions.

Table 8-1: Callable Routines

Routine Called	Description
GVHMR^APCHSMU; PEP	Call accessible by any application
LASTMAM^APCLAPI1; PEP	Date of last MAMMOGRAM
LASTFLU^APCLAPI4; PEP	Date of last FLU
LASTNAP^APCLAPI6; PEP	Date of last NO ACTIVE PROBLEMS
LASTPLR^APCLAPI6; PEP	Date of last PROBLEM LIST REVIEWED
LASTPLU^APCLAPI6; PEP	Date of last PROBLEM LIST UPDATE
START1^APCLDF; PEP	Main entry point for data fetcher utility
CLINIC^APCLV; PEP	Given “V” is visit, “F” is format, returns clinic on visit
PRIMPROV^APCLV; PEP	Returns primary provider on that visit in F format
FHCHK^ AUPNSICD; PEP	Called from input tx on FAMILY HISTORY .01 field
ALLDP^BDPAPI; PEP	Returns array of designated providers in all categories or 1-category
BQI^BGPMUEHD; PEP	iCARE
BQI^BGPMUEP ; PEP	iCARE
IMMPROF^BQIRPC; PEP	Returns ImmServe Profile in global array

8.3 Exported Options

There are no callable options in iCare since the user interface is GUI. Table 8-2 shows BQIRPC, which is the broker option which must be used to access iCare.

Table 8-2: Exported options

Option Name	Description
BQIRPC	Hosts RPCs in the BQI namespace. iCare users must have access to this option to use iCare.

9.0 Archiving and Purging

There is no archiving or purging in iCare.

10.0 Documentation Resources

This section describes the methods to generate iCare system technical documentation.

10.1 %INDEX Option

The %INDEX option analyzes the structure of a routine to determine in part if the routine adheres to RPMS programming standards. Its 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 in the selected routines 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 iCARE package, type the BQI namespace at the Routine(s)?> prompt.

10.2 List File Attributes Option

This Department of Veterans Affairs (VA) FileMan option allows users to generate documentation pertaining to files and file structure. Using the standard format of the VA FileMan option yields 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

For a comprehensive listing of iCARE package files, please refer to Section 6.0.

11.0 SAC Requirements and Exemptions

Figure 11-1 is a Standards and Conventions (SAC) Exemption Request for use of third party User Interface (UI) controls.

Request for Exemption to RPMS Programming Standards

Package: BQI–iCare **Date: Jan. 07**

Program: N/A

Line Number: N/A

Applicable Standard: Section 9 of the 2006 SAC

Item #7 under Section 9.3 states that a SAC exemption must be requested for use of commercially purchased controls.

Reason for Exemption:

Requirements for the iCare application required the use of enhanced UI controls for datagrid, toolbars, tabbed MDI interface and print preview displays. To accommodate these needs without significant additional development time and cost associated with developing these custom controls, commercially available user interface controls were purchased from Infragistics® for a nominal fee and were utilized within the GUI portion of the iCare application. The set of controls used at the time of this writing is the NetAdvantage® for Windows® Forms–Version 2007 Vol 1.

The licensing agreement is attached with this application, and our understanding is that the control dll files may be incorporated and distributed with applications freely. The charge only comes into play for the developer licenses, i.e. in order for a developer to use these controls within a new application; they must have a properly licensed copy of the developer tools on the machines used for development.

Use of these tools was suggested and encouraged by IHS liaisons early in the design phase of the project.

Additional information about these controls is available from the Infragistics® Web site:

Product Description:

http://www.infragistics.com/dotnet/netadvantage/winforms.aspx#Overview

508 Accessibility Information:

http://www.infragistics.com/learn/accessibility.aspx

Current license agreement:

http://www.infragistics.com/products/license.aspx#LicenseAgreements

Developer:

SACC Review **Date:**

Recommend APPROVAL___ DISAPPROVAL___

Duration:

Comments:

OIT Action **Date:**

Request APPROVED___ DISAPPROVED___

Comments:

Director, DIT

Figure 11-1: Exemption Request

12.0 Templates, Forms, and Protocols

12.1 Print Templates

There are no print templates in iCare.

12.2 Sort Templates

There are no sort templates in iCare.

12.3 Input Templates

There are no input templates in iCare.

12.4 List Templates

There are no list templates in iCare.

12.5 Forms

There are no forms in iCare.

12.6 Protocols

There are no protocols in iCare.

13.0 iCare Windows Client

13.1 Description of Development Environment

The iCare application was developed using the programming language C# within Microsoft® (MS) Visual Studio® (VS) 2012 integrated development environment (IDE). iCare is written to utilize the MS .NET 4.0 framework (Client Profile). All new classes created for the iCare application exist within the namespace IndianHealthService.iCare.

In addition to the standard .NET object classes, the iCare application also uses commercially available Windows® form controls from Infragistics®. All the controls used were part of a package of controls named Infragistics® NetAdvantage® for Windows® Forms 2012 Volume 2.

In addition, the iCare application also utilizes the BMX version 4.0 software to facilitate security authentication and communication between the GUI Windows® application and the RPMS server data. All data retrieval and updates are handled through the RPCs defined in the BQIRPC and BMXRPC namespaces.

All of the dynamic link library (dll) files upon which iCare depend are delivered with the iCare application install package and are stored in the iCare program directory. The default iCare install directory is: C:\%ProgramFiles%\Indian Health Service\iCare Version {Version Number}. There are no Active-X/COM files installed or registered with the iCare application.

13.2 iCare RPMS Server Requirements

The RPMS server portion of the iCare application does not require a specific version of Cache® or operating system (OS). However, the server needs to be able to support BMX 4.0 fully, and is therefore subject to any requirements needed to run that application. Please refer to the BMX version 4.0 Technical Manual for details.

The iCare GUI client has certain workstation OS and hardware requirements, as detailed in Section 2.32 of the iCare (BQI) Installation Guide and Release Notes.

13.3 List of iCare GUI Dependencies

Table 13-1 shows the GUI dependencies associated with the iCare application.

Table 13-1: GUI dependencies

Dependency	Assembly Version	Description
MS .Net 4.0 Framework (Client Profile)	Version 4.0 with any subsequent service packs from Microsoft®	The Microsoft® .NET 4.0 Framework is required for the iCare allocation. The iCare installation package will check this prerequisite during install and will assist with the download of this update from Microsoft®. If online download is not available, installation will not be allowed until .Net 4.0 has been installed by other means.
BMXNet20.dll	2.0.2459.21970	This is the original BMXNet 2.0 dll utilized by BMXNet 4.0 to map existing connection information cached on clients to the new BMXNet 4.0 configuration
BMXNet40.dll	4.0.0.2	This library file contains the general BMXNet 4.0 client-side utilities and functions for connecting to the RPMS server and managing data connections.
BMXWIN40.dll	4.0.0.2	This dll contains BMXNet 4.0 client side utilities and functions that are specific to use within the Windows stand-alone application environment.
bqi-iCareControlLibrary1.dll	2.1.4869.28313	The iCareControlLibrary1 is a VS® 2012 collection of custom UI controls used by the iCare client.
bqi-ultraGridToolBar.dll	2.1.4869.28313	The ultraGridToolBar is a VS® 2012 custom UI control used by the iCare client.

Dependency	Assembly Version	Description
RichTextBoxPrintControl.dll	1.0.0.0	This class extends the RichTextBox control to allow for generation of formatted print documents for use in print preview and print to printer functions. Specifically, this is used to print character based reports pulled from RPMS and displayed in the iCare application.
UserInactivityMonitoring.dll	0.0.0.0	This class allows the iCare application to monitor user activity and implement locking and timeout functionality required by IHS for implementation on shared client machines.
Infragistics® NetAdvantage® for Windows® Forms 2012 Vol.2	12.2.20122.2038	These dll files are also distributed with the iCare installation package. See Section 6.1 for details of individual files that are distributed.
Microsoft.Office.Interop.Excel.dll	14.0.0.0	Microsoft® Office Interoperability dll used to allow iCare to open, edit and save MS Excel® files.

Table 13 1 GUI dependencies

13.4 iCare Windows Client–Install %

Table 13-2 shows all of the files that will be installed with the iCare application. These files are installed into the main iCare application folder, which defaults to C:\%ProgramFiles%\Indian Health Service\iCare {Version Number}.

Table 13-2: iCare Windows® install client

Filename	Assembly Version	Description
bqi-iCare.exe	2.3.4.0	This is the main iCare executable used to launch and run the iCare application.
BMXNet20.dll	2.0.2459.21970	This is the original BMXNet 2.0 dll utilized by BMXNet 4.0 to map existing connection information cached on clients to the new BMXNet 4.0 configuration

Filename	Assembly Version	Description
BMXWIN40.dll	4.0.0.2	This dll contains BMXNet 4.0 client side utilities and functions that are specific to use within the Windows® stand-alone application environment.
BMXNET40.dll	4.0.0.2	This library file contains the general BMXNet 4.0 client-side utilities and functions for connecting to the RPMS server and managing data connections..
bqi-iCareControlLibrary1.dll	2.1.0.0	The iCareControlLibrary1 is a VS® 2012 collection of custom UI controls used by the iCare client.
bqi-ultraGridToolBar.dll	2.1.0.0	The ultraGridToolBar is a custom VS® 2012 UI control that handles the set of buttons for search, print, copy, and export to MS Excel® on each datagrid in the iCare application.
RichTextBoxPrintControl.dll	1.0.0.0	This class extends the RichTextBox control to allow for generation of formatted print documents in print preview and print to printer functions. Specifically, this is used to print character based reports pulled from RPMS and displayed in the iCare application.
UserInactivityMonitoring.dll	0.0.0.0	This class allows the iCare application to monitor user activity and implement locking and timeout functionality required by IHS for implementation on shared client machines.
Microsoft.Office.Interop.Excel.dll	14.0.0.0	Microsoft® Interop dll. Used to reference Microsoft® Office documents.
MAIN.ico		This is the main icon file used for iCare.exe.
iCare_Population_Management_GUI.chm		Compiled HTML file that contains the online help for the iCare application.

Table 13-3 shows all of the files that are part of a set of enhanced UI controls from Infragistics® called NetAdvantage® for Windows Forms® Version 2010 Volume 3.

Table 13-3: Enhanced UI controls

Filename	Assembly Version	Description
Infragistics4.Documents.Core.v12.2.dll	12.2.20122.2038.1000	This file contains the Infragistics® Document Engine that allows export of PDF and XML formats.
Infragistics4.Documents.Excel.v12.2.dll	12.2.20122.2038	This file contains helper classes that allow export to MS Excel® format without requiring that MS Excel® is installed on the client machine.
Infragistics4.Documents.Reports.v12.2.dll	12.2.20122.2038	This file contains the Infragistics® Document Engine that allows export of PDF and XML formats
Infragistics4.Shared.v12.2.dll	12.2.20122.2038	This file contains general functions and types common to all of the Infragistics® controls.
Infragistics4.Win.Misc.v12.2.dll	12.2.20122.2038	This is a set of other miscellaneous functions and data types used when working with the other Infragistics® classes.
Infragistics4.Win.UltraWinCalcManager.v12.2.dll	12.2.20122.2038	This dll file contains functionality to allow definition of functions and calculations with the Windows® UltraGrid™ enhanced DataGrid class.

Filename	Assembly Version	Description
Infragistics4.Win.UltraWinChart.v12.2.dll	12.2.20122.2038	This dll file contains functionality used when charting patient measurements from PCC over time.
Infragistics4.Win.UltraWinDataSource.v12.2.dll	12.2.20122.2038	This dll file contains functionality to create manage data sources that can be used with the Windows® UltraGrid™, etc.
Infragistics4.Win.UltraWinDock.v12.2.dll	12.2.20122.2038	This dll file contains functionality to create manage docks that can be used with the Windows® UltraGrid™, etc.
Infragistics4.Win.UltraWinEditors.v12.2.dll	12.2.20122.2038	This dll file contains enhanced UI input controls such as the calendar date picker and special combo boxes.
Infragistics4.Win.UltraWinGauge.v12.2.dll	12.2.20122.2038	This dll file contains enhanced UI input control such as gauges.
Infragistics4.Win.UltraWinGrid.Excel®Export.v12.2.dll	12.2.20122.2038	This file contains the classes used to handle export of information from UltraGrid™ DataGrid to MS Excel® format.

Filename	Assembly Version	Description
Infragistics4.Win.UltraWinGrid.v12.2.dll	12.2.20122.2038	The UltraGrid™ is an enhanced data-bound DataGrid used to display tabular data to the user. This also allows users to sort, filter, arrange columns, and select rows of data at run time.
Infragistics4.Win.UltraWinListBar.v12.2.dll	12.2.20122.2038	The UltraWinListBar is used to aid with navigation to forms.
Infragistics4.Win.UltraWinListView.v12.2.dll	12.2.20122.2038	The UltraWinListView is a user interface control to display lists of items.
Infragistics4.Win.UltraWinPrintPreviewDialog.v12.2.dll	12.2.20122.2038	This file contains classes to handle print preview windows for printable items with the application and allows for zoom, page layout adjustments, etc.
Infragistics4.Win.UltraWinSchedule.v12.2.dll	12.2.20122.2038	This file contains classes for scheduling controls for uses such as calendar, week views and month views, etc.
Infragistics4.Win.UltraWinStatusBar.v12.2.dll	12.2.20122.2038	The UltraWinStatusBar provides the enhanced status bar used at the bottom of form to provide status text and row counts.

Filename	Assembly Version	Description
Infragistics4.Win.UltraWinTabbedMdi.v12.2.dll	12.2.20122.2038	The classes within this file provide a way to present multiple forms within a tabbed interface style.
Infragistics4.Win.UltraWinTabControl.v12.2.dll	12.2.20122.2038	The UltraWinTabControl provides an enhanced tab UI interface used on forms to present multiple pages of data.
Infragistics4.Win.UltraWinToolbars.v12.2.dll	12.2.20122.2038	This file contains classes to handle the toolbars, menu and context menus (right-click) within Windows® forms.
Infragistics4.Win.UltraWinTree.v12.2.dll	12.2.20122.2038	The UltraWinTree allows presentation of data in a tree style layout where the user is able to drill down into categories of data.
Infragistics4.Win.v12.2.dll	12.2.20122.2038	This file contains classes used at a high level to control application-wide styles and appearances and interface with Windows® XP themes, etc.

13.5 iCare Windows Client — List of Object Classes

Table 13-4 shows the new object classes used within the iCare Windows® application. All of the specified class names exist within the namespace IndianHealthService.iCare.

Table 13-4: Object Classes

Class Name	Assembly	Description
CMETUtilities	bqi-iCare.exe	The CMETUtilities class provides utilities for implementation of CMET functionality in iCare.
CmetWorksheet	bqi-iCare.exe	The CmetWorksheet class is a custom user control used to implement the CMET Worksheet functionality for processing a CMET tracked event through iCare
DAddTemplate	bqi-iCare.exe	DAddTemplate class provides a view to allow users to select layout type and template name before editing template.
DAppTimeCountdown	bqi-iCare.exe	DAppTimeCountdown class provides a 60 second timer gauge for counting down before minimizing iCare application.
DBackProcProperties	bqi-iCare.exe	The DBackProcProperties class provides a grid view of the status for background jobs that iCare utilizes. The screen displays the name of the process, the last run date/time, and the next run date/time.
DCategoryPicker	bqi-iCare.exe	The DCategoryPicker class provides the user the ability to pick a desired category for a panel. Category editing can also be accessed from this class.
DChartView	bqi-iCare.exe	The DChartView class provides the user the ability to graph PCC Measurement data for a specific patient through iCare
DChartViewIPCFacAgg	bqi-iCare.exe	The DChartViewIPCFacAgg class provides the user the ability to graph IPC Facility Aggregated Measurement data through iCare
DChartViewIPCProvAggByMeas	bqi-iCare.exe	The DChartViewIPCProvAggByMeas class provides the user the ability to graph IPC Provider Aggregated Measurement selected by measure data through iCare

Class Name	Assembly	Description
DChartViewIPCProvAggByProv	bqi-iCare.exe	The DChartViewIPCProvAggByProv class provides the user the ability to graph IPC Provider Aggregated Measurement selected by provider data through iCare
DChartViewNationalMeasures	bqi-iCare.exe	The DChartViewNationalMeasures class provides the user the ability to graph National Measurement data for a specific patient through iCare
DChoiceDlg	bqi-iCare.exe	The DChoiceDlg class allows the user to select one or more selections in a generic dialog as a list of radiobuttons or checkboxes
DCMETSiteParameters	bqi-iCare.exe	The DCMETSiteParameters class allows the user with CMET Package Manager access to edit the CMET Site Parameters
DColorPicker	bqi-iCare.exe	The DColorPicker class allows the user to select a desired color and is implemented to support the new panel category feature.
DCommAlerts	bqi-iCare.exe	The DCommAlerts class provides a display of any active community alerts at login.
DCopyPanel	bqi-iCare.exe	The DCopyPanel class allows the user to create a copy of a panel from the user's panel list in iCare
DGenEdit	bqi-iCare.exe	The DGenEdit class is a table-driven dynamic data entry form that can be used to provide an interface to simpler RPMS data entry screens.
DGenEditForm	bqi-iCare.exe	This class simply provides a prewrapped DGenEdit control in a form with appropriate default form settings preconfigured.

Class Name	Assembly	Description
DGridView	bqi-iCare.exe	The DGridView class provides a generic grid data display form with the standard grid functions (search, print, etc.) for data best displayed in a tabular fashion.
DiCareMain	bqi-iCare.exe	The iCareMain class provides the main form for the iCare application. It currently contains a tabbed multiple document interface (MDI) control that holds the Panel List and the Flag List for the signed-in iCare user. Closing the main form will exit the application.
DInputBox	bqi-iCare.exe	The DInputBox class provides a generic user input form used primarily when copying panels to a different name. Updated in to allow masked input and encryption for electronic signature functionality.
DInputBoxMultiline	bqi-iCare.exe	The DInputBoxMultiline class provides a generic user input form to allow multiline data entry.
DIpcExport	bqi-iCare.exe	The DIpcExport class provides a method for the user to select month and provider to export for IPC reporting
DLabFilter		
DLetterView	bqi-Care.exe	The DLetterView class allows users to create a TIU note through iCare, save it to RPMS and sign it electronically to complete it
DManageTemplates	bqi-Care.exe	The DManageTemplates class provides window for users to manage templates for panel view. Templates are now shareable across users.
DMsgBox	bqi-iCare.exe	The DMsgBox class provides a generic message box that displays a message to the user when the application is performing a task that must complete before the user can continue.

Class Name	Assembly	Description
DNewVersion	bqi-iCare.exe	The DNewVersion class allows users to choose to revisit their User Preferences when a new version of the software is released
DNotifications	bqi-iCare.exe	The DNotifications class provides a form to allow the user to manage notifications received for the user regarding changes to shared panels, panel repopulate issues, etc.
DPanelDef	bqi-iCare.exe	The DPanelDef class provides a form to allow the user to manage an individual panel definition used to generate the patient list, as well as preview changes to the list, customize the patient list and GPRA detail layouts, manage sharing, and auto-repopulate options.
DPanelProperties	bqi-iCare.exe	This form provides a display of some of the panel's more detailed properties in tabbed interface.
DPanelSearch	bqi-iCare.exe	The DPanelSearch class provides a form to allow the user to search the patient list from DPanelView based on demographic fields.
DPanelView	bqi-iCare.exe	The DPanelView class provides a form to allow the user to view and manage an individual panel of patients. This form contains a customizable patient list, flag list, customizable GPRA detail list, and GPRA Aggregate all based on patients in the panel.
DPatientProperties	bqi-iCare.exe	The DPatientProperties form class provides a display of additional demographic and other fields related to the patient record in a pop-up window display.

Class Name	Assembly	Description
DPatientView	bqi-iCare.exe	The DPatientView class provides a form to allow the user to view and manage an individual patient. This form contains the following tabs: Cover Sheet, Flags, Reminders, Patient GPRA, Face Sheet, Health Summary, Wellness Summary, Labs, Meds, Radiology, and Problem List. The user can manage an individual patient's flags and view patient results in this form.
DPccEdit	bqi-iCare.exe	The DPccEdit class provides the user interface for entering historical PCC event data through iCare.
DPnlAddRemove	bqi-iCare.exe	The DPnlAddRemove class provides a form to allow users to select/deselect panels. This functionality is used when selecting panel filters, adding a patient to panels, and selecting panels to immediately repopulate in the background.
DQueuedEventsTrack	bqi-iCare.exe	The DQueuedEventsTrack class allows users to track CMET data mined events as a batch or singly with the ability to continue on to the CMET Worksheet
DReassignPanel	bqi-iCare.exe	The DReassignPanel class allows users with iCare Package Manager access to reassign panels from one iCare user to another – especially if users are no longer with the organization
DRegBatchEdit	bqi-iCare.exe	This class provides a dialog that allows the user to change selected values on multiple selected patients within a panel.
DReportGenCancel	bqi-iCare.exe	The DReportGenCancel provides a way to cancel Async loading reports.
DReportMsgCancel	bqi-iCare.exe	The DReportMsgCancel provides a cancel message box after a user cancels an Async report.

Class Name	Assembly	Description
DSearchInfo	bqi-ultraGridToolBar.dll	The DSearchInfo class provides a form for the user to search for values within the context of a bound UltraGrid™ (Infragistics® control).
DSearchText	bqi-iCare.exe	The DSearchText class allows users to search RichTextBox controls to implement Find functionality
DSelectPatient	bqi-iCare.exe	The DSelectPatient class provides a form to allow users to select patients from the RPMS system based on name, HRN, and DOB searches.
DSiteParametersDivision	bqi-iCare.exe	The DSiteParametersDivision class provides a way for users to set Division site parameters settings.
DSiteParametersEmployer	bqi-iCare.exe	The DSiteParametersEmployer class provides a way for users to set Employer site parameters settings.
DSiteParametersGroupOrder	bqi-iCare.exe	The DSiteParametersGroupOrder class provides a way for users to set Group Order site parameters settings.
DSiteParametersIPC	bqi-iCare.exe	The DSiteParametersIPC class provides a way for users to set IPC site parameters settings.
DSiteParametersLockiCare	bqi-iCare.exe	The DSiteParametersLockiCare class provides a way for users to set iCare time out settings.
DSiteParametersMU	bqi-iCare.exe	The DMUSiteParameters class allows users with the appropriate security key to maintain the site's MU site parameters
DSiteParametersPregnancy	bqi-iCare.exe	The DSiteParametersPregnancy class provides a way for users to set Pregnancy site parameters settings.
DSplash	bqi-iCare.exe	The DSplash class provides the initial splash screen displayed when starting iCare to show startup progress and installed version.

Class Name	Assembly	Description
DTableLookup	bqi-iCare.exe	The DTableLookup class provides the ability for users to search for items for generic table search and is implemented in support of the DGenEdit class for generic form generation.
DTagHistory	bqi-iCare.exe	The DTagHistory class provides the user the ability to review the audit history of changes related to a patient's diagnostic tags including the factors that proposed the tag.
DTagReason	bqi-iCare.exe	The DTagReason class provides the user with a form to enter the reason for proposing, accepting or not accepting a diagnostic tag for a patient.
DTaxonomyLookup	bqi-iCare.exe	The DTaxonomyLookup class provides the ability to search for taxonomy items to be included in site populated taxonomies.
DTaxonomyMaint	bqi-iCare.exe	The DTaxonomyMaint class provides a form to allow users to review and edit site-populated taxonomies if the users have the proper access rights.
DTemplate	bqi-iCare.exe	The DTemplate class provides the user the ability to enter user data into existing TIU templates in order to include the template and input into a TIU note.
DTextView	bqi-iCare.exe	The DTextView class provides the user the ability to view text detail such as visit detail, lab detail, etc. for review in iCare.
DToast	bqi-iCare.exe	The DToast class provides the display of Notifications received by iCare displayed as a pop-up message that will appear and disappear like other MS® notifications.
DTrackedEventClose	bqi-iCare.exe	The DTrackedEventClose class allows users to enter a close reason and comment when closing a CMET tracked event

Class Name	Assembly	Description
DUnLock	bqi-iCare.exe	The DUnLock class prompts a user to enter their current verify code to unlock iCare.
DUserAppPrefs	bqi-iCare.exe	The DUserAppPrefs class provides a form to allow the user to manage their application preferences such as My Patients Definition, Flag Preferences, and Default Startup View. The form defined by this class also doubles as the Initial Login Wizard that allows users to set up their preferences when first logging into iCare.
DUserRoles	bqi-iCare.exe	The DUserRoles class gives users the ability to manage iCare access rights to manager keys and editor keys for iCare and the CMET package manager keys.
DValAddRemove	bqi-iCare.exe	The DValAddRemove class allows users to select one or more values from RPMS tables
DValTreeAddRemove	bqi-iCare.exe	The DValTreeAddRemove class allows users to select one or more values from RPMS tables using TreeView controls
DViewLayout	bqi-iCare.exe	The DViewLayout class allows users to edit their individual panel layouts and default layout templates
DVisitFilter	bqi-iCare.exe	The DVisitFilter class allows users to define a Visit Detail filter associated with a panel definition. The DVisitFilter class is only referenced from DPanelDef at this time.

Class Name	Assembly	Description
iCareDocumentManager	bqi-iCare.exe	The iCareDocumentManager class provides the framework for RPMS session connectivity, authentication, and other sign-on tasks. The iCareDocumentManager class also serves as the main document controller for the application by managing a list of open windows, document locking, most recently used (MRU) list, and logic to handle cleanup on application exit.
iCareUser32	bqi-iCare.exe	The iCareUser32 class provides access to User32.dll methods and is implemented to lock iCare.
iCareUtilities	bqi-iCare.exe	The iCareUtiilities class contains utility functions used through the iCare application
LabelLookup	bqi-iCare.exe	The LabelLookup class is a custom user control implemented in DGenEdit for table lookups when the RPMS table is too big to display as a combo box.
mdiAlerts	bqi-iCare.exe	The mdiAlerts class provides the MDI form that allows users to manage flags for any patient in at least one panel of the user's panel list. Flags can be refreshed, shown, and hidden from this form and patients can be opened from the form defined by this class, as well.
mdiCommunityAlerts	bqi-iCare.exe	The mdiCommunityAlerts class provides a form that can be added as a tab on iCareMain screen to provide a list of current community alerts.
mdiEventTracking	bqi-iCare.exe	The mdiEventTracking class provides a form that is added as a tab on the iCare Main form to provide access to CMET events via three sub-tabs, Events, Tracked Events, and Follow-up Events, where users can manage their site's CMET workflow.

Class Name	Assembly	Description
mdiIPC	bqi-iCare.exe	The mdiIPC class provides a form that is added as a tab on the iCare Main form to provide access to IPC measurements via four sub-tabs where users can review their site's IPC performance: Patient Detail; Provider Detail; Providers Aggregated; and Facility Aggregated.
mdiMeaningfulUse	bqi-iCare.exe	The mdiMeaningfulUse class provides a form that is added as a tab on the iCare Main form to provide access to Meaningful Use measurements via four sub-tabs where users can review their site's MU performance: Providers – Obj; Hospital/CAHs – Obj; Providers – CQ; and Hospital/CAHs – CQ.
mdiNationalMeasures	bqi-iCare.exe	The mdiNationalMeasures class provides a form that is added as a tab on the iCare Main form to provide access to the site's National Measures performance.
mdiPanelList	bqi-iCare.exe	The mdiPanelList class provides the MDI-child form that allows users to manage panels that are owned (created) by them or shared with them by another user. In addition, the form defined by this class, allows panels to be created, edited, repopulated, deleted, shared, opened, and copied.
MultiItemEditor	bqi-iCareControlLibrary1.dll	This is a grid editing control that allows display and editing of multicolumn subrecord data within a single data entry form.
NotificationProcesss	bqi-iCare.exe	The NotificationProcess class is a custom user control used to implement Reminders Notification, PatientBatchProcessing uses to method to control groupbox updates.

Class Name	Assembly	Description
PatientBatchProcessing	bqi-iCare.exe	The PatientBatchProcessing class is a custom user control used to implement the Definition Details Reminder Notification, Notification Process functionality for processing a notification sent to a user through iCare
PnlDocument	bqi-iCare.exe	The PnlDocument class is the primary panel object for the RPMS panel file
PnlFilters	bqi-iCare.exe	The PnlFilters class is the object used to contain the filters associated with a panel definition
PnlLayout	bqi-iCare.exe	The PnlLayout class is the object used to contain a layout associated with the panel or the user preference default template layout
PnlParams	bqi-iCare.exe	The PnlParams class is the object used to contain the parameters associated with a panel definition
PtDocument	bqi-iCare.exe	The PtDocument class is the primary patient object based on the RPMS patient file
TabFormattedTextBox	bqi-iCareControlLibrary1.dll	The TabFormattedTextBox class to override default behavior for UltraFormattedTextEditor.
ToastHelper	bqi-iCare.exe	The ToastHelper class describes the arguments used for the event arguments when the user opens the Notifications form from the Notification window.
ToolSeparatorDrawFilter	bqi-iCare.exe	This ToolSeparateDrawFilter class provides a mechanism for changing properties on Begin new group on menu.
UltraColorPickerPlus	bqi-iCare.exe	The UltraColorPickerPlus class is a copy of Infragistics® Color Picker modified to allow disabling of color selection tabs.

Class Name	Assembly	Description
UltraGridToolBar	bqi-ultraGridToolBar.dll	The ultraGridToolBar class is a toolbar control that provides printing, exporting, copy, and search for a bound UltraGrid™ (Infragistics® control).
UltraGridUtilities	bqi-ultraGridToolBar.dll	The ultraGridUtilities class is a grouping of methods by ultraGridToolBar.

14.0 Accessibility Checklist

14.1 Indian Health Service (IHS) Section 508 36 CFR Part §1194.21 Software Applications and Operating Systems Checklist

Software Application and Version: IHS iCare Version 2.3.4.0

Manufacturer/Contractor/Developer: GDIT

Tester: GDIT

Date: August 2013

- Fully Compliant (FC): All instances are Fully Compliant
- Non-Compliant (NC): All instances are Non-Compliant
- Partially Compliant (PC): Requires further explanation
- Not Applicable (N/A): Standard is not applicable to this application

Compliance is defined as meeting the requirement set forth in the Section 508 Technical Standards 36 CFR Part 1194, http://www.access-board.gov/sec508/guide/.

Table 14-1: ID number and an explanation for any PC or NC results.

ID	36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question	FC	PC	NC	N/A
1	(a) When software is designed to run on a system that has a keyboard, product functions shall be executable from a keyboard where the function itself or the result of performing a function can be discerned textually. Can you navigate and use all aspects of the application using only the keyboard?	FC–w/ minor			

ID	36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question	FC	PC	NC	N/A
2	(b) Applications shall not disrupt or disable activated features of other products that are identified as accessibility features, where those features are developed and documented according to industry standards. Applications also shall not disrupt or disable activated features of any operating system that are identified as accessibility features where the application programming interface for those accessibility features has been documented by the manufacturer of the operating system and is available to the product developer. Are all of the accessibility options that were previously set still available?	FC			
3	(c) A well-defined on-screen indication of the current focus shall be provided that moves among interactive interface elements as the input focus changes. The focus shall be programmatically exposed so that Assistive Technology can track focus and focus changes. Is the focus well defined?	FC			
	Is there no evident change in on-screen focus as you navigate through one or more components of an application?				
4	(d) Sufficient information about a user interface element including the identity, operation and state of the element shall be available to Assistive Technology. When an image represents a program element, the information conveyed by the image must also be available in text. Can the screen reader distinguish and read all controls to the user, such as prompts for edit fields, text, radio buttons, checkboxes, menus, and toolbars?		PC at present –Testing is Pending with Assistive Technology Products		

ID	36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question	FC	PC	NC	N/A
5	(e) When bitmap images are used to identify controls, status indicators, or other programmatic elements, the meaning assigned to those images shall be consistent throughout an application's performance. Do individual icons used to identify controls, status indicators, or other programmatic elements mean the same thing throughout the application?	FC			
6	(f) Textual information shall be provided through operating system functions for displaying text. The minimum information that shall be made available is text content, text input caret location, and text attributes. Is all text presented in the application readable by assistive technologies?	FC–Testing is Pending with Assistive Technology Products			
7	(g) Applications shall not override user selected contrast and color selections and other individual display attributes. Does the software not override user-selected contrast and color selections and other individual display attributes or settings?	FC			
8	(h) When animation is displayed, the information shall be displayable in at least one non-animated presentation mode at the option of the user. If animated objects exist, does the information conveyed by the animated object exist in another mode, i.e., captions?	FC			

ID	36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question	FC	PC	NC	N/A
9	(i) Color coding shall not be used as the only means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. If color is the sole means used to prompt a response, indicate an action, distinguish a visual element, or convey information, is the information displayed in another mode? For example: If the color red indicates negative numbers, are those numbers also represented with a negative sign (-)?	FC			
10	(j) When a product permits a user to adjust color and contrast settings, a variety of color selections capable of producing a range of contrast levels shall be provided. If users can adjust color and contrast settings, are a variety of color and contrast settings available to choose from?				N/A
11	(k) Software shall not use flashing or blinking text, objects, or other elements having a flash or blink frequency greater than 2 Hz and lower than 55 Hz. If any flashing or blinking objects or text occurs in the application, are the frequencies less than 2 Hz and greater than 55Hz?	FC			
12	(l) When electronic forms are used, the form shall allow people using Assistive Technology to access the information, field elements, and functionality required for completion and submission of the form, including all directions and cues. Can you navigate and follow links and forms with the keyboard?	FC–Pending			
	Can the electronic forms be used with assistive technologies?				
	Can a screen reading program read all prompts, directions, explanations, or instructions on the form and understand the purpose of each field?				

ID	36 CFR Part 1194.21: Software Applications and Operating Systems Standards & Checklist Test Question	FC	PC	NC	N/A
13	Documentation Are all manuals and documentation provided in electronic format, as well as text files, including text descriptions of any charts, graphs, pictures, or graphics of any nature?	FC–Pending			

Table 14-2: Explanation of results

ID	Explanation
1	Currently all functionality in the application is accessible via keyboard except for changing sort order and applying list filters to DataGrid lists. Staff is working with the vendor of the DataGrid to find a way to make this functionality available by keyboard only, but changing sort order and applying list filters to DataGrid lists is not considered a critical functionality. The most important data lists have user customizable column order and sort screens that are accessible via the keyboard-only usage.
4	Testing with screen reading assistive technology software is pending. It is anticipated that the application will need some modification to work effectively with screen reading software; however, all components used in development claim to meet Section 508 compliance measures and each control makes accessibility-related properties available to help the screen reader software. Therefore the application will be able to meet compliance, but may need adjustments with respect to accessibility properties.
6	See comment on ID #4. One challenge for the iCare application is that by its very nature it involves working with long lists of patients, laboratory results, GPRA data, etc. which may be challenging to convey in a practical way via screen reading software, but the current design seems to be as appropriate as any for handling long lists.
10	iCare uses Windows® system or theme colors for all controls in the application, and does not offer any functionality within iCare itself to modify the colors, etc.
12	Testing is pending. See comment ID #4 and #6.
13	All documentation is being prepared using IHS form templates and documentation standards and guidelines.

Application results:

Fully Compliant __ Partially Compliant __ Noncompliant __ N/A ___

Additional Comments:

This initial review is based on application status prior to alpha and beta testing. Testing related to Section 508 compliance will continue and improvements will continue to be made prior to national release and potentially thereafter.

Glossary

Care Management Event Tracking (CMET)

New functionality created in the BTPW namespace to implement event tracking for specific events from identification through patient notification. iCare is the first interface to use the CMET functionality.

Case File Manager(s)

The system owner(s) of the individual CM application. The case file manager(s) will have full security access to the application to perform various setup functions and assign access roles to other users.

Case Manager(s) (CM)

A term used to describe a particular type of clinical role within a clinic. Case managers are typically, but not always, nurses who perform clinical management tasks for specified groups of patients, e.g. diabetics.

Centers for Disease Control and Prevention (CDC)

An agency within the Department of Health and Human Services (HHS).

Centers for Medicare & Medicaid Services (CMS)

An agency within the HHS.

Electronic Health Record (EHR)

An application used by medical organizations to track patient medical records and care.

Health Resources and Services Administration

An agency within HHS.

ICD Codes

One of several code sets used by the healthcare industry to standardize data. The International Classification of Disease (ICD) codes are an international diagnostic coding scheme. In addition to diseases, ICD also includes several families of terms for medical-specialty diagnoses, health status, disablements, procedures, and reasons for contact with health care providers. IHS currently uses ICD-9 for coding.

Improving Patient Care (IPC)

The Improving Patient Care program's aim is to change and improve the Indian Health system. IPC will develop high performing and innovative healthcare teams to improve the quality of and access to care. The IPC results will be a medical home that sets new standards for healthcare delivery and further advances the health and wellness of the American Indian and Alaska Native people. iCare is a tool used by the IPC healthcare teams to evaluate the quality of care and identify areas for improvement.

Meaningful Use (MU)

Meaningful Use (MU) is a term used by CMS to ensure that providers and hospitals that have adopted certified EHR are using the technology to further the goals of information exchange among health care professionals. Eligible Providers (EPs) and Eligible Hospitals (EHs) will achieve meaningful use if the EP or EH : (a) demonstrate use of certified EHR technology in a meaningful manner, (b) demonstrate the certified EHR technology provides for electronic exchange of health information to improve quality of care, and (c) use certified EHR technology to submit information on clinical quality and other measures.

Office of Information Technology (OIT)

The organization within IHS that is responsible for developing and maintaining RPMS and related IT functions.

PCC form

The paper form used in most IHS direct, Tribal, and urban (I/T/U) clinics on which the provider(s) document all data from the patient's visit. Used by data entry staff to enter patient data into RPMS PCC.

PCC+

The RPMS PCC+ software produces automated, customizable PCC forms.

Purpose of Visit (POV)

In RPMS, ICD codes and narrative describing the patient's purpose of visit (POV) are documented in PCC V POV.

Resource and Patient Management System (RPMS)

A series of integrated software components that includes clinical, administrative, and financial functions.

RPMS Patient Care Component (PCC)

Refers to functions within RPMS as a clinical data repository, storing visit-related data about a patient.

Software Quality Assurance (SQA)

The office within OIT responsible for ensuring that the system conforms to RPMS Programming Standards and Conventions (SAC).

Taxonomy

In RPMS, a grouping of functionally related data elements, such as ICD codes. For iCare, taxonomies will be used as definitions for diagnoses, procedures, laboratory tests, medications, and other clinical data types.

Text Integration Utility (TIU)

Refers to functions within RPMS used to store long blocks of text in the medical record.

Visual Studio® (VS)

Microsoft® software development tool and integrated development environment (IDE) used to develop the iCare client application.

Acronym List

API	Application Programmer Interface
BMI	Body Mass Index
BQI	Namespace for iCare files and routines
CDC	Centers for Disease Control and Prevention
CM	Case Manager(s)
CMET	Care Management Event Tracking
CMS	Center Medicaid and Medicare Services, an agency within IHS
COTS	Commercial off the Shelf, refers to commercially available software applications
CPT	Current Procedural Terminology
CVD	Cardiovascular Disease
CVD MS	Cardiovascular Disease Management System
DOB	Date of Birth
DSM	Digital Standard Mumps
DT	Current Date
DX	Diagnosis
ED	Education
EHR	Electronic Health Record
FC	Fully Compliant

GOTS	Government off the Shelf, refers to existing Government-owned and developed software applications
GPRA	Government Performance and Results Act
GUI	Graphical User Interface
HMS	HIV Management System
HRN	Health Record Number within RPMS
HRSA	Health Resource and Services Administrator
HTML	HyperText Markup Language
ICD	International Classification of Diseases
IDE	Integrated development environment
IHS	Indian Health Service
IPC	Improving Patient Care programs
I/T/U	Abbreviation referring to all IHS direct, Tribal, and urban facilities. Using the abbreviation I/T/U generally refers to all components of the Indian healthcare system.
ITSC	Information Technology Support Center currently referred to as Office of Information Technology (OIT)
KIDS	Kernel Installation and Distribution System
MRU	Most Recently Used
MDI	Multiple Document Interface
MS	Microsoft®

MU	Meaningful Use
N/A	Not Applicable
NC	Non-Compliant
OIT	Office of Information and Technology
OS	Operating System
PC	Partially Compliant
PCC	RPMS Patient Care Component
PDF	Portable Document Format
PEP	Published Entry Points
POV	Purpose of Visit
RCIS	RPMS Referred Care Information System
REM	Reminder
RPC	Remote Procedure Call
RPMS	Resource and Patient Management System
SAC	Standards and Conventions
SQA	Software Quality Assurance
SRD	Software Requirements Document
TIU	Text Integration Utility
V-file	Visit File
UI	User Interface
VA	Department of Veterans Affairs

VMS	Virtual Memory System
VS	Visual Studio®
XML	Extensible Markup Language

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: http://www.ihs.gov/helpdesk/

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