iCare Population Management GUI

(BQI)

Improving Patient Care (IPC)
User Manual

Version 2.3
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Office of Information Technology (OIT)
Division of Information Resource Management
Albuquerque, New Mexico
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Preface

The purpose of this manual is to provide information about the latest enhancements of the iCare (BQI) population management application that supports the IHS Improving Patient Care (IPC) initiative.

This manual contains reference information about iCare views, examples of its processes, and step-by-step procedures that show 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, you can consult these resources:

- iCare – IHS OIT
  Available at http://www.ihs.gov/cio/ca/icare/

  Available at http://www.ihs.gov/RPMS/PackageDocs/bqi/bqi_022u.pdf

- HHS WebEx recorded training sessions (search for iCare). Available at https://ihs-hhs.webex.com/mw0306lb/mywebex/default.do?siteurl=ihs-hhs&service=7
  or at http://www.ihs.gov/cio/ca/icare/index.cfm?module=dsp_icare_cmet_training

- Join the iCare listserv by sending an e-mail to icare@listserv.ihs.gov
1.0 Introduction

iCare is a Windows-based, client-server graphical user interface (GUI) to the IHS Resource and Patient Management System (RPMS). iCare 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 the way they view patient data.

The information included in this IPC-specific manual covers iCare IPC-support functionality enhancements in iCare Version 2.3 (released April 2012). For more information about iCare basic functionality, iCare usage, or training for iCare, consult the resources listed above 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 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 ‘silos’ 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 “stove piped” care management.
• Providing an intuitive and integrated interface to the diverse patient data elements of the RPMS database.
• Facilitating providers 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.
• Having the default tag selection be Proposed and Accepted, as shown in the above example. You can change the tag selection for any record by selecting or deselecting any checkbox.
• Clicking the “use AND?” check box when there are multiple tags 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 think about 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 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.
• 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.
• I am a site manager working to ensure our site meets Meaningful Use objectives.

1.4 User Desktop (Client) Requirements

iCare software resides on both your facility’s RPMS server and on the desktop computer that you use. In order to use iCare successfully, your computer should have the following minimum configuration:
Table 1-1: Computer configuration for installing iCare

<table>
<thead>
<tr>
<th>Client PC</th>
<th>Minimum Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microsoft .NET Framework</td>
<td>V2.0</td>
</tr>
<tr>
<td>Suggested Client PC Hardware</td>
<td>Processor: Minimum: Pentium III 800MHz; Suggested: Pentium 4 2GHz+Memory (RAM): Minimum: 256MB; Suggested: 512MB+</td>
</tr>
<tr>
<td>Approximate Disk Space Requirements</td>
<td>iCare Application Footprint ~10MB .NET 2.0 Framework ~ 100MB (if not already installed via Windows Updates)</td>
</tr>
</tbody>
</table>
2.0 Improving Patient Care Support in iCare

Improving Patient Care (IPC) is an IHS initiative to improve the healthcare of American Indian and Alaska Native IHS/ITU patients. You can find more information about IPC at the following sources:

- [http://www.ihs.gov/ipc/](http://www.ihs.gov/ipc/)
- Improving Patient Care Collaborative (IPCIII), Measures Guide, Version 1.1, February 2011

2.1 Package Manager

A new IPC Package Manager key has been created. The user must have been granted this key by the iCare Package Manager in order to manage the IPC site parameters.

2.2 IPC Site Parameters

Select Tools | iCare Site Parameters | IPC Site Parameters to access the IPC site parameters screen (Figure 2-1). The IPC Package Manager uses this screen to set the following:

- The day of the month on which to run the iCare IPC data collection
- The type of local clinics to be designated as primary care
- The names of specific providers that can be included by users in the site's microsystem(s)
2.2.1 Primary Care Clinics

This is the list of primary care clinics that are used for the Continuity of Care to a Provider measure (Figure 2-1). The default list of clinics defined upon installation is: GENERAL (01), FAMILY PRACTICE (28), INTERNAL MEDICINE (13) and PEDIATRIC (20). Click **Edit** to access the **Add/Remove Visit Clinics** screen where you can manage the clinics.

2.2.2 Microsystem Providers

This is the list of providers who are to be defined in the **IPC Site Parameters** as the site’s microsystem (Figure 2-1). Monthly data aggregation will automatically be calculated for any provider who has been designated as a Primary Care Provider and who has at least one patient assigned to them. Click **Edit** to access the **Add/Remove DPCPs** window where you can manage the **Microsystem Providers**.
2.3 IPC User Preferences

The following provides information about the Startup View for IPC on User Preferences as well as the Patient Detail and Panel Detail sub-tabs to the IPC tab.

2.3.1 Startup View

iCare users can select Patient Detail, Provider Aggregated, Facility Aggregated, or Panel Detail tabs to set as the Startup view (Figure 2-2).

![Figure 2-2: Select IPC Startup View tab](image)

2.3.2 Patient Detail Sub-tab

iCare users can choose the type of measures and other factors to display in Patient Detail (Figure 2-3).

![Figure 2-3: Patient Detail sub-tab (highlighted in red)](image)
2.3.3 Panel Detail Sub-tab

Panel Detail options can also be selected by iCare users (Figure 2-4).

![Figure 2-4: IPC Panel Detail tab (highlighted in red)](image)

2.4 Creating IPC Panels (Microsystems)

In the Panel Definition view, newly created patient panels can now be designated as IPC Panels (Figure 2-5). These designated IPC Panels can be viewed on the IPC tab. This should facilitate the creation of IPC teams/microsystems for IPC compliance monitoring.

![Figure 2-5: Panel Definition tab displays Designate as IPC Panel (highlighted in red) and Patients NOT Assigned to a DPCP (highlighted in red)](image)

As shown in Figure 2-5, iCare now also allows users to create panels of patients that are not assigned to a DPCP. This should facilitate clinical quality improvement efforts where patients are required to have an assigned DPCP.

2.5 IPC Main View Tab

As shown in Figure 2-6, there is an IPC main view tab.
As shown in Figure 2-6, there are four **IPC** main view sub-tabs:

- **Patient Detail**
- **Panel Detail**
- **Provider Aggregated**
- **Facility Aggregated**

### 2.5.1 Patient Detail Sub-tab

For the **Patient Detail** sub-tab, Core and Supplemental IPC measures compliance data for each patient (aggregated by provider) are shown in the table by Yes (compliant), No (noncompliant), NDA (no data available) or N/A (not applicable to patient) designations (Figure 2-6). In the **Optional Filters** side bar to the left of the screen or **Category Filter** side bar to the left of the screen), the user can select one or more measure sets to display for a selected **IPC** panel simply by selecting the measure set(s).
In order to reduce the amount of horizontal scrolling to see a large number of measure data columns, the left side bar **Category Filter** selector (Figure 2-7) can be used to limit columnar data display to each of these IPC measures or measure sets individually:

- **Core**
  - Cancer Screening Bundle
  - Health Risk Screening
  - Outcome Measures
  - Self-Management
- **Supplemental**

For a panel designated as an IPC panel, **Patient Detail** displays all patients with the values of their IPC measures. The values are calculated based on the last time the iCare nightly job or weekly National Measures job completed.

### 2.5.2 Panel Detail Sub-tab

For the **Panel Detail** sub-tab, Core and Supplemental IPC measures compliance data for each provider are shown in the table by display of measure numerator, denominator, and compliance (% Met = numerator/denominator) (Figure 2-8). In the **Optional Filters** left side bar, the user can select one or more measure sets to display for an IPC panel simply by selecting the measure set(s).
In the **Panel Detail** view, an IPC column will display the total number of IPC patients who have No Data Available (Total NDA) for each IPC measure (Figure 2-8). To the left of the NDA column, a new **Total Deceased** column is also displayed that totals the suspected number of deceased patients erroneously included in each measure.

![Figure 2-8: IPC Panel Detail view with IPC Measure data and the Total NDA column (highlighted in red)](image)

To change to an aggregated view for all measures and for all providers in an IPC panel, check the **Aggregate** checkbox (next to the Panel drop-down box). The **Aggregate** view will hide the provider column and display the aggregated totals for all providers for each measure.

**IPC Goals** for the indicated measures appear in data table (Figure 2-9).

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 time the iCare nightly job or weekly National Measures job completed.
2.5.3 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 display of the compliance rate (% Met = numerator/denominator) for the indicated month (Figure 2-10). By moving your cursor to each data cell in the table, you can see the numerator and the denominator (in a hover box) used for calculating that displayed compliance rate.

The checkboxes above the data table on the **Provider Aggregated** tab also allow the user to filter the displayed data by microsystem (team) and to aggregate the data by microsystem (team).

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

As each month 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 that is calculated the next month on the day specified in the IPC site parameter for data collection.
Figure 2-10: Provider Aggregated data displayed

Clicking on the **Graph It** icon above the table will present a user-definable graphical display of the data in the table. The appropriate IPC Goals will also be displayed in the graphs.

### 2.5.4 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 (\( \% \text{ Met} = \frac{\text{numerator}}{\text{denominator}} \)) for the indicated month (Figure 2-11). By moving your cursor to each data cell in the table, you can see the numerator and the denominator (in a hover box) used for calculating that displayed compliance rate.
Facility Aggregated provides a view on a month-by-month basis 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 parameter for data collection.

Clicking on the Graph It icon above the table will present a user-definable graphical display of the data in the table. The appropriate IPC Goals will also be displayed in the graphs.

2.6 Tips, Tooltips, and Glossary

As shown in Figure 2-12, there are Tips for some IPC tabs that describe the information being displayed. These Tips can be hidden or displayed using the Tips Expand and Collapse buttons.

By moving your cursor over IPC column names, measure names, and data cells, you can also view informational IPC Tooltips that appear in hover boxes.
There is also an **IPC Glossary** that can be accessed by clicking on **Help** menu in the top **tool** banner, then selecting **IPC Glossary** (Figure 2-13).

![IPC Glossary](image)

**Figure 2-13: IPC Glossary**

### 2.7 IPC Data Collection and Transfer to Data Portal

IPC Data Collection and aggregation will be automatically performed on the day of the month (as defined in the IPC site parameter for data collection) during the iCare nightly job. The default value is the 1st of the month. Depending on the timeliness of data entry at each site, this can be adjusted up to the 7th of the month.

Above the **IPC Provider Aggregated** data table, when **IPC Data Portal** is clicked, a dropdown window appears with **Download** and **Upload** choices (Figure 2-14). Selection of either of these automatically connects to the **IPC Data Portal** where the user can log-in and download the appropriate IPC reporting template or upload a completed template.
To automatically populate an IPC reporting template and upload it using iCare:

1. Navigate to the **iCare IPC** tab.

2. Open the **Provider Aggregated** view.

3. In the **IPC** section of the banner above the data table, click **Data Portal** dropdown list (Figure 2-14).

4. Select the **Download** option.

5. Log onto the **IPC Data Portal** as you normally would and select the Excel template that you want.

6. Give the template a name and file location, then download it.

7. To automatically populate the downloaded template with iCare, click **Export** in the **IPC** section of the banner (Figure 2-14).

8. In the dropdown box that appears, add the provider(s) that you want to the **Provider** box. Select the **Edit** button to edit the listing(s) in the **Provider** box.

9. Click **OK**, then select the file for the Excel template that you want to use (downloaded above through iCare or the standard one that you have been manually filling out for your site).

10. Click **OK**, and the Excel template will automatically be filled out for the provider(s) that you specified in #8 above.

11. In the **IPC** section of the banner above the data table (Figure 2-12), click **Data Portal** again.
12. In the drop-down window that appears, select **Upload**. The completed Excel template from #10 above will be automatically uploaded to the **IPC Data Portal** site.

**Note:** Alternatively, you can save the Excel template that is filled out by iCare (#10 above) and upload it manually to the IPC Data Portal in the manner that you have previously been using for your site.
Acronym List

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>BMX</td>
<td>Namespace for BMX ADO.Net Data Broker</td>
</tr>
<tr>
<td>BQI</td>
<td>Namespace for iCare</td>
</tr>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>CQ</td>
<td>Clinical Quality</td>
</tr>
<tr>
<td>DPCP</td>
<td>Designated Primary Care Provider</td>
</tr>
<tr>
<td>EHR</td>
<td>Electronic Health Record</td>
</tr>
<tr>
<td>GPRA</td>
<td>Government Performance and Results Act</td>
</tr>
<tr>
<td>GUI</td>
<td>Graphical User Interface</td>
</tr>
<tr>
<td>HHS</td>
<td>Health and Human Services</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>Indian Health Service</td>
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<td>Improving Patient Care</td>
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<td>Megabytes</td>
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<td>Meaningful Use</td>
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<td>OS</td>
<td>Operating System</td>
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<td>Personal Computer</td>
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<tr>
<td>RPMS</td>
<td>Resource and Patient Management System</td>
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</table>
Contact Information

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**Fax:**   (505) 248-4363

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