



RESOURCE AND PATIENT MANAGEMENT SYSTEM

iCare Population Management GUI

(BQI)

Improving Patient Care (IPC) User Manual

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Office of Information Technology (OIT)
Division of Information Technology

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Preface

The purpose of this manual is to provide users with the information needed to use the latest enhancements of the iCare (BQI) population management application that support the Indian Health Service (IHS) Improving Patient Care (IPC) initiative.

This manual contains reference information about iCare views, examples of its processes, and step-by-step procedures on how to perform activities related to IPC functionality in the latest version of the iCare application.

For more information about iCare basic functionality, iCare usage, or training for iCare, consult the following resources:

- iCare IHS Office of Information Technology (OIT), available at https://www.ihs.gov/icare/.
- iCare Population Management GUI, supporting documentation, available at https://www.ihs.gov/RPMS/PackageDocs/bqi/index.cfm?module=Applications&option=View&AC_ID=0.
- iCare Training, available at https://www.ihs.gov/icare/training/.
- Recorded Adobe Connect sessions for iCare, available at https://ihs.adobeconnect.com/r6yazmoz1gm.
- The iCare listsery, join by sending an e-mail to icare@listsery.ihs.gov.

1.0 Introduction

The iCare application is a Windows-based, client-server graphical user interface (GUI) to the IHS Resource and Patient Management System (RPMS). The iCare application retrieves key patient information from various components of the RPMS database and brings it together under a single, user-friendly interface. iCare is intended to help providers manage the care of their patients. The ability to create multiple panels of patients with common characteristics (e.g., age, diagnosis, community) allows users to personalize how they view patient data.

The information included in this IPC-specific manual covers iCare IPC-support functionality enhancements in iCare Version 2.7. For more information about iCare basic functionality, iCare usage, or training for iCare, consult the resources listed in the Preface.

1.1 Background

Along with the rest of the healthcare industry, IHS has already developed a set of chronic condition management (or register) applications, including for diabetes, asthma, and human immunodeficiency virus (HIV). This type of application provides a way for healthcare providers to manage a specific group (register) of patients for a single-disease state. Register management applications assist healthcare providers to identify high-risk patients, proactively track care reminders and health status of individuals or populations, provide more standardized and appropriate care by embedding evidence-based guidelines, and report outcomes.

Many patients, however, have more than one diagnosed disease. For instance, at the current time within the Indian Health system, a diabetic, asthmatic woman could be a member of four RPMS registers (diabetes, asthma, women's health, and immunizations). This silo approach to patient care could potentially result in fragmented care and could increase the risk of inadequate patient-care management due to misidentification of the true level of risk.

1.2 iCare Graphical User Interface

The iCare GUI is intended to allow providers to see a more complete view of patients with multiple conditions, while maintaining the integrity of the user-defined, disease-specific registers.

iCare can help IHS providers by:

 Proactively identifying and managing different groups (populations) of patients who share user-defined characteristics.

- Providing an integrated view of a patient's conditions that would minimize stovepiped care management.
- Providing an intuitive and integrated interface to the diverse patient data elements of the RPMS database.
- Facilitating providers with a review of clinical quality of care measures for their own patients to enable improvement in the quality of healthcare delivery.
- Enabling views of traditional healthcare information from the perspectives of community, population and public health.
- Providing the default tag selection as Proposed and Accepted. You can change the tag selection for any record by selecting or de-selecting any check box.
- Providing the **use AND?** check box when multiple tags are selected. The **And** option searches for patients who have ALL of the user-defined tags.

1.3 Who Should Use iCare?

Any provider who needs to identify a group of patients for long-term management or to create a temporary list should consider using iCare. Do you fit any of the following scenarios?

- I am a nurse at a facility that assigns a primary care provider to each patient. Every day, I want to create a list of scheduled patients for two different doctors in my clinic.
- I want to identify which of my patients are considered obese so I can recommend nutrition counseling.
- Because providers at our clinic have performance goals related to annual Government Performance and Results Act (GPRA) clinical measures, I want to identify which of my patients are missing key clinical data.
- Our Women's Health Clinic wants to focus on two clinical performance improvement initiatives this year. We want to identify the performance problem areas for female patients between the ages of 18 and 50 years old.
- I am one of two part-time case managers for a group of children, and I want to create a patient list that we both can use.

2.0 Improving Patient Care (IPC) Support in iCare

IPC is an IHS initiative to improve the healthcare of American Indian and Alaska Native ITU patients. Learn more information about IPC at https://www.ihs.gov/ipc/.

2.1 Package Manager

There is an IPC Package Manager key. The user must be granted this key permission by the iCare Package Manager to manage the IPC site parameters.

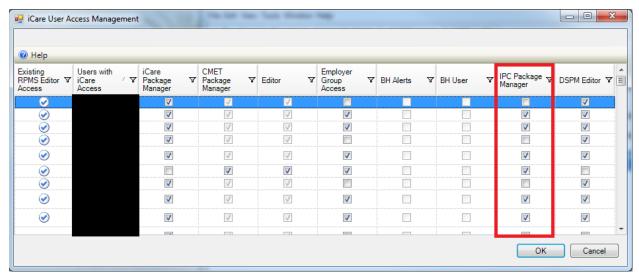


Figure 2-1: iCare User Access Management dialog – IPC Package Manager option

2.2 iCare Site Parameter Options

Access the iCare Site Parameters from the Tools menu.

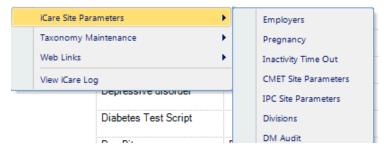


Figure 2-2: iCare Site Parameter options

2.2.1 IPC Site Parameters

Use the **IPC Site Parameters** option to determine the IPC version, day of the month to run IPC data collection, and clinics used for IPC. Select the **IPC Site Parameters** option to access the **iCare Site Parameters - IPC** dialog.

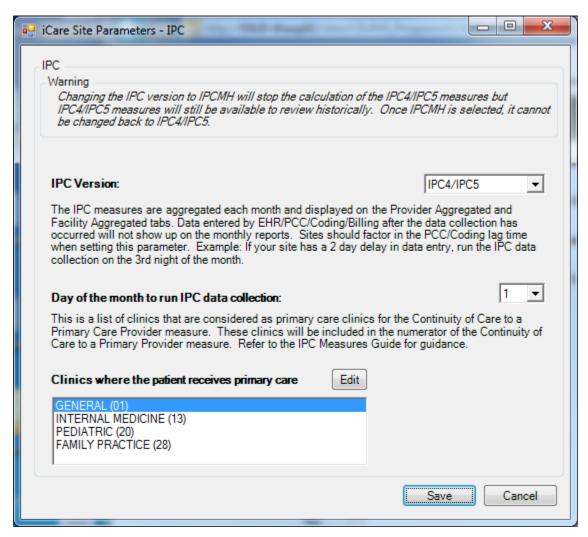


Figure 2-3: iCare Site Parameters - IPC dialog

IPC Version: This is the current version that a site is using. The standard current version is named IPC4/IPC5. With the installation of iCare v 2.7, another version named IPCMH will be added. When a site is ready to move from the current version to the new version, they can change from IPC4/IPC5 to IPCMH in IPC Site Parameters.

WARNING: Once the IPC Version has been changed to IPCMH in IPC Site Parameters, it cannot be changed back to IPC4/IPC5. Also, calculations will no longer be done for version IPC4/IPC5, but all previous data will still exist for historical viewing.

2.3 Creating IPC Panels

In the **Definition** view, any panel can be designated as an **IPC** panel. Only those panels so selected will be available in the **IPC** tab. Any of the selected panels can be viewed in the **IPC** tab for the **Patient Detail** and **Provider Detail** tabs. The aggregation, seen on the three aggregated tabs, is only done for providers or teams that have providers who have assigned patients.

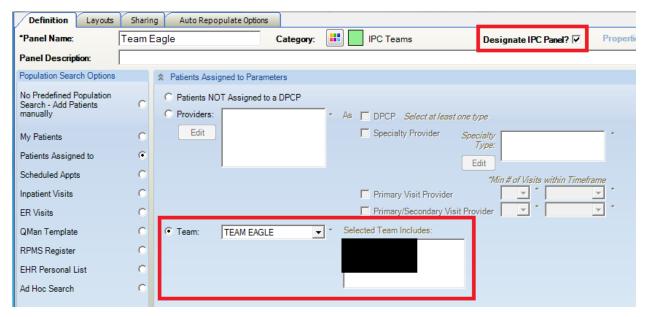


Figure 2-4: Designation of New Patient Panel as IPC Panel by Team

As shown in Figure 2-4, iCare also allows users to create panels of patients that are assigned to a Team.

2.4 IPC Main View

2.4.1 Main View Tab

As shown in Figure 2-5, there is one **IPC** main view tab.

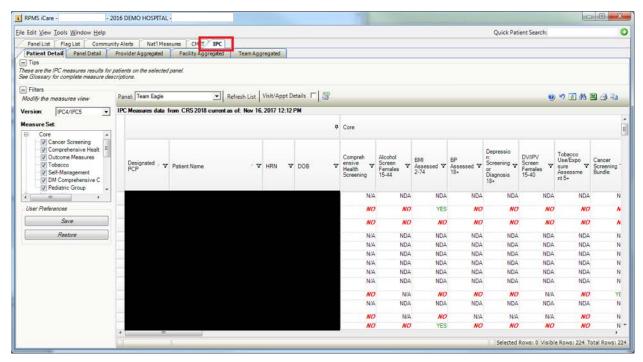


Figure 2-5: IPC main view tab and sub-tabs - Patient Detail data displayed

2.4.2 Sub-Tabs and Measures View

As shown in Figure 2-5, there are five **IPC** main view sub-tabs:

- Patient Detail
- Panel Detail
- Provider Aggregated
- Facility Aggregated
- Team Aggregated

On the **Patient Detail** sub-tab, core and supplemental IPC Measures compliance data for each patient (aggregated by provider) are shown in the table (see Figure 2-5) by the following designations:

- Yes (compliant)
- **No** (noncompliant)
- **NDA** (no data available)
- N/A (not applicable to patient)

In the **Panel** menu above the data table, the user can select a measure name to display IPC Measures data for all listed patients for the listed providers.

Users can reduce the amount of horizontal scrolling necessary to see a large number of measure data columns: on the right sidebar use the **Category Filter** selector to limit columnar data display for each of these IPC Measures or measure sets individually:

- Designated as an IPC panel, the Patient Detail sub-tab displays all patients with their IPC Measures values. The calculated values are based on the last iCare nightly job or weekly National Measures job.
- For the **Panel Detail** sub-tab, core and supplemental IPC Measure compliance data for each provider are shown in the table by display of measure numerator, denominator, and compliance (% Met = numerator/denominator, Figure 2-6). In the **Panel** menu above the data table, the user can display single IPC Measure data for all listed providers by selecting the measure name.
- In the **Panel Detail** view, a new column will display the total number of IPC patients who have no data available (**Total NDA**) (Figure 2-6). To the left of the **NDA** column, a new **Total Deceased** column also displays, which totals the suspected number of deceased patients erroneously included in each measure.

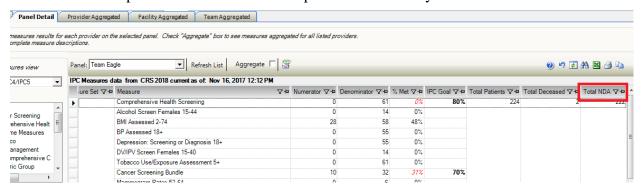


Figure 2-6: IPC Panel Detail view with Total NDA column highlighted

When the user clicks the **Aggregate** button, the data in the table will change to an aggregated view for all measures and for all providers. The **Aggregate View** hides the **Provider** column and displays aggregated totals for all providers for each measure.

IPC Goal data for the indicated measures also display in this table (Figure 2-7).

Note: IPC Goal values currently only exist for IPC Version IPC4/IPC5.

For a panel designated as an IPC panel, **Panel Detail** displays aggregated data for all patients in the panel for all IPC Measures by provider. The values are calculated based on the last iCare nightly job or weekly National Measures job.

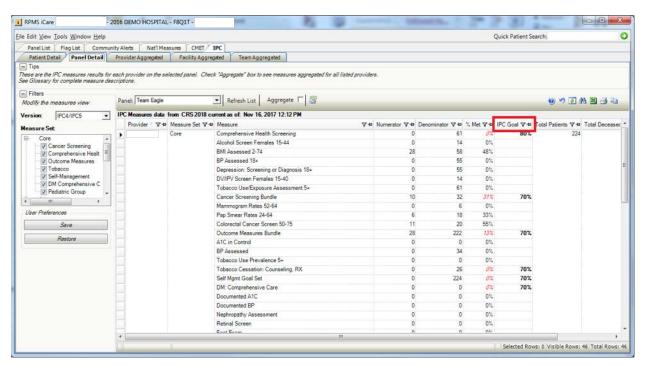


Figure 2-7: IPC Panel Detail sub-tab - IPC Goal column

Provider Aggregated Sub-Tab

For the **Provider Aggregated** sub-tab, core and supplemental IPC Measures compliance data for each provider are shown in the table by the compliance rate (% Met = numerator/denominator) for the indicated month (Figure 2-8). Move the cursor to each data cell in the table to view the numerator and denominator (in a hover box) used for calculating the displayed compliance rate.

IPC Goal data for the indicated measures also appear in this table (Figure 2-8).

Note: IPC Goal values currently only exist for IPC Version IPC4/IPC5.

As each month or week is processed, **Provider Aggregated** is a view of all providers who are Primary Care Providers for all IPC Measures. These values are not refreshed after they are calculated. They are a snapshot for the previous month or week, which is calculated the next month or weekly on the day specified in the IPC site parameters for data collection.

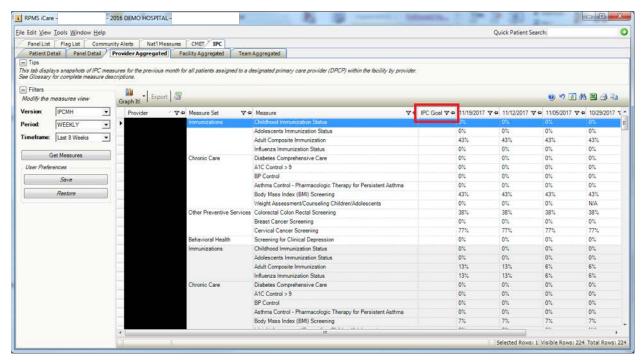


Figure 2-8: Provider Aggregated sub-tab with data displayed

Click the **Graph It!** button above the table for a user-definable, graphical display of the data in the table. The appropriate IPC goals will also display in the graphs.

Facility Aggregated Sub-Tab

For the **Facility Aggregated** sub-tab, core and supplemental IPC Measures compliance data for all providers combined are shown in the table by display of the compliance rate (% Met = numerator/denominator) for the indicated month (Figure 2-9). Move the cursor to each data cell in the table to view the numerator and denominator (in a hover box) used for calculating the displayed compliance rate.

IPC Goal data for the indicated measures also appear in this table (Figure 2-9).

Note: IPC Goal values currently only exist for IPC Version IPC4/IPC5.

The **Facility Aggregated** sub-tab provides a monthly or weekly view for all IPC Measures for all providers who are Primary Care Providers. These values are not refreshed once they are calculated. They are a snapshot for the previous month that is calculated the next month on the day specified in the IPC site parameters for data collection.

Click the **Graph It!** button above the table for a user-definable, graphical display of the data in the table. The appropriate IPC goals will also display in the graphs.

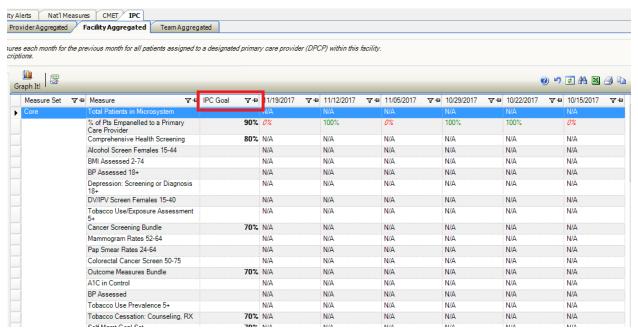


Figure 2-9: Facility Aggregated sub-tab

Team Aggregated Sub-Tab

For the **Team Aggregated** sub-tab, core and supplemental IPC Measures compliance data for all providers combined are shown in the table by display of the compliance rate (% Met = numerator/denominator) for the indicated month (Figure 2-10). Move the cursor to each data cell in the table to view the numerator and denominator (in a hover box) used for calculating the displayed compliance rate.

IPC Goal data for the indicated measures also appear in this table (Figure 2-10).

The **Team Aggregated** sub-tab provides a monthly or weekly view for all IPC Measures by team. These values are not refreshed once they are calculated. They are a snapshot for the previous month that is calculated the next month on the day specified in the IPC site parameters for data collection.

Click the **Graph It!** button above the table for a user-definable, graphical display of the data in the table. The appropriate IPC goals will also display in the graphs.

Note: IPC Goal values currently only exist for IPC Version IPC4/IPC5.

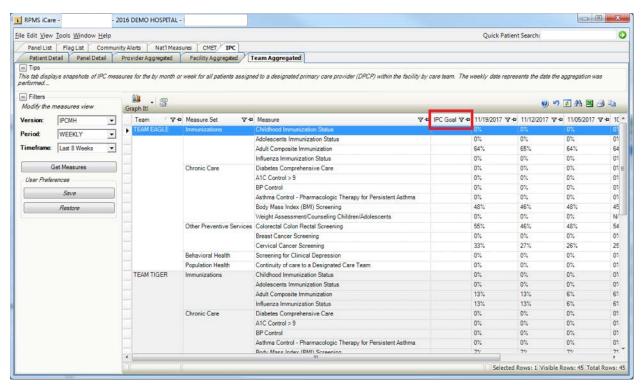


Figure 2-10: Team Aggregated sub-tab

2.4.3 Tips, Tooltips, Glossary

As shown in Figure 2-11, there are Tips for some IPC tabs that describe the displayed information. Users can hide or display these Tips by clicking the button next to the **Tips** label (**plus** when expanded or **minus** when hidden).

By moving the cursor over IPC column names, measure names, and data cells, users can also view informational IPC Tooltips that display in hover boxes.

Access the IPC Glossary by clicking **Help** in the top tool banner and selecting **IPC Glossary** from the menu (Figure 2-11).

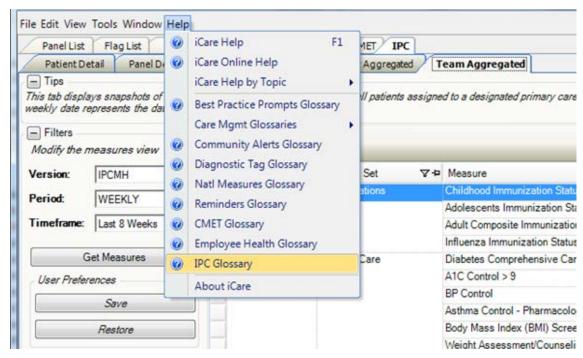


Figure 2-11: Help menu, IPC Glossary

2.5 User Preferences

Click **Tools** in the tool banner to access the **IPC User Preferences** dialog. Users of iCare can define view preferences for five IPC sub-tabs: **Patient Detail**, **Panel Detail**, **Provider Aggregated**, **Facility Aggregated**, and **Team Aggregated**.

The standard user-preferences default for the **Patient Detail** and **Panel Detail** tabs is IPC Version IPC4/IPC5 and all measures selected (if the user has made no previous modifications of measures). The user can change the IPC Version, Measure Set, or Panel and click **OK** to save the preferences for that tab. Users cannot cancel changes after clicking **OK**; the user must change selections as needed and click **OK** to save.

The user must select at least one measure from the **Measure Set** menu before clicking **OK**. No data will display unless measures are selected. If the user does not make a selection from the **Panel** list, **IPC Patient Detail** and/or **Panel Detail** will automatically select and load data for the first IPC panel from the **Panel** list.

The user can set user preferences on the following three new tabs: **Provider Aggregated**, **Facility Aggregated**, and **Team Aggregated**. The standard default values are as follows:

Version: IPC4/IPC5

• Period: Monthly

• Timeframe: This Current Year

If this is the user's first time signing on after the install of version 2.7, the user preferences will default to the standard default. If the user selects the **IPC** tab immediately after changing the user preferences, it may be necessary to click the **Restore** button to implement those changes. On the aggregated sub-tabs, the user will need to click the **Get Measures** button to refresh the view. The alternate solution is to sign off of iCare and then log in again.

1. Patient Detail tab: IPC Version, Measure Set, and Panel default (Figure 2-12)

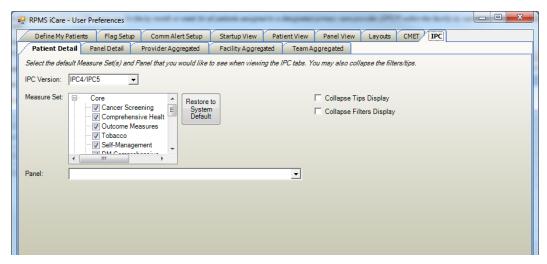


Figure 2-12: User Preferences dialog – IPC tab, Patient Detail sub-tab

2. Panel Detail tab: IPC Version, Measure Set, and Panel default (Figure 2-13)

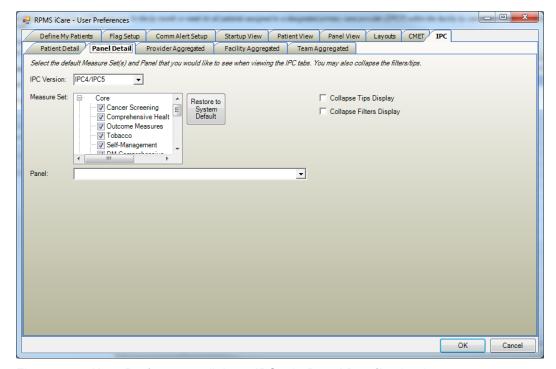
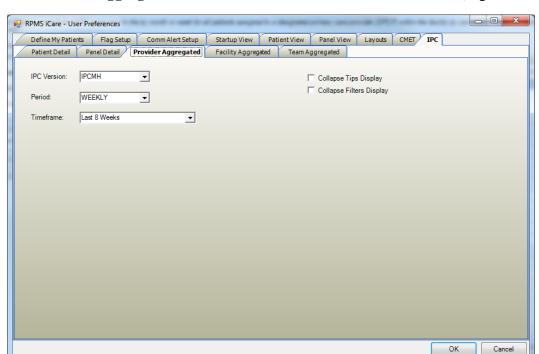


Figure 2-13: User Preferences dialog – IPC tab, Panel Detail sub-tab



3. Provider Aggregated tab: IPC Version, Period, and Timeframe (Figure 2-14)

Figure 2-14: User Preferences dialog – IPC tab, Provider Aggregated sub-tab

4. Facility Aggregated tab: IPC Version, Period, and Timeframe (Figure 2-15)

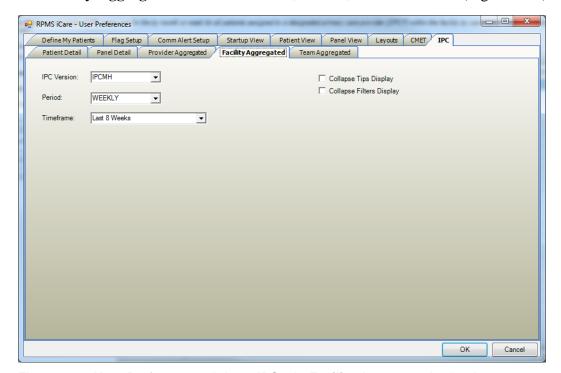


Figure 2-15: User Preferences dialog – IPC tab, Facility Aggregated sub-tab

5. **Team Aggregated** tab: **IPC Version**, **Period**, and **Timeframe** (Figure 2-16)

Figure 2-16: User Preferences dialog: IPC tab, Team Aggregated sub-tab

2.6 IPC Data Collection

2.6.1 IPC Data Aggregation in iCare

The monthly IPC data aggregation will be automatically performed on the day of the month as defined in the IPC site parameters for data collection, during the iCare nightly job. The default date is the first of the month. Depending on the timeliness of data entry at each site, this can be adjusted up to the seventh of the month.

The weekly IPC data aggregation will be automatically performed on Sunday during the iCare Nightly Background job.

Version IPC4/IPC5 can still be exported to the existing Excel templates that were being used before. Version IPCMH will not be exported.

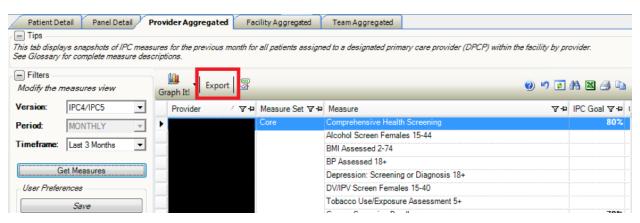


Figure 2-17: Export button

- 1. In the **Provider** box, add the appropriate provider(s).
- 2. On the **IPC Export Parameters** dialog (Figure 2-18), click the **Edit** button to edit the **Provider** listing(s) and select the **Reporting Month**. The selected reporting month must have previously saved calculations and data.

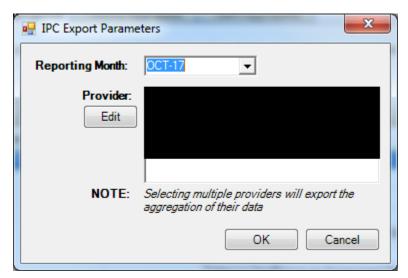


Figure 2-18: IPC Export Parameter dialog – Reporting Month and Provider fields

3. Click the **OK** button; you will then be able to open the file in Excel.



Figure 2-19: Excel icon

4. Select the Provider's Excel template to use (the standard one that you have been using). Click **OK**, and the Excel template will automatically populate for the provider(s) specified in step 2.

3.0 IPC Measures

Many of the measures used in IPC are mapped to IHS Clinical Reporting System (CRS) measures. See the National Measures Glossary for details on the logic definitions for these measures.

3.1 IPC4/IPC5

The following is a list of measures by name for all the IPC4/IPC5 measures available for review in iCare v2.7 and earlier.

- Pap Smear w/HPV (24–64) (AC)
- Mammogram Rates 52–64
- Colorectal Cancer Screen 50–75
- DM: Comprehensive Care
- DM: Dental Access
- Topical Fluoride: 1–15
- Patients 5+: Physical Activity Assessment
- Goal Setting: Goal Set
- DM: A1c Good Glycemic Control <8 (GPRAMA)
- Alcohol Screen Females 14–46
- IPV/DV Screen Females 14–46
- Depression: Screening or Diagnosis 18+
- Tobacco Use/Exposure Assessment 5+
- BMI Measured 2–74
- 18+: BP Assessed
- CHD: BP Assessed
- Peds IZ 4:3:1:3*:3:1:4 Active IMM
- Tobacco Cessation: Counseling or RX
- Tobacco Use Prevalence 5+
- DM: Comprehensive Care: A1C
- DM: BP Assessed
- DM: Nephropathy Assessed
- DM: Comprehensive Care: Retinal Evaluation

- DM: Foot Exam
- STI: Prenatal HIV Screening
- Breastfeed Screen at 2 months: exclusive/mostly breastfed
- Breastfeed Screen at 6 months: exclusive/mostly breastfed
- Breastfeed Screening at 2 months
- Breastfeed Screening at 6 months
- Appropriate Testing for Pharyngitis (3–18)
- Weight Assessment & Counseling (3-17): BMI
- Weight Assessment & Counseling (3–17): Nutrition
- Weight Assessment & Counseling (3–17): Physical Activity
- Antidepressant Medication Management: Acute Phase Management
- Antidepressant Medication Management: Continuation Phase Management
- Breastfeed Screen Rates

3.2 IPCMH

The following is a list of measures by name for all the IPCMH measures available for review in iCare v2.7.

- Adult Immunization 19+ (UP)
- Childhood Immunizations 4:3:1:3*:3:1:4 (UP)
- Adolescent IZ: 1:1:2* 13 years (AC)
- Influenza (6 months 17 years UP)
- Influenza (18+ UP)
- DM: Comprehensive Care
- DM: A1c Glycemic Control Poor >9 (GPRA)
- MH: Controlling High BP
- Asthma Treatment: Controller Meds
- Asthma Treatment: Corticosteroid Meds
- Patients 2–74: Comprehensive Health Screening: BMI Calculated
- Weight Assessment & Counseling (3+): Nutrition
- Weight Assessment & Counseling (3+): Physical Activity
- Colorectal Cancer Screening (50–75) (UP)

- Cancer Screening: Mammogram Rates (52–64) (UP)
- Cancer Screening: Pap Smear Rates (24–64) (UP)
- Depression Screening 12–17 (UP)
- Depression Screening 18+ (UP)

Glossary

Context Menu

The menu of options that displays when the user right-clicks on an entity.

Designated Primary Care Provider (DPCP)

In RPMS, the provider name that is assigned as the primary care physician for a patient or group of patients at a specific facility. This is not a required function.

Free Text Field

A field where the user can type text, just like typing a note to someone.

iCare Package Manager

The designated person with authority to manage all information settings for iCare.

Panel List

The list of patient panels owned by the user.

Providers

Any staff member in an I/T/U facility who provides direct healthcare to patients, e.g. general practice or specialty physicians, registered nurses, social workers, physician assistants, etc.

Taxonomy

In RPMS, a grouping of functionally related data elements, such as ICD codes, that are created and maintained within the RPMS Taxonomy Setup application. Taxonomies will be used as definitions for diagnoses, procedures, lab tests, medications, and other clinical data types.

If you need a change or an addition to an existing taxonomy, please see your CRS coordinator.

Tooltip/Hover Help

A common GUI element used to provide additional information to users. To display a Tooltip, hover the mouse pointer, without clicking, over a column heading or field.

Acronym List

| Acronym | Term Meaning |
|---------|--|
| BQI | Namespace for iCare |
| CMET | Care Management Event Tracking |
| CQM | Clinical Quality Measures |
| CRS | Clinical Reporting System |
| DPCP | Designated Primary Care Provider |
| GPRA | Government Performance and Results Act |
| GUI | Graphical User Interface |
| HHS | Health and Human Services |
| HIV | Human Immunodeficiency Virus |
| ICD | International Classification of Diseases |
| IHS | Indian Health Service |
| IPC | Improving Patient Care |
| I/T/U | Indian Health Service, or Tribal or Urban Indian health programs |
| OIT | Office of Information Technology |
| PM | Performance Measures |
| RPMS | Resource and Patient Management System |

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/

Email: support@ihs.gov