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1. Introduction

This User Guide provides the information necessary for hospitals to effectively use the CART – Inpatient tool.

CART is an application for the collection and analysis of quality improvement data. Through data collection, retrospective analyses, and real-time reporting, CART – Inpatient enables hospitals to comprehensively evaluate and manage quality improvement efforts. CART – Inpatient assists in meeting the aligned CMS and The Joint Commission measurement specifications for performance monitoring and data collection within a single application. It also maintains security of patient data to comply with the Health Information Portability and Accountability Act (HIPAA).

The application is available at no charge to hospitals or other organizations seeking to improve the quality of care for eight Hospital Inpatient measure sets selected by CMS:

- AMI (Acute Myocardial Infarction)
- ED (Emergency Department)
- HF (Heart Failure)
- IMM (Immunization)
- PN (Pneumonia)
- SCIP (Surgical Care Improvement Project)
- STK (Stroke)
- VTE (Venous Thromboembolism)
2. Overview

The CART – Inpatient tool has been designed to allow hospitals to abstract and edit medical record data, allowing for the answering of all questions or the use of skip-pattern logic. The tool provides the ability to import abstractions and uniform billing file layout information. The CART – Inpatient reports are available within the tool to preview detailed abstraction information as well as detailed and summary measure outcome information for both providers and physicians.

Once data collection is completed, hospitals are able to export their data from the tool and submit it to the Hospital Inpatient Quality Reporting (IQR) Clinical Warehouse via the QualityNet website, http://www.qualitynet.org. QualityNet Data Submission and Feedback/Comparison reports are available for registered QualityNet users via My QualityNet.

The QualityNet Help Desk is available for technical support and assistance with problems or questions that may arise regarding CART – Inpatient. Contact information for the QualityNet Help Desk is provided on the QualityNet website. See the Inpatient Q&A tool for reference to abstraction-related questions.

CART – Inpatient is available for use on a standalone, Windows-based computer or on a network. CART – Inpatient provides the following functionality:

- Provider Setup/Maintenance
- User Setup/Maintenance
- Patient Setup/Maintenance
- Measure Sets and Preferences
- Abstraction
- Reporting
- Importing and Exporting
- Integrating Modules

2.1 Conventions

This document provides screen prints and corresponding narrative to describe how to use CART – Inpatient.

Procedures are written in the action-result style. The steps begin with the action the user must take followed by the result of that action. The steps also may contain background information the user needs at the time the step is being performed.

Fields or buttons to be acted upon are indicated in **bold**; links to be acted upon are indicated as links in underlined blue text.

For example:
1. In Internet Explorer, from the Tools menu, choose Internet Options. The Internet Options window opens.

2. In the Internet Options window, click the Advanced tab. The Advanced tab with a list of settings appears.

3. In the settings box, scroll down to the group of security settings. Select Enable Support and then click OK. The Internet Options window closes.

**Note:** Throughout this document, the term ‘user’ refers to a person who requires and/or has acquired access to CART.

### 2.2 Cautions & Warnings

Not applicable

### 3. Getting Started

#### 3.1 Set-Up Considerations

Initial installation of CART requires the installation and setup of Quality Management System (QMS) in addition to CART – Inpatient. Required installation files and instructions are located on the QualityNet website, http://www.qualitynet.org, under Data Collection (& CART)/CART Downloads & Info. Various versions of the CART – Inpatient tool are available, so verify the version that you require and if the installation is new to your workstation. (You can determine which QMS and CART – Inpatient versions are installed on the workstation by clicking the About QMS link in the lower-right corner of the CART – Inpatient login box).

After you have completed installation of the tool and launched it, QMS loads. Once the QMS application is loaded, the CART – Inpatient login screen appears if CART – Inpatient is the only application installed. If CART – Inpatient and CART – Outpatient have both been installed on this workstation, you will be prompted to select Inpatient or Outpatient. Specific details of this process may be found in Section 3.3, Accessing the System.

##### 3.1.1 System Configuration

CART – Inpatient has been designed to run on a standalone workstation or a network.

The QMS application is a unique proprietary design of a MySQL database. This design is not compatible with any other MySQL application.

##### 3.1.2 Recommended Hardware and Software Requirements

Workstation hardware supported (standalone and client/server):

- Pentium 4 1.4 GHz Personal Computer (PC) configured with 512 MB of free RAM
- 1 GB hard drive space available
- Color monitor, display set at 1024 x 768 and minimum of 256 colors
Workstation operating systems supported (standalone and client/server):

- Windows XP with Service Pack 2
- Windows 2003 with SP3 and all current security patches applied
- Window 7 32 bit and 64 bit

### 3.2 User Access Considerations

After you have installed CART – Inpatient, the initial person signing into the application is required to set up at least one **Provider** and one **System Administrator** user. See Section 3.2.4, Initial Login, for instructions on the initial User ID and Password to be used.

#### 3.2.1 The System Administrator User

System Administrators:

- Set up and maintain provider information
- Set up and maintain user accounts
- Specify measures and measure sets to be collected
- Modify archive directory location if necessary

It is recommended that you set up more than one System Administrator account as a back-up in the event that one of the System Administrator accounts becomes locked.

#### 3.2.2 Session Time-Out

After you have signed in to CART – Inpatient, the system continually monitors user activity (page refresh or new page request). If the system detects that there has been no user activity for greater than ten minutes, it will display a message that your session will end in five minutes (see Figure 1).

**Figure 1: Session Time-Out Message Box**

To continue your session, click **OK**. If you do not click **OK**, you will be returned to the Welcome screen and any data that was not saved will be lost.

(During the Import process, the system will *not* automatically time-out the session).
3.2.3 Password Rules

Changing your password is:

- Required upon initial log in to the application. See Section 3.2.4, Initial Login, for instructions on the user ID to be used for your first login. The default password for any user is p@ssw0rd.

- Required when an account has been reset

- Required every 60 days upon next log in

- Voluntary at any time but cannot be changed more than once in a 24 hour period. This limitation on changing passwords does not apply to resetting an account.

Use the following recommendations to create an acceptable password:

- Use a minimum of eight characters and a maximum of nineteen.

- Use at least one upper case, one numeric, and one special character.

- Valid special characters are: % # * + - , : = ? _ .

- Passwords are case-sensitive.

- Do not use your User ID, First Name, or Last Name as your password.

- Do not use more than three consecutive like characters.

- Wait a minimum of six password changes to reuse a password.

- Do not change the password more than once in a 24 hour period.

- Passwords cannot contain dictionary words.

3.2.4 Initial Login

CART – Inpatient allows you to log in initially using cart as the User ID and using the default password as described in Section 0 (see Figure 2 for a sample Login screen).

Figure 2: CART – Inpatient Login Box

The ‘cart’ User ID has very limited access; it is established only for the initial user to set up the Provider and System Administrator user. (You may not use the cart User ID to create
abstractions). Once you are successfully signed in with the ‘cart’ User ID, you will be prompted to change the password and answer security questions.

You must then set up at least one Provider user and one System Administrator user. The System Administrator is the highest-level user.

When the System Administrator sets up a new user, the new user’s initial password will be the default password (See Section 0).

To log in to CART – Inpatient for the first time after installation:

1. Enter cart in the User ID field (case-sensitive).
2. Enter the default password (as in Section 0) in the Password field (case-sensitive).
3. Click **Login**. A Change Password box is displayed (see Figure 3).

   **Figure 3: Change Password Box**

   ![Change Password Box](image)

   You are required to change your password before accessing the CART – Inpatient system. Figure 4: System Logoff Warning displays the pop-up message that appears regarding this action. If you click **Cancel**, your password will not be changed, you will be logged off the system, and redirected to the welcome screen.

   **Figure 4: System Logoff Warning**

   ![System Logoff Warning](image)

4. Enter a new password in the New Password field and enter the same password in the Confirm New Password field.

   If you need help with your password, hover over the light bulb to display the Content Assist Available and press **Ctrl + Space**. This will display the criteria for your new password. For a list of password rules, see Section 0, Password Rules.

   Once the password is successfully changed, this will change the password for the CART – Inpatient ‘cart’ user account.
5. Click **Continue**. The Security Questions dialog box appears. You must answer at least six of the ten Security Questions displayed.

![Figure 5: Security Questions Box](image)

6. To enable the **OK** button, press **Tab** after your last security question has been answered; click **OK**.

7. The Login Banner appears (see Figure 6). Click **Accept**. If the login banner is declined, the system will log you off.
8. When you accept the Login Banner, the CART – Inpatient screen is displayed.

Figure 7: The CART – Inpatient Screen

9. Set up the Provider (see Section 3.2.5, Provider Setup).

10. Set up the System Administrators per User Setup (see Section 3.2.6, User Setup).
Set up more than one System Administrator account as back-up, in the event that one of the System Administrator accounts becomes locked.

11. On the Security menu, click **Logout**.

12. Log back in as the System Administrator. Your initial password is the default password defined in Section 0. At login, you will be prompted to change the password.

### 3.2.5 Provider Setup

The Provider Information screen shown in Figure 8 provides the ability to set up and modify providers. The term, provider, refers to a hospital. The Provider Information screen is divided into two sections: **Provider Summary** and **Provider Detail**.

**Figure 8: Provider Information Screen**

The Provider Summary section displays provider data once it has been entered in the Provider Detail section. Data includes:

- Name
- Address 1
- Address 2 (Optional)
- Zip
- City
- State
- CMS Cert No (CCN)
- National Provider ID (Optional)
- Termination Date (Enter data in this field only if the hospital is no longer valid, e.g., closed).
• HCOID (Optional)

To add a Provider:

1. On the Administration menu, click Provider. The Provider Information screen appears.

2. If no providers exist, enter data in the Provider Detail fields.

   If providers exist, click New Provider (plus sign symbol) to enter new provider information.

3. Click Save. Saved information will display in the Provider Summary section.

To modify a Provider:

1. In the Provider Summary section, select a provider. The data for that provider will display in the Provider Detail section.

2. Change any data in the Provider Detail section.

3. Click Save.

3.2.6 User Setup

The User Information screen shown in Figure 9 provides the ability to set up new users and modify users. The screen is divided into four sections: User Summary, User Detail, Activation Detail, and Provider Detail, each of which can be expanded or collapsed as needed (see Section 3.4.2.4 Screen Size Control).

Figure 9: User Information Screen

3.2.6.1 User Summary

The User Summary section displays user data for existing users. Summary data includes:

• User ID

• First Name
- Middle Name (optional)
- Last Name
- User Type (See Table 1 to determine what User Type to assign a user, based on application processes the User Type may perform)
- Activation Date
- Termination Date (Enter data in this field only if the user is no longer valid, for example, no longer works for the hospital)
- Provider

3.2.6.2 User Detail

The User Detail section enables you to enter data for a new user and modify data for an existing user with the exception of the User ID. The User ID may not be modified once it has been created for the new user. Required fields are in bold type with an asterisk.

3.2.6.3 Activation Detail

The Activation Detail section enables you to enter activation and termination dates for the user. The Termination Date is optional and should not be completed until a known termination date exists for the user.

3.2.6.4 Provider Detail

The Provider Detail section enables you to select the provider with which the user is associated. Only one provider may be assigned to a User ID.

To add a user:

1. On the Administration menu, click User. The User Information window displays.
2. If no user exists, enter data in the User Detail, Activation Detail, and Provider Detail sections. If users exist, click New User to enter new user information.
3. Click Save. The new user information displays in the User Summary section. The system will automatically populate a checkmark in the Reset Password check box. This enables the new user to use their User ID as their initial User ID and the default password as the password (Refer to Section 0 for default password).
4. If more users are needed, click New to add each new user. Be sure to click Save to save the user information.

To modify a user:

1. Select an existing user in the User Summary section of the User Information screen.
2. Modify the data for that user in the User Detail, Activation Detail, and Provider Detail sections.

3. Click **Save**.

If you entered a Termination Date for a user with any pending abstractions, a Termination Date dialog box displays, advising you to reassign the pending abstractions to an active user. Click **OK** (see Figure 11).

![Figure 11: Termination Date Box](image)

Each instance of Inpatient CART must always have at least one active System Administrator. If there is only one System Administrator and that person terminates his/her position, another System Administrator must be created prior to entering the Termination Date for the existing System Administrator. Figure 12: Valid System Administrator Box shows the error message that appears if no System Administrator is entered.

![Figure 12: Valid System Administrator Box](image)

### 3.2.7 Initial Login for System Administrator User

1. Enter your assigned User ID in the User ID field.

2. Enter the default password (see Section 0) in the password field.

3. Click **Login**. The Change Password screen is displayed.
4. Enter a new password in the New Password field and enter the same password in the Confirm New Password field.

5. Click **Continue**.

6. The Security Questions dialog box is displayed. Enter answers to at least six of the ten Security Questions displayed.

7. To enable the **OK** button, press **Tab** after your last security question has been answered and then click **OK**.

8. The CART – Inpatient screen is displayed.

### 3.2.8 Set Preferences

Preferences define the measure sets and measures for which provider data can be collected. At the individual abstraction level, the measures selected in the Provider Preferences section of the Provider Information screen will be selected automatically. You can add measures at the individual abstraction level but cannot deselect any measures unless the preferences are changed.

Only the system administrator can set the preferences. The preferences can be changed at any time but will affect only future abstractions. At least one measure set with corresponding measures has to be selected and saved for a time period, in order to perform abstractions.

The preferences set in CART – Inpatient must reflect what has been entered into Measure Designation on the My QualityNet website. Failure to set the correct preferences could result in cases being rejected from the IQR Clinical Warehouse.

To set preferences:

1. On the Administration menu, click **Provider**. The Provider Information screen appears.

2. In the **Provider Summary** section, select the desired provider.

3. On the lower right-side of the window, click the arrow next to **Provider Preferences** to expand the Provider Preferences section (see Figure 13).
Figure 13: Provider Information Screen with Provider Preferences Shown

4. From the **Time Period** list, select the desired time period.

5. Sets and their measures are displayed in a tree format preceded by a green checkmark. You may need to use the scroll bars to view all of the measure sets and measures.

   By default, the system will automatically populate a checkmark in the box next to each measure. To deselect a measure, click the box next to the measure name that will not be collected.

6. Once you have selected the desired measures, click **Save**.

### 3.2.9 Managing Passwords

CART – Inpatient allows you to change your password at any time while signed into the tool. It also includes two features to help you reset your password.

- **Forgot Password**
- **System Administrator Reset Password/Unlock the Account**

#### 3.2.9.1 Forgot Password

CART – Inpatient has aForgot Password feature toreset your password at log in. Rules include:

- You have only three attempts to successfully log in to the CART – Inpatient tool. Upon the third unsuccessful login attempt, your account will be locked. The system will display a message, notifying you of the locked account and instructing you to contact your CART – Inpatient System Administrator.
- You will be required to answer three Security Questions.

- When a System Administrator’s account is locked, the CART – Inpatient database will automatically be archived.

To request a new password:

1. Enter your User ID.

2. Click **Forgot Password**. The Security Questions dialog box appears.

3. Enter your answers to the displayed Security Questions.

4. Press **Tab** after your last security question has been answered and then click **OK**. The Change Password dialog box displays.

5. Enter a new password in the **New Password** field, and then enter the same password in the **Confirm New Password** field.

6. Click **Change Password**.
3.2.9.2 System Administrator Reset Password/Unlock the Account

The CART – Inpatient tool provides a visual indicator of a locked account. Any locked account will display in **bold** font in the User Summary section of the User Information screen (see Figure 14). Only the System Administrator may use this function.

**Figure 14: User Information Screen**

To unlock a user’s account:

1. Select the locked account (displayed in **bold**) within the User Summary.
2. Select the **Reset Password/Unlock The Account** checkbox.
3. Click **Save**.
4. Instruct the user to enter their User ID in both the User ID and Password fields. The user will be prompted to change his/her password.

3.2.9.3 Changing Passwords

1. On the Security menu, click **Change Password**.
2. The Change Password dialog box displays.
3. Enter your Old Password.
5. Click **Change Password**.
3.2.10 Changing Security Questions
CART – Inpatient enables you to change your Security Questions at any time while signed into the tool.

To change your security questions/answers:


2. A Confirm Password dialog box displays (see Figure 15). Enter your CART – Inpatient User password and click OK.

   Figure 15: Confirm Password Box

3. A Security dialog box displays with your current security questions and answers. Change your Security Questions/Security Answers as desired and click OK.

   At least six of the Security Questions must be answered in order to proceed.
### 3.2.11 User Types

Table 1 summarizes the different user types and their associated roles within CART – Inpatient. An ‘X’ indicates a process that a particular role performs, unless otherwise specified.

**Table 1: Authorization Rights for User Types**

<table>
<thead>
<tr>
<th>Process</th>
<th>System Administrator</th>
<th>Abstractor</th>
<th>Initial User (cart)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maintain Provider Information</td>
<td>Add/Edit/Terminate</td>
<td>N/A</td>
<td>Add/Edit/Terminate</td>
</tr>
<tr>
<td>Maintain Preference Information</td>
<td>Add/Edit</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Maintain User Information</td>
<td>Add/Edit/Terminate/Unlock/ Reset Password</td>
<td>N/A</td>
<td>Add/Edit/Terminate</td>
</tr>
<tr>
<td>Maintain Patient Information</td>
<td>Add/Edit/Delete</td>
<td>Add/Edit/ Delete</td>
<td>N/A</td>
</tr>
<tr>
<td>Maintain Abstractions</td>
<td>Add/Edit/Delete/ Reassign</td>
<td>Add/Edit/ Delete</td>
<td>N/A</td>
</tr>
<tr>
<td>View/Print Reports</td>
<td>X</td>
<td>X</td>
<td>N/A</td>
</tr>
<tr>
<td>Import Files</td>
<td>X</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Export Files</td>
<td>X</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Change Archive File Location</td>
<td>X</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Edit Abstraction Information</td>
<td>X</td>
<td>X</td>
<td>N/A</td>
</tr>
<tr>
<td>Integrate and Uninstall Modules</td>
<td>X</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Enable/Disable Notifications</td>
<td>X</td>
<td>X</td>
<td>N/A</td>
</tr>
</tbody>
</table>
3.2.12 **Help**

Help is available for all questions at any time during abstraction by either clicking the Help icon to the right of the question or by selecting Help Contents from the Help menu. Adobe Reader is required to view the help screens. To close the help screens and return to the CART page, click Close.

3.2.13 **Checking for System Upgrades**

During the first week of every month, when the user launches the application, CART checks the QualityNet web site to see if the version of the system installed on the user’s computer is the same as the latest version available on the web site. If they are not the same, the following message appears.

![System Upgrade](image)

To install the new version or patch, the user needs to access the QualityNet website http://www.qualitynet.org, under Data Collection (& CART)/CART Downloads & Info, read the Upgrade instructions, and install the upgrade. Both the instructions and the upgrade are located on the webpage in the Upgrading from CART-Inpatient box.

The user may choose to disable this alert in two ways. When the message first appears, the user may check the “Disable the alert” box and the message will not appear again unless the user chooses to enable it. The user may also remove or reinstate the alert using the Enable Notifications pop-up window under the File menu. To disable the alert, the user deselects the “Enable/Disable update(s)/patch(es) notification” box so that the check mark does not appear. To enable the alert after disabling it, the user selects the “Enable/Disable update(s)/patch(es) notification” box so that the check mark appears as in the following figure.

![Enable/Disable Update/Patch notification](image)
3.3 Accessing the System

To access the CART – Inpatient from MS Windows:

1. Launch QMS using one of the following methods:
   - Double click the qms30 desktop icon (appears as a bar chart with QMS30).
   - Click the application’s entry on the Start menu.
   - Double-click the qms30.exe in the CART – Inpatient/QMS30 directory.

2. If only CART – Inpatient is installed, the Welcome to the Quality Management System Screen is displayed (see Figure 18).

   Figure 18: The Welcome to the Quality Management System Screen

3. If multiple applications are installed, the QMS Application Selection dialog box is displayed. Figure 19 shows this box.

   Figure 19: QMS Application Selection Box

4. Choose the appropriate application and click OK. The login box will then display.
3.4 System Organization & Navigation

3.4.1 Window Layout

CART – Inpatient contains familiar Windows features: title bar, menu bar, toolbar, and window size controls.

Figure 20: CART – Inpatient Screen Layout

3.4.1.1 Title Bar

The title bar displays the name of the software: CART – Inpatient.

3.4.1.2 Menu Bar

The menu bar contains the command selections shown in Table 2: Menu Bar Commands.

Table 2: Menu Bar Commands

<table>
<thead>
<tr>
<th>Menu</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>File</td>
<td>Save</td>
<td>Available on Provider, Patient, User, and Abstraction screens. Selecting Save will save the screen that is displayed.</td>
</tr>
<tr>
<td>File</td>
<td>Save All</td>
<td>Available when editing Abstraction, Patient, User, or Provider information. Selecting Save All will save the information on all tabs.</td>
</tr>
<tr>
<td>File</td>
<td>Undo</td>
<td>Allows you to undo an action when editing an abstraction.</td>
</tr>
<tr>
<td>Menu</td>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>File</td>
<td>Redo</td>
<td>Allows you to redo an action when editing an abstraction.</td>
</tr>
<tr>
<td>File</td>
<td>Close (object)</td>
<td>Allows you to close the Provider, Patient, and user screens. The text of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the command varies with the object being closed (i.e., Provider, Patient</td>
</tr>
<tr>
<td></td>
<td></td>
<td>or User).</td>
</tr>
<tr>
<td>File</td>
<td>New (object)</td>
<td>Available on the Provider, Patient, and User screens and allows entry of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>new providers, patients, and users. The text of the command varies with</td>
</tr>
<tr>
<td></td>
<td></td>
<td>the object being closed (i.e., Provider, Patient or User).</td>
</tr>
<tr>
<td>File</td>
<td>Change Archive File Location</td>
<td>Allows the System Administrator to assign a specific file location to</td>
</tr>
<tr>
<td></td>
<td></td>
<td>archive the CART – Inpatient backup files.</td>
</tr>
<tr>
<td>File</td>
<td>Integrate Modules</td>
<td>Allows the System Administrator to integrate or import any user-defined</td>
</tr>
<tr>
<td></td>
<td></td>
<td>measure sets created using CART Module Designer.</td>
</tr>
<tr>
<td>File</td>
<td>Uninstall Modules</td>
<td>Allows the System Administrator to uninstall user-defined measure sets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>created using CART Module Designer.</td>
</tr>
<tr>
<td>File</td>
<td>Enable Notifications</td>
<td>Allows the System Administrator to allow Notifications to occur</td>
</tr>
<tr>
<td>File</td>
<td>Exit</td>
<td>Allows you to Exit the CART – Inpatient application and closes QMS core.</td>
</tr>
<tr>
<td>Administration</td>
<td>Provider</td>
<td>Only available to the System Administrator. Displays the Provider Information screen.</td>
</tr>
<tr>
<td>Administration</td>
<td>Patient</td>
<td>Available to Abstractor and System Administrator types. Displays the Patient Information screen.</td>
</tr>
<tr>
<td>Administration</td>
<td>User</td>
<td>Only available to the System Administrator. Displays the User Information screen.</td>
</tr>
<tr>
<td>Reports</td>
<td>Measure Detail by Physician</td>
<td>Displays the overall measure outcome for all cases with a status of</td>
</tr>
<tr>
<td></td>
<td></td>
<td>complete for the specified physician.</td>
</tr>
<tr>
<td>Reports</td>
<td>Measure Summary</td>
<td>Provides an aggregate count of category assignments for each measure by</td>
</tr>
<tr>
<td></td>
<td></td>
<td>provider and/or physician.</td>
</tr>
<tr>
<td>Menu</td>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Reports</td>
<td>Case Listing by Unique ID</td>
<td>Provides a list of patients who were abstracted during a requested timeframe.</td>
</tr>
<tr>
<td>Reports</td>
<td>Measures</td>
<td>Provides an overall total number of complete abstractions for a facility for the selected measure sets, including a breakdown of the age, sex, payment source, and measure rates.</td>
</tr>
<tr>
<td>Reports</td>
<td>Abstraction Detail</td>
<td>Provides a complete list of all questions and answers for an abstraction.</td>
</tr>
<tr>
<td>Reports</td>
<td>Measure Failure</td>
<td>Displays all cases with a status of complete that failed a measure during an identified discharge date range.</td>
</tr>
<tr>
<td>Reports</td>
<td>Measure Trending</td>
<td>Displays in a graph the total number of abstractions that passed or failed over a selected time period.</td>
</tr>
<tr>
<td>Reports</td>
<td>Measure Trending – Continuous Variable</td>
<td>Displays in a graph the median of all continuous variable measure values for each month over a selected time period.</td>
</tr>
<tr>
<td>Security</td>
<td>Change Security Answers</td>
<td>Allows you to change your security questions and answers after submitting your password.</td>
</tr>
<tr>
<td>Security</td>
<td>Change Password</td>
<td>Allows you to change your password.</td>
</tr>
<tr>
<td>Security</td>
<td>Logout</td>
<td>Logs you out of CART – Inpatient but does not close QMS.</td>
</tr>
<tr>
<td>Abstraction</td>
<td>Import ZIP</td>
<td>Allows System Administrator to import ZIP files containing XML files.</td>
</tr>
<tr>
<td>Abstraction</td>
<td>Import CSV</td>
<td>Allows System Administrator to import CSV files.</td>
</tr>
<tr>
<td>Abstraction</td>
<td>Import XML</td>
<td>Allows System Administrator to import XML files.</td>
</tr>
<tr>
<td>Abstraction</td>
<td>Search</td>
<td>Allows you to search for existing abstractations.</td>
</tr>
<tr>
<td>Help</td>
<td>Search</td>
<td>Allows you to search the help topics for a specific word or words.</td>
</tr>
</tbody>
</table>
### Menu

<table>
<thead>
<tr>
<th>Menu</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Help</td>
<td>Help Contents</td>
<td>Allows you to access all help topics.</td>
</tr>
<tr>
<td>Help</td>
<td>About Quality Management System</td>
<td>Provides information regarding QMS and the CART – Inpatient version installed on your workstation.</td>
</tr>
</tbody>
</table>

### 3.4.1.3 Toolbar

Each screen contains various toolbars that contain buttons and icons for assistance. As you mouse over icons, the name of the functionality is displayed. The availability of the functionality will vary depending upon which screen is displayed.

### 3.4.1.4 Combo Box Window Elements

A combo box is a box that contains a mix of field types: those in which data can be typed, in which data is selected from a drop-down list, in which data is selected from a pop-up calendar, and in which boxes can be checked or buttons selected.

**Figure 21: Combo Box**

![Combo Box](image)

### 3.4.1.5 Grids

To answer certain questions, such as those involving codes, procedures, or medications, grids are provided. The grids allow you to select/enter multiple responses. To make a selection, click on a row; an ellipsis will be displayed. Click on the ellipsis to bring up a dialogue box. You may click **New** or **Insert** to add new table rows. Click **Verify** to view edit messages in the lower pane of the window. Click **Close** when all desired selections are complete.

### 3.4.2 Screens

CART – Inpatient has five screens described in Table 3: Screen Icons and Descriptions.
### Table 3: Screen Icons and Descriptions

<table>
<thead>
<tr>
<th>Screen</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider Information</td>
<td>Allows the System Administrator to set up new, and modify existing, providers. Measure sets and measure preferences are also set from this screen.</td>
</tr>
<tr>
<td>User Information</td>
<td>Allows the System Administrator to set up new users, modify users, and terminate users.</td>
</tr>
<tr>
<td>Patient Information</td>
<td>Allows you to set up new patients and modify patients. From this screen, you can start/create an abstraction. A System Administrator can also delete patients and the abstractions associated with the patient from this screen.</td>
</tr>
<tr>
<td>Abstraction Search</td>
<td>Allows you to search for abstractions, edit abstraction information, edit abstractions, delete abstractions, and export abstractions.</td>
</tr>
<tr>
<td>Abstraction</td>
<td>Allows you to enter data for the abstraction, view measure calculation on cases with a status of complete, and enter comments. The tab name includes the patient’s name and admission and discharge dates.</td>
</tr>
</tbody>
</table>

To open a new screen within your current screen:

1. Right-click in the screen space. The context menu is displayed (see Figure 22):

   **Figure 22: Context Menu**

   ![Context Menu]

2. Click **New Editor**. A new screen for the same function opens. For example, if you are in the Abstraction Search screen and click New Editor, a new Abstraction Search screen will open.
3.4.2.1 Sorting

The Provider, User, Patient, and Abstraction Search screens provide the ability to sort displayed search results by the header row. To toggle between ascending and descending order of the field, click on the field name and an arrow will appear next to the field name (see Figure 23). To reverse the sort, click on the field name again.

Figure 23: Header Row of Search Results List

| ▲ First Name | Last Name | Patient Identifier |

3.4.2.2 Save Data

When changes are made to data displayed on a screen, an asterisk displays to the left of the tab title. To save those changes, click Save. The changes will be saved and the asterisk will no longer appear.

3.4.2.3 Close Screen

To close a screen, click Close on the screen tab or the Close button on the toolbar. When you close a screen with unsaved changes, a Save Resource dialog box appears, asking if you want to save the changes (see Figure 24).

Figure 24: Save Resource Dialog Box

If you attempt to exit CART – Inpatient and more than one screen is open with changes that have not been saved, a Save Resources dialog box will appear. Select the resources you want to save and click OK to save changes.

Figure 25: Select Resources to Save Box
3.4.2.4 Screen Size Control

The Provider, Patient, and User Information screens are divided into various sections such as Search, Summary, and Detail. Each section can be collapsed by using the arrow to the left of the section title. If you click on the arrow a second time, the section is reinstated. Figure 26 shows a sample of the size controls and Figure 27 shows a sample Patient Information screen with the Patient Summary section collapsed.

Figure 26: Screen Size Control

![Screen Size Control]

![Patient Information Screen with Patient Summary Section Collapsed]

The sections also may be resized if needed. Place your cursor over the line that separates the Summary section from the Detail section. The cursor will appear as an arrow. Click and drag the line to either the right or left depending on which area you want to expand (Figure 28).
3.5 Exiting the System

To log out of CART – Inpatient: From the Security menu, click **Logout**. The Welcome to the Quality Management System screen is displayed.

To exit the Quality Management System: From the File menu, click **Exit**. The CART – Inpatient application and the Quality Management System both close.
4. Using the System

The following subsections provide detailed, step-by-step instructions on how to use the various features of CART – Inpatient.

4.1 Patient Information

The Patient Information screen enables you to add new patients, modify patient data, delete patients, and search for patients.

Figure 29: The Patient Information Screen

The Patient Information screen has three sections:

- Patient Summary
- Patient Detail
- Search

4.1.1 Patient Summary

The Patient Summary section displays patient information for existing patients. Summary data includes:

- First Name
- Last Name
- Patient Identifier
4.1.2 Patient Detail

The Patient Detail section enables you to enter data for a new patient and modify data for an existing patient. Required fields are in bold type with an asterisk.

To add a new patient:

1. On the Administration menu, click **Patient**. The Patient Information screen is displayed.

2. Click **New Patient** to display blank Patient Detail fields.

3. Enter data in the Patient Detail section.

4. Click **Save**. The patient information displays in the Patient Summary section. The option to add an abstraction or delete the patient is enabled.

CART – Inpatient will identify a duplicate patient when the following criteria match exactly to an existing patient’s record: **Birthdate**, **Race**, **Hispanic Ethnicity**, **Patient Identifier**, and **Provider**. Figure 30 displays the message that appears when a duplicate patient is identified.

![Duplicate Patient Error Message Box](image)

### Figure 30: Duplicate Patient Error Message Box

4.1.3 Patient Search

The search feature enables you to search for a specific patient record or all patient records. Patients matching your search criteria will display in the Patient Summary section. If no search criteria are entered, the system will display all patients.

To perform a patient search:

1. On the Administration menu, click **Patient**. The Patient Information screen displays.

2. To retrieve all existing patient records, click **Search**.

3. To retrieve **one or more records** based on search criteria:
- Select criteria from the **Field Name** and **Condition** lists.
- Enter a **Field Value**.
- Click **Search**.
- You may search based on up to four selections at one time.
- To revise your Field Value, click **Clear** and enter a new value.
- Patients who match all of the search criteria will display in the Patient Summary section.

### 4.1.4 Modify Patient

To modify a patient:

1. Select a patient in the Patient Summary section. The information for that patient will display in the Patient Detail section.
2. Modify the necessary Patient Detail data.
3. Click **Save**. If you change the provider, you will be asked to confirm the change. All associated abstractions for the patient will display. Click **Finish** to verify the provider change or **Cancel** to cancel the provider change.

### 4.1.5 Delete Patient

To delete a patient:

1. Select the desired patient in the Patient Summary section.
2. Click **Delete Patient**.

If an abstraction exists for the patient, a Confirm Delete Patient(s) box displays (see Figure 31), asking you to verify that you want to delete the patient and all associated abstractions. Click **Finish** to delete the patient and all associated abstractions or click **Cancel** to cancel the patient deletion.

**Figure 31: Confirm Delete Patient(s) Box**
4.2 Abstractions

Abstractions can be imported (see Section 4.4, Import), duplicated or created manually. The task of creating an abstraction is primarily accomplished by answering questions on an abstraction screen. Only the questions applicable to the measure sets and measures selected are displayed.

You may begin the abstraction process after the patient has been entered into the database. To begin an abstraction, you need the following case information:

- Admission Date
- Discharge Date (Optional)
- Measure Set
- Abstractor ID
- Abstraction Date
- Vendor Tracking Identification (Optional)
- Comment (Optional)

Once you begin the abstraction, you may not access other screens until you have exited the abstraction.

4.2.1 To Create a New Abstraction for an Existing Patient

1. Select the desired patient in the Patient Summary section.
2. Click Add Abstraction.
   - If the patient does not exist yet, enter the new patient, save, and then proceed with Add Abstraction.
3. The Add/Edit Abstraction for patient screen appears:
4. Enter data in the Add/Edit Abstraction screen.

5. Click **Finish**. The Abstraction screen displays.

### 4.2.1.1 Preferences Missing

If Preferences have not been set up for the time period (see Section 3.2.8, Set Preferences), the **Next** button will be enabled. Click **Next** and skip to Section 0, Missing Preferences.

### 4.2.1.2 Existing Abstractions

If the patient has an existing abstraction with the same admission date, the **Next** button will be enabled. Click **Next**. A list of abstractions for the patient will be displayed.

---

**Figure 33: Existing Abstraction Information for a Patient**
Information for the existing patient abstraction will be displayed. Select the abstraction to be completed and click **Finish**. The Abstraction screen displays.

4.2.1.3 Missing Measures

If all of the measures for the Measure Set are not selected for the time period, the **Next** button will be enabled. Click **Next**.

To add Measures:

1. From the Add/Edit Abstraction for patient...Abstraction screen, click the displayed abstraction. The **Next** button will be enabled.

2. Click **Next**. The list of Measure sets and measures will be displayed. Figure 34 displays a sample Measure sets dialog box.

   **Figure 34: Measure Sets Dialog Box**

3. Add additional measures if desired and click **Finish**.

   The measures previously set as preferences by the System Administrator will display with a green checkbox and cannot be deselected. However, you can add additional measures if applicable. If additional measures are selected, they will display with a green checkmark.
4.2.1.4 Missing Preferences

If preferences have not been set up for the time period (see Section 3.2.8, Set Preferences), the Next button will be enabled. Click Next; a warning message will be displayed (see Figure 35).

Figure 35: Preferences Warning Box

Click OK to close the message and return to the Abstraction screen. Click Cancel to close the Abstraction screen and contact a System Administrator to have preferences set up before you retry creating the abstraction.

4.2.1.5 Abstraction Screen

Once a patient is entered in the CART – Inpatient tool, you may begin the abstraction process. You also have the option of importing patient and abstraction data and modifying the information once imported. Once you begin the abstraction, you will not be able to access other screens until you have exited the abstraction.

The Abstraction screen is divided into two vertical sections, with the Question Editor section divided into two subsections:

- Navigator (left pane)
- Question Editor (right pane)
  - Abstraction tab
  - Patient Details tab

Figure 36 displays a sample Abstraction screen and Figure 37 displays a sample Navigator screen. A description of the Navigator and Question Editor screens follows later in this chapter.

The Abstraction Toolbar provides the following:

- Save
- Undo or Redo changes
- Close Abstraction
- Show/Hide Answered Questions
- Current status of the case (e.g., PENDING)
- Timer of the abstraction process (may be paused and restarted)
Figure 36: Abstraction Screen

Figure 37: Navigator Screen
4.2.1.6 Navigator Pane

The Navigator section enables you to move between questions anywhere in the abstraction. The Navigator section is formatted as a Windows tree directory. The first level contains the measure set; the second level contains the category (e.g., Abstraction); and the third level contains the questions that are applicable to the measure set (e.g., International Classification of Diseases 9th Edition Clinical Modification (ICD-9-CM) Principal Diagnosis code). To expand or collapse the tree, click the plus or minus buttons, + / -.

Figure 38: Navigator Pane of the Abstraction Screen

- Required questions are in bold font
- Optional questions are in regular font
- Disabled questions are grayed out
- Use the plus or minus buttons to expand or collapse the tree
- Unanswered questions (including questions that are disabled due to skip-patterns) display an unanswered symbol to the left of the question
- As questions are answered in the Question Editor section, if the Show Answered Questions option is selected, the Navigator section will indicate the following question status to the left of the question:
  - Complete
  - Complete but Pending Edit
  - Click a question in the Navigator section (left-side) to be taken directly to that question within the Question Editor section (right-side).
4.2.1.7  Question Editor Pane

The Question Editor screen is divided into two tabs:

- The Abstraction tab displays abstraction questions based on your measure preferences and skip pattern selection. The first question within the abstraction determines your skip pattern selection. You may select **Enable/disable questions appropriately** and follow all skip-patterns. Or you may select the **Enable all questions** and answer all related questions for that measure set. Figure 39 displays a sample Abstraction section.

  ![Image of Skip Pattern Determination Question]

  **Figure 39: Skip Pattern Determination Question**

- The Patient Details Tab displays Patient Details and Measures (see Figure 40).
  - Patient Details – displays read-only patient information
  - The Comment field is read-only
  - Measures – displays a list of the applicable quality measures and the measure category assignment. For continuous variable measures the tool will display the measurement value and (minutes) along with the measure category assignment when applicable. Initially, the Status column is blank. The Measures will calculate once the abstraction status is complete and will display the status of the measures.
4.2.2 Abstraction Status

The Abstraction toolbar keeps you informed of the status of your abstraction. There are three abstraction statuses:

- **Complete** – An abstraction achieves Complete status when all required questions are answered and have passed all edits.

- **Pending** – An abstraction will remain in a Pending status until all required questions have been answered.

- **Edit Errors** – An abstraction will be labeled with an Edit Errors status if the abstraction answers have triggered a ‘hard edit.’
4.2.3 Edit Types

Edit Errors usually occur on import, but also can occur while you are entering a new abstraction or editing an existing abstraction. If the abstraction being imported contains at least one hard edit, the import is still allowed and saved with a status of Edit_Errors. The user can then edit the abstraction and correct the errors. Edits are displayed in the lower-left of the abstraction screen.

![Abstraction Window Navigator Pane Showing Edits](image)

- **! Error Edit** – Critical edits require changes to an abstraction in order for it to be saved as complete and be accepted into the IQR Clinical Warehouse. This edit is also known as a ‘Hard’ edit and is indicated with an exclamation symbol.

- **# Warning Edit** – Warning edits allow the entered value to remain, but ask for a confirmation as to the accuracy of the answer provided. If you ignore the Warning edit message and save, the abstraction status will display as Edit_Errors rather than complete. This edit is also known as a ‘Hard*’ edit and is indicated with a pound symbol.

- **? Informational Edit** – Informational edits do not require changes to an abstraction in order for it to be saved as complete and be accepted into the IQR Clinical Warehouse. This edit is also known as a ‘Soft’ edit and is indicated with a question symbol.

The term 'edit' can also refer to validation messages you may receive as you answer abstraction questions. The system verifies that each response you give is consistent with related responses you’ve already given. When a response is inconsistent, a Validation box will appear:

![Edit Validation Box](image)
4.2.4 Measure Status and Category Assignments

The Measures section of the Question Editor Pane Patient Details tab displays a list of the applicable quality measures and the measure status, also called its category assignment.

![Figure 43: The Measures Section of the Abstraction Window Patient Details Tab](image)

Initially, the status column is blank; once the abstraction is complete, the data entered for each measure will be evaluated against the measure’s requirements which are published in the Specifications Manual for National Hospital Inpatient Quality Measures at http://www.qualitynet.org. The category assignment will be calculated and displayed in the status column.

<table>
<thead>
<tr>
<th>Measure Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator Exclusion – (B)</td>
<td>Abstraction is excluded from the denominator and is therefore not in the measure population.</td>
</tr>
</tbody>
</table>
| Failed – (D)                            | All required element questions for the measure have been answered, but the answer value is such that the case does not pass the quality of care standards and therefore fails the measure.  
  For rate-based measures: EOC record is a member of the measure’s population and the intent of the measure was not met  
  For continuous variable measures: EOC record is a member of the measure’s population and has sufficient, accurate, and valid data to compute the measurement |
<table>
<thead>
<tr>
<th>Measure Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passed – (E)</td>
<td>All required element questions for the measure have been answered, and the answer value is such that the case passes the quality of care standards. For rate-based measures: EOC record is a member of the measure’s population and the intent of the measure was met. For continuous variable measures: Does not apply</td>
</tr>
<tr>
<td>Unable to Calculate – (Y)</td>
<td>A data element required to calculate a measure was answered with Unable to Determine (UTD). That answer renders the measure unable to be calculated.</td>
</tr>
<tr>
<td>&lt;numeric value&gt;</td>
<td>The abstraction process time, calculated in minutes.</td>
</tr>
</tbody>
</table>

**4.2.5 Abstraction Tips**

- To optimize the skip patterns for each measure set, answer the questions in the order they appear on the screen.

- An abstraction will achieve complete status when all required, enabled questions are answered, and the edit errors have been corrected.

- Abstraction status does not change from pending to complete until the abstraction is saved.

- To view the status of the measures once the abstraction is complete, click **Patient Details**. Measures and their statuses appear.

**4.2.6 Save Abstraction**

Click **Save** or, on the **File** menu, click **Save** or **Save All**.

The **Save All** command on the **File** menu will save the information entered on all open tabs including the information on the tab that is currently displayed.

When a user clicks **Save** to exit an abstraction and the abstraction is being modified concurrently by another user, a Concurrent Modification message displays, advising you to close the abstraction without saving any of the changes and re-open.

**4.2.7 Close Abstraction**

Click **Close** on the Abstraction screen tab or **Close** on the toolbar.

**4.2.8 Abstraction Search**

The search feature enables you to search for all abstractions or specific abstractions within the CART – Inpatient tool. To search for all abstractions, click **Search** without entering any criteria.
To search for specific abstractions, you must select one or more of the following in the **Field Name** list:

- First Name
- Last Name
- Patient Identifier
- Admission Date
- Discharge Date
- Measure Set
- Abstraction Status
- Provider
- Abstractor ID
- Abstraction Date
- Export Date

Once a Field Name is selected, you have the option to choose from the Condition list. The Condition list values vary on the Field Name selected.

Patient records matching your search criteria will display once you complete a search. You may then perform the following tasks: Edit Abstraction Information (case information), Edit Abstraction, Delete Abstraction, Duplicate a Case, and Export Abstractions.
If the user has the role type of Administrator and the ‘Abstractor ID’ search criteria is selected as the Field Name value, the system displays all abstractions for all users that are affiliated with the provider that the Administrator is associated with.

Users with the role type of abstractor have the ability to search/view abstractions that contain his/her Abstractor ID and the provider he/she is affiliated with.

To perform an abstraction search:

1. On the Abstraction menu, click **Search**. The Abstraction Search screen displays.
2. To retrieve all existing abstraction records, click **Search**.
3. To retrieve one or more records based on search criteria:
   - Select criteria from the Field Name and Condition list.
   - Enter a Field Value.
   - Click **Search**.
   
   Dates must be entered in mm-dd-yyyy format.

   You may search based on up to four selections at one time.

   If you have made an error in your selections and want to start over, click **Clear**.
4. Abstractions that match all of the search criteria will display.

   A Navigation toolbar displays to assist you with moving from page to page or lets you return all rows on one screen.

4.2.9 **Edit Abstraction**

Once an abstraction has been entered into CART – Inpatient and saved, you may continue editing the abstraction. Any abstraction may be edited.

To edit an abstraction:

1. On the Abstraction menu, click **Search**. The Abstraction Search screen appears.
2. Click **Search**.
3. Select the desired abstraction.
4. Click **Edit Abstraction**. The Abstraction screen appears.

To add/edit Abstraction Case Information:

1. On the Abstraction menu, click **Search**. The Abstraction Search screen appears.
2. Click **Search**.
3. Select the desired abstraction.
4. Click **Edit Abstraction Information**. The Add/Edit Abstraction screen appears.

![Add/Edit Abstraction Screen](image)

If all of the measures for the measure set are selected, the measure set section cannot be modified when opening the Add/Edit Abstraction from the Abstraction Search screen. Only the **Finish** and **Cancel** buttons are available.

If all of the measures for the measure set are not selected for the time period, the next button will be enabled. Click **Next** to view the measures.

If you do not make any changes to the Case Information screen and **Cancel**, you will return to the Abstraction Search screen.

5. Make any applicable changes and click **Finish**.

6. The Abstraction screen appears.
4.2.10  Delete Abstraction

Once an abstraction has been entered into CART – Inpatient and saved, you can delete the abstraction. System Administrator or Abstractor may delete abstractions. Multiple abstractions may be selected for deletion by pressing the **Ctrl** or **Shift** keys when making selections.

To delete an abstraction:

1. On the **Abstraction** menu, click **Search**. The Abstraction Search screen appears.
2. Click **Search**.
3. Select the desired abstraction.
4. Click **Delete Abstraction**. The Confirm Abstraction Delete screen appears:

   ![Figure 46: Confirm Abstraction Delete](image)

   **Figure 46: Confirm Abstraction Delete**

5. Click **OK**.

4.2.11  Reassigning Abstractions

CART – Inpatient lets you assign an abstraction to a new abstractor. Reassignment may be necessary when a terminated user has pending abstractions. Once the user’s termination date has passed, the case cannot be completed until that user’s abstractions are reassigned to an active user.

To reassign an abstraction: (System Administrator only)

1. On the **Abstraction** menu, click **Search**. The Abstraction Search screen appears.
2. Click **Search**.
3. Select the desired abstraction and click **Edit Abstraction Information**.
4. Select a new Abstractor ID from the list and click **Finish**. The abstraction will open.
5. Close the opened abstraction.

4.2.12  Create a Duplicate Abstraction

CART – Inpatient lets you create a duplicate abstraction from an existing abstraction. Once you complete a case, a pop-up will come up stating, “This abstraction is now COMPLETE. Do you wish to duplicate this record?”
To create a duplicate abstraction for an existing abstraction:

1. Select the desired abstraction in the Abstraction Search section.
2. Click **Duplicate Case**.
3. The Abstraction screen appears (Figure 48).

**Figure 48: The Duplicate Abstraction Screen**

4. This will copy the case level information except measure set, abstractor ID, abstraction date and comments. If all of the measures for the selected Measure Set are not selected for the time period, the **Next** button will be enabled. Click **Next**. The Add/Edit Abstraction for patient Abstraction screen appears. This screen will have answers copied from the original abstraction. Skip to Section 4.2.1.3, Missing Measure. If preferences have not
been set up for the time period (see Section 3.2.8, Set Preferences), the Next button will be enabled. Click Next, then skip to Section 0, Missing Preferences.

If the patient has an existing abstraction with the same Admission Date, the Next button will be enabled. Click Next, then skip to Section 4.2.1.2, Existing Abstractions.

5. Click Finish, the Abstraction screen appears (Figure 49).

Figure 49: Abstraction Screen

4.3 Reports

CART – Inpatient reports enable you to preview and print detailed abstraction information, as well as detail and summary measure outcome information for both providers and physicians.

Available CART – Inpatient Reports:

- Abstraction Detail
- Case Listing By Unique ID
- Measure Detail by Physician
- Measure Failure
- Measure Summary
- Measure Trending
- Measure Trending – Continuous Variable
4.3.1 Running Reports

Reports generated within the CART – Inpatient tool may be saved or exported as a Portable Document Format (PDF), Single Sheet XLS, or as a CSV file. Help Desk support is provided only for PDF files. The Reports screen also enables you to resize the displayed screen size.

![Figure 50: The Report Viewer Toolbar](image)

To run a report:

1. Click Reports on the Menu bar.
2. Select a specific report. A parameter screen displays.
3. Complete the required information and click OK.
4. The Report Viewer screen displays with the report results.

To print the report:

1. Click Print.
2. Click OK to close the print screen.

To save a report:

1. Click Save.
2. Select a location to save your file and click Save.

To export a report:

1. Click Save/Export. The available export values display.
2. Select an export type.
3. Select a location to save your report and click Save.

4.3.1.1 Abstraction Detail Report

The Abstraction Detail Report lists the questions, answers, comments, and abstractor name for an abstraction. This report is based on abstractions with a status of Complete, Pending, or Edit_Errors. Questions are dynamic and display in the report in the order they display in CART – Inpatient. Only those questions that were answered in the abstraction are included. The report is sorted by Discharge Date, in ascending order. If no data is available for the selected parameters, the report displays header information with the retrieval criteria entered by the user and no hospital data for the displayed columns. See Figure 51 for a sample report.
The report can be filtered on:

- Provider
- Measure Set
- Patient Identifier
- Discharge Date – From and To

**Figure 51: Abstraction Detail Report**

The following table contains descriptions for the data that appears on the Abstraction Detail Report.

**Table 5: Data Displayed on the Abstraction Detail Report**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure set as selected from the parameter screen.</td>
</tr>
<tr>
<td>Patient Identifier</td>
<td>The unique identifier of the patient for the case.</td>
</tr>
<tr>
<td>First Name</td>
<td>The first name of the patient for the case.</td>
</tr>
<tr>
<td>Last Name</td>
<td>The last name of the patient for the case.</td>
</tr>
<tr>
<td>Admission Date</td>
<td>The date of the patient’s hospital admission for the case.</td>
</tr>
<tr>
<td>Discharge Date</td>
<td>The date of the patient’s hospital discharge for the case.</td>
</tr>
<tr>
<td>Status</td>
<td>The status of the case: Complete Pending, or Edit_Errors.</td>
</tr>
<tr>
<td>Sex</td>
<td>The sex of the patient for the case.</td>
</tr>
<tr>
<td>Race</td>
<td>The race of the patient for the case.</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Birthdate</td>
<td>The birth date of the patient for the case.</td>
</tr>
<tr>
<td>Hispanic Ethnicity</td>
<td>Yes or No regarding the Hispanic ethnicity of the patient for the case.</td>
</tr>
<tr>
<td>Abstractor</td>
<td>The User ID of the abstractor for the displayed abstraction case.</td>
</tr>
<tr>
<td>Abstraction</td>
<td>A list of the abstraction questions and the answers for the case. Only those questions that were answered in the abstraction are included. Questions appear on the report in the same order they display in CART.</td>
</tr>
<tr>
<td>Comment</td>
<td>The comments that were entered on the ‘Add/Edit Abstraction’ screen and the ‘Patient Details’ tab of the ‘Abstraction’ screen.</td>
</tr>
</tbody>
</table>

### 4.3.1.2 Case Listing by Unique ID Report

The Case Listing by Unique ID Report provides a list of patients who were abstracted during the requested timeframe. All abstraction statuses are included in the report. The report is sorted by Discharge Date, then by Patient Identifier, in ascending order. If no data is available for the selected parameters, the report displays header information with the retrieval criteria entered by the user and no hospital data for the displayed columns. See Figure 52 for a sample report.

The report can be filtered on:

- Provider
- Measure Set
- Discharge Date – From and To

**Figure 52: Case Listing by Unique ID Report**

<table>
<thead>
<tr>
<th>Patient Identifier</th>
<th>Admission Date</th>
<th>Discharge Date</th>
<th>Physician 1</th>
<th>Physician 2</th>
<th>Abstractor ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>010</td>
<td>05-01-2013</td>
<td>05-01-2013</td>
<td>PHYSICIAN_1</td>
<td>PHYSICIAN_2</td>
<td>nturnan1</td>
</tr>
</tbody>
</table>

Report Run Date: 01-03-2013

Case Listing by Unique ID – Hospital IQR
Provider: Provider 02 - 123098
Discharge Date Range: 05-01-2013 – 05-01-2013
Measure Set: IQR-AMI
The following table contains descriptions for the data that appears on the Case Listing by Unique ID Report.

**Table 6: Data Displayed on the Case Listing by Unique ID Report**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure set as selected from the parameter screen.</td>
</tr>
<tr>
<td>Patient Identifier</td>
<td>The unique identifier of the patient for the case.</td>
</tr>
<tr>
<td>Admission Date</td>
<td>The date of the patient’s hospital admission for the case.</td>
</tr>
<tr>
<td>Discharge Date</td>
<td>The date of the patient’s hospital discharge for the case.</td>
</tr>
<tr>
<td>Physician 1</td>
<td>The first physician identifier if entered for the case.</td>
</tr>
<tr>
<td>Physician 2</td>
<td>The second physician identifier if entered for the case.</td>
</tr>
<tr>
<td>Abstractor ID</td>
<td>The User ID of the abstractor for the displayed abstraction case.</td>
</tr>
</tbody>
</table>

4.3.1.3 Measure Detail by Physician Report

The Measure Detail by Physician Report displays the overall measure outcome (category assignment) for all cases, with a status of complete, for the specified physician. In order to use this report, the abstractor would have had to complete the Physician 1 and/or Physician 2 fields in the abstraction for the core measure sets. Continuous Variable measures will not display in the Passed and Failed columns. The report is sorted by Discharge Date, Measure, and Patient Identifier in ascending order. If no data is available for the selected parameters, the report displays header information with the retrieval criteria entered by the user. See Figure 53 for a sample report.

The report can be filtered on:

- Provider
- Measure Set
- Physician
- Discharge Date – From and To
The following table displays descriptions for the fields on the Measures Detail by Physician Report:

### Table 7: Data Displayed on the Measures Detail by Physician Report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Physician</td>
<td>The physician identifier entered on the parameter screen. The selection entered on the parameter screen must match the values entered in the abstractions for the PHYSICIAN 1 or PHYSICIAN 2 questions.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure set as selected from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date</td>
<td>The date of the patient’s hospital discharge for the case.</td>
</tr>
<tr>
<td>Admission Date</td>
<td>The date of the patient’s hospital admission for the case.</td>
</tr>
<tr>
<td>Patient Identifier</td>
<td>The unique identifier of the patient for the case.</td>
</tr>
<tr>
<td>Measure</td>
<td>The measures associated with the measure set as selected by the parameter choice.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Excluded</td>
<td>Displays ‘X’ in the column if indicated based on the measure outcome for each measure abstracted.</td>
</tr>
<tr>
<td></td>
<td>Excluded = Category B</td>
</tr>
<tr>
<td>Passed</td>
<td>Displays ‘X’ in the column if indicated based on the measure outcome for each measure abstracted.</td>
</tr>
<tr>
<td></td>
<td>Passed = Category E</td>
</tr>
<tr>
<td></td>
<td>Continuous Variable measures will not be displayed in the Passed column.</td>
</tr>
<tr>
<td>Failed</td>
<td>Displays ‘X’ in the column if indicated based on the measure outcome for each measure abstracted.</td>
</tr>
<tr>
<td></td>
<td>Failed = Category D</td>
</tr>
<tr>
<td></td>
<td>Continuous Variable measures will not be displayed in the Failed column.</td>
</tr>
<tr>
<td>Continuous Variable</td>
<td>The calculated median value, in minutes, from continuous variable measures. The median value is calculated after sorting the measure values in ascending order.</td>
</tr>
<tr>
<td></td>
<td>• If the count of the measure value is even, the median will be the average of the two middle numbers (average of N/2 and [N/2]+1). For example, for measure values of 30, 50, 70, and 90, the Median = 60.</td>
</tr>
<tr>
<td></td>
<td>• If the count of the measure value is odd, the middle value is picked ([N+1]/2). For example, for measures values of 20, 30, 70, 90, and 100, the Median = 70.</td>
</tr>
<tr>
<td></td>
<td>The Continuous Variable field will be blank if a numerical value is not available or if it was excluded from measure calculation.</td>
</tr>
<tr>
<td>Unable to Calculate</td>
<td>Displays ‘X’ in the column if the measure outcome is unable to be calculated.</td>
</tr>
</tbody>
</table>
4.3.1.4 Measure Failure Report

The Measure Failure Report displays all cases, with a status of complete, that failed a measure (fell into Category Assignment D and is not a continuous variable measure) during the identified discharge date range. The report is sorted first by measure, then by Patient Identifier and discharge date, in ascending order. If no data is available for the selected parameters, the report displays header information with the retrieval criteria entered by the user. See Figure 54 for a sample report.

The report can be filtered on:

- Provider
- Measure Set
- Discharge Date – From and To

![Figure 54: Measure Failure Report](image)

The following table contains descriptions for the fields on the Measure Failure Report.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure set as selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure</td>
<td>The measures associated with the measure set as selected by the parameter choice that had cases that failed.</td>
</tr>
<tr>
<td>Patient Identifier</td>
<td>The unique identifier of the patient for the case.</td>
</tr>
<tr>
<td>Admission Date</td>
<td>The date of the patient’s hospital admission for the case.</td>
</tr>
<tr>
<td>Discharge Date</td>
<td>The date of the patient’s hospital discharge for the case.</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstraction Date</td>
<td>The date the abstraction was completed for the case.</td>
</tr>
</tbody>
</table>

#### 4.3.1.5 Measure Summary Report

The Measure Summary Report provides an aggregate count of category assignments for each measure by provider. Continuous Variable measures will not display in the Passed and Failed columns. Totals are displayed with the numerator/denominator plus a percent for each category assignment. The percentage is calculated from the numerator divided by the denominator for the measure.

This report is based on abstractions with a status of complete. The report is sorted by measure set and then measure in ascending order. Multiple measure sets may be selected for inclusion in the report. If no data is available for the selected parameters, the report displays header information with the retrieval criteria entered by the user. See Figure 55 for a sample report.

The report can be filtered on:

- Provider
- Measure Set
- Physician – Optional
- Discharge Date – From and To

![Figure 55: Measure Summary Report](image)

Table 9 contains descriptions for the fields on the Measure Summary Report.
### Table 9: Data Displayed on the Measure Summary Report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Physician</td>
<td>The physician identifier entered on the parameter screen. The selection entered on the parameter screen must match the values entered in the abstractions for the PHYSICIAN 1 or PHYSICIAN 2 questions.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure set as selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure</td>
<td>The measures associated with the measure set as selected by the parameter choice. Only those measures selected for abstraction shall display.</td>
</tr>
<tr>
<td>Excluded</td>
<td>The number of excluded cases for the measure (Numerator)/total number of abstractions with a status of complete for the measure (Denominator) and the percentage.</td>
</tr>
<tr>
<td>Passed</td>
<td>The number of cases that passed the measure (Numerator)/total number of abstractions with a status of complete for the measure (Denominator) and the percentage. Continuous Variable measures will not display in the Passed column.</td>
</tr>
<tr>
<td>Failed</td>
<td>The number of cases that failed the measure (Numerator)/total number of abstractions with a status of complete for the measure (Denominator) and the percentage. Continuous Variable measures will not display in the Failed column.</td>
</tr>
<tr>
<td>Continuous Variable</td>
<td>The calculated median value from continuous variable measures in minutes. The median value is calculated after putting the measure values in ascending order.</td>
</tr>
<tr>
<td></td>
<td>• If the count of the measure value is even, the median will be the average of the two middle numbers (average of $\frac{N}{2}$ and $\frac{N}{2} +1$). For example, for measure values of 30, 50, 70, and 90, the Median = 60.</td>
</tr>
<tr>
<td></td>
<td>• If the count of the measure value is odd, the middle value is picked ($\frac{N+1}{2}$). For example, for measures values of 20, 30, 70, 90, and 100, the Median = 70.</td>
</tr>
<tr>
<td></td>
<td>The Continuous Variable field will be blank if a numeric value is not available or if it was excluded from measure calculation.</td>
</tr>
<tr>
<td>Unable to Calculate</td>
<td>The number of cases that were unable to be calculated (Category Y) for the measure (Numerator)/total number of abstractions with a status of Complete for the measure (Denominator) and the percentage.</td>
</tr>
</tbody>
</table>
4.3.1.6 Measure Trending Report

The Measure Trending Report displays in a graph the total number of abstractions that passed (Category E) or failed (Category D) over a selected time period. Only data for abstractions with a status of complete are included in this report. If no data is available for the selected parameters, the report displays header information with the retrieval criteria entered by the user. See Figure 56 for a sample report.

The report can be filtered on:

- Provider
- Discharge Date Range
- Measure Set
- Measure

![Figure 56: Measure Trending Report](image)

Table 10 contains descriptions for the fields on the Measure Trending Report.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure set as selected from the parameter screen.</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure</td>
<td>The measure associated with the measure set as selected by the parameter choice.</td>
</tr>
<tr>
<td>Y-Axis (left side of the graph)</td>
<td>The total number of abstractions that passed or failed for each month.</td>
</tr>
<tr>
<td>X-Axis (bottom of the graph)</td>
<td>Each month of the selected time period.</td>
</tr>
</tbody>
</table>

#### 4.3.1.7 Measure Trending – Continuous Variable Report

The Measure Trending – Continuous Variable Report displays the Median of all continuous variable measure values for each month contained in the selected date range. Only data for abstractions with a status of complete are included in this report. If no data is available for the selected parameters, the report displays the graph with zeros. See Figure 57: Measure Trending – Continuous Variable Report for a sample report.

The report can be filtered on:

- Provider
- Discharge Date Range
- Measure Set
- Measure

**Figure 57: Measure Trending – Continuous Variable Report**

Table 11 contains descriptions of the fields on the Continuous Variable Report.
### Table 11: Data Displayed the Measure Trending – Continuous Variable Report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure set as selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure</td>
<td>The measure associated with the measure set as selected by the parameter choice.</td>
</tr>
<tr>
<td>Y-Axis (left side of the graph)</td>
<td>The median of all Measure Values for each month of the selected time period. The median value is calculated after putting the measure values in ascending order.</td>
</tr>
<tr>
<td></td>
<td>• If the count of the measure value is even, the median will be the average of the two middle numbers (average of $N/2$ and $[N/2] +1$). For example, for measure values of 30, 50, 70, and 90, the Median = 60.</td>
</tr>
<tr>
<td></td>
<td>• If the count of the measure value is odd, the middle value is picked ($[N+1]/2$). For example, for measures values of 20, 30, 70, 90, and 100, the Median = 70.</td>
</tr>
<tr>
<td>X-Axis (bottom of the graph)</td>
<td>Each month of the selected time period.</td>
</tr>
</tbody>
</table>
4.3.1.9 Measures Report

The Measures Report provides an overall total number of complete abstractions for a provider for the selected measure set including a breakdown of the age, sex, and measure rates. This report displays the numerator, denominator, and percentage for each age category, sex category, and each measure. It is sorted by measure set. If no data is available for the selected parameters, the report displays header information with the retrieval criteria entered by the user. See Figure 58 for a sample report.

The report can be filtered on:

- Provider
- Measure Set
- Physician – Optional
- Discharge Date – From and To

![Figure 58: The Measures Report](image-url)

<table>
<thead>
<tr>
<th>Report Run Date: 01-18-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measures - Hospital IQR</td>
</tr>
<tr>
<td>Provider: test - 123456</td>
</tr>
<tr>
<td>Discharge Date Range: 01-01-2013 - 03-05-2013</td>
</tr>
<tr>
<td>Measure Set: IQR-VTE</td>
</tr>
<tr>
<td>Physician: ALL</td>
</tr>
</tbody>
</table>

Total medical records abstracted for IQR-VTE:1

<table>
<thead>
<tr>
<th>Age Breakdown:</th>
<th>N/D</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age (years)</td>
<td>37</td>
<td></td>
</tr>
<tr>
<td>35-39</td>
<td>0/1</td>
<td>100.0%</td>
</tr>
<tr>
<td>35-39</td>
<td>0/1</td>
<td>6.0%</td>
</tr>
<tr>
<td>35-39</td>
<td>0/1</td>
<td>0.0%</td>
</tr>
<tr>
<td>35-39</td>
<td>0/1</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex Breakdown:</th>
<th>N/D</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>0/1</td>
<td>0.0%</td>
</tr>
<tr>
<td>Female</td>
<td>1/1</td>
<td>100.0%</td>
</tr>
<tr>
<td>Unknown</td>
<td>0/1</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Payment Source Breakdown:</th>
<th>N/D</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment Source</td>
<td>N/D</td>
<td>Percent</td>
</tr>
<tr>
<td>Medicare</td>
<td>0/1</td>
<td>0.0%</td>
</tr>
<tr>
<td>Non-Medicare</td>
<td>1/1</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures</th>
<th>N/D</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTE-1 Venous Thromboembolism</td>
<td>0/0</td>
<td></td>
</tr>
<tr>
<td>VTE-2 Intensive Care Unit</td>
<td>1/1</td>
<td>100.0%</td>
</tr>
<tr>
<td>VTE-3 Venous Thromboembolism</td>
<td>0/0</td>
<td></td>
</tr>
<tr>
<td>VTE-4 Ventricular Thrombosis</td>
<td>0/0</td>
<td></td>
</tr>
</tbody>
</table>

*No cases eligible for inclusion within the denominator.
**The time (in minutes) will be displayed in the N/D column. There will be no percent for this measure because it is a continuous variable.
Table 12 provides descriptions of the fields on the Measures Report.

### Table 12: The Measures Report

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provider</td>
<td>The name and CMS Certification Number of the selected provider from the parameter screen.</td>
</tr>
<tr>
<td>Discharge Date Range</td>
<td>The discharge date range selected from the parameter screen.</td>
</tr>
<tr>
<td>Measure Set</td>
<td>The measure sets selected from the parameter screen.</td>
</tr>
<tr>
<td>Physician</td>
<td>The physician identifier entered on the parameter screen. The selection entered on the parameter screen must match the values entered in the abstractions for either the PHYSICIAN 1 or PHYSICIAN 2 questions.</td>
</tr>
<tr>
<td>Total Medical Records Abstracted</td>
<td>The total number of medical records abstracted with a status of complete for the selected measure sets.</td>
</tr>
<tr>
<td>Mean Age (years)</td>
<td>Age is calculated from the Admission Date minus the Birth date.</td>
</tr>
<tr>
<td>Payment Source</td>
<td>Values are Medicare and Non-Medicare.</td>
</tr>
<tr>
<td>Measure</td>
<td>Each measure associated with the measure set selected.</td>
</tr>
<tr>
<td>Sex</td>
<td>Values are Male, Female, and Unknown. The gender rows contain a numerator/the denominator and a percentage.</td>
</tr>
<tr>
<td>N/D</td>
<td>The number of cases falling into the respective category (Numerator)/total number completed for the measure set (Denominator).</td>
</tr>
<tr>
<td></td>
<td>For measures, the number of cases that passed the measure [Category E] (Numerator)/total number completed that were assigned Categories D and E for the measure (Denominator). For Continuous Variable Measures, the time (in minutes) will display in the N/D column.</td>
</tr>
<tr>
<td></td>
<td>Category D = In Measure Population</td>
</tr>
<tr>
<td></td>
<td>Category E = In Numerator Population</td>
</tr>
</tbody>
</table>
### Field Description

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>The percentage calculation from the numerator divided by denominator for the measure set. For Continuous Variable Measures, no percent will display.</td>
</tr>
</tbody>
</table>

#### 4.4 Import

The import function enables the System Administrator user type to import data into CART – Inpatient. All abstractions, regardless of abstraction status (Complete, Pending, or Edit Errors) can be imported. The Provider has to be added to CART – Inpatient prior to import. Once abstraction data is imported, the Patient Information section is updated with the new patient data.

CART – Inpatient has the ability to import CSV and XML files containing case-specific information or zip files containing XML files. An importLog.xls file is created for every import and is saved in the in the directory where CART- Inpatient was installed. Please note that ‘Answer Value’ rows within XML files are not supported. Example: `<answer-value>1</answer-value>

To import into CART – Inpatient:

1. Select an import file type.

![Figure 59: Import File Types](image)

2. An Abstraction Import window appears. Navigate to the folder containing the files to be imported.
3. Select one or more files you want to import and click **Open**. To select more than one file, click **Ctrl** and select the specific files to import. To select all files, click **Shift** and click the first and last file you want to import.

4. An Overlay existing records message displays. Click **Yes** to overlay existing records or **No** to import only records that are not currently in the system. Figure 61 displays the Overlay message.

   If you select No to overlay existing records, the statistics page will list the file as ‘skipped’ since you have chosen not to overlay the files.

![Overlay Existing Record(s) Message](image)

5. An enable/disable questions message displays. Choose an option and click **OK**.
If a current record exists that is overwritten by the new imported record and the enable/disable questions answer is modified from the original record, any complete case will change to pending and skip-patterns will be based on the current response to the enable/disable questions.

6. An Import Statistics message displays:

   **Figure 63: Import Statistics Message**

   The import process has completed. Please see the log file and statistics for more details.

   Statistics >> Close Show Log

7. Click **Statistics** to view a summary listing the total abstractions attempted, failures, successes, skipped, overlaid, and the total and average import times in milliseconds.

   **Figure 64: Import Statistics Window**

   - Total abstractions attempted – Displays the number of records selected for import.
- Total failures – Displays the number of records that were not successfully imported.
- Total successes – Displays the number of records that were successfully imported.
- Total skipped – Displays the number of records that were skipped based on your decision to not overlay existing records.
- Total overlaid – Displays the number of records that were overwritten based on your decision to overlay existing records.
- Total import time for the abstractions – Displays the amount of time it took to import the records in seconds and milliseconds.
- Average import time per abstraction – Displays the average amount of time to import each record in milliseconds.

8. Click **Show Log** to view the detailed results of the import validation, including errors (see Figure 65).

Figure 65: The Import Validation Log

9. Click **Close** to close the Import Statistics screen and exit the import process.

10. To view the imported records, click **Search** on the Abstraction Search screen.
4.5 Export and Data Submission

The export function enables the System Administrator user type to export data from CART – Inpatient. All abstractions regardless of status (Complete, Pending, and Edit Errors) can be exported.

4.5.1 Export Abstraction

The CART – Inpatient tool provides the ability to export data in various file types. With the export process, you must specify the action to be taken by the IQR Clinical Warehouse with the file. Once the abstraction export file has been created (xml or zip), it can be submitted to the IQR Clinical Warehouse by uploading the files via the QualityNet website (http://www.qualitynet.org). Users are able to export in CSV format, but there is no production or troubleshooting support for a CSV file within the CART – Inpatient application. Table 13 contains descriptions of the export file type options and Table 14: Export Measure Options contains descriptions of the export measure options.

CART defaults the location to the QMS30\workspace\Inpatient\export subfolder of the directory where CART – Inpatient is installed. User can browse in order to select a different location.

Table 13: Export File Type Options

<table>
<thead>
<tr>
<th>File Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>XML</td>
<td>Creates a separate XML file for each abstraction selected and exported. Each case must have a separate XML file created for the cases to be accepted into the IQR Clinical Warehouse.</td>
</tr>
<tr>
<td>ZIP</td>
<td>Exports abstraction information into a ZIP file (data compressed format) of one or more XML files. The ZIP file can be submitted to the IQR Clinical Warehouse.</td>
</tr>
<tr>
<td>Excel</td>
<td>Creates an Excel file of the abstractions you exported. A separate Excel file is created for each measure set. Separate tabs are created in the Excel file for each discharge timeframe if the abstractions you are exporting are from more than one discharge timeframe. If the Excel file type is selected, the export type and action type fields are disabled. If you are including user-defined elements in your export, any new grid elements that were created in CART Module Designer and integrated into CART – Inpatient will have only the first 10 rows in the grid included in the Excel export. This file cannot be submitted to the IQR Clinical Warehouse.</td>
</tr>
</tbody>
</table>
| CSV       | Creates a comma-separated file of the abstractions you exported. The format of the CSV file follows the Uniform Billing File Import File Layout posted on the QualityNet website under Hospitals-Inpatient/Data Collection (& CART)/Uniform Billing File Layout. All abstractions are included in one file, including all measure sets and discharge timeframes. If the CSV file type is selected, the export type and action type fields are disabled. This file cannot be submitted to
## Table 14: Export Measure Options

<table>
<thead>
<tr>
<th>Measure Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS Measures</td>
<td>Creates an export file of only the CMS measure sets per the selected file type with an export type of CMS.</td>
</tr>
<tr>
<td>(CMS measure sets are those within the tool that are CMS-approved, such as AMI)</td>
<td></td>
</tr>
<tr>
<td>CMS Measures &amp; Users Defined</td>
<td>Creates an export file of the CMS measure set and any user-defined data elements (created in Module Designer) with an export type of CMS. Files containing user-defined data elements will be rejected from the IQR Clinical Warehouse.</td>
</tr>
<tr>
<td>The Joint Commission</td>
<td>Creates an export file of The Joint Commission measure sets per the selected file type with an export type of CMS. If the ‘The Joint Commission (COMPLETE Cases Only)’ export type is selected, the system will create the export file according to the existing Joint Commission data export format for the selected export file type.</td>
</tr>
<tr>
<td>User Defined</td>
<td>Creates an export file of only the user-defined data elements (created in CART Module Designer) per the selected file type.</td>
</tr>
</tbody>
</table>

## Table 15: Export Type Options

<table>
<thead>
<tr>
<th>Export Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMS</td>
<td>The exported files include the element tags that are required by CMS in order for the data to be accepted into the IQR Clinical Warehouse.</td>
</tr>
<tr>
<td>The Joint Commission (Complete Cases Only)</td>
<td>The exported files include the element tags that are required for submission to The Joint Commission.</td>
</tr>
</tbody>
</table>
Table 16: Export Action Type Options

<table>
<thead>
<tr>
<th>Action Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Add</td>
<td>Indicates the user wants the XML File to be added to the IQR Clinical Warehouse.</td>
</tr>
<tr>
<td>Delete</td>
<td>Gives the user the ability to create an XML file with a delete request. When a case is submitted to the IQR Clinical Warehouse with a delete request, the particular records will be removed.</td>
</tr>
<tr>
<td></td>
<td>- To delete an existing file, the following fields <em>must</em> match in the IQR Clinical Warehouse: Provider ID, Patient Identifier, Admission Date, Discharge Date, and Measure Set.</td>
</tr>
<tr>
<td></td>
<td>- To delete an existing Joint Commission file, the following fields <em>must</em> match The Joint Commission's data warehouse: Performance Measurement System Identifier, Vendor Tracking ID, Admission Date, Discharge Date, and Measure Set.</td>
</tr>
</tbody>
</table>

To export abstractions:

1. From the Abstractions screen, select the desired abstractions:

   Figure 66: The Abstractions Screen

   ![Image of the Abstractions Screen]

   To easily identify the cases, you can sort by any of the fields displayed. To toggle between ascending and descending order of the field, click on the field name and an arrow will appear next to the field name. To reverse the sort, click on the field name again.

2. Click **Export**. The Abstraction Export screen appears.
The system defaults the file type to XML, the action type to Add, the location to an export subfolder of the directory where CART – Inpatient is installed. Change the selections as desired.

3. Select a File and Action Type and click **Finish**.

![Figure 67: Abstraction Export Screen](image)

4. A Progress Information box may display, indicating the export procedure is running:

![Figure 68: Progress Information Message](image)

5. When the export is complete, an Export Statistics window displays:

![Figure 69: Export Statistics Message](image)

6. Click **Statistics** to view the results of the export. Information displayed includes:

   - The location where the export files were saved
   - The total number of abstractions exported
- The total export time for the abstractions
- The average export time per abstraction in milliseconds

7. Click **Close** to close the statistics message.

### 4.5.1.1 Export File Naming Convention

CART – Inpatient automatically assigns a name to the exported files. An underscore separates the different sections of the file name. XML file types are not separated between Patient’s Admit Date and the Measure Set. Table 17 through Table 20 contain descriptions of the content for different file types.

#### Table 17: File Name Components of a Sample XML File Named 123456_6789_20120703AMI_23366.xml

<table>
<thead>
<tr>
<th>File Name Component</th>
<th>Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>123456</td>
<td>CMS Certification Number from the case</td>
</tr>
<tr>
<td>6789</td>
<td>Last four digits of the patient’s Patient Identifier</td>
</tr>
<tr>
<td>20120703 (July 03, 2012)</td>
<td>Patient’s Admit Date</td>
</tr>
<tr>
<td>AMI</td>
<td>Measure Set</td>
</tr>
<tr>
<td>23366 (Milliseconds)</td>
<td>Last five digits of Export timestamp.xml</td>
</tr>
</tbody>
</table>

#### Table 18: File Name Components of a Sample ZIP File Named 11242012_013518.zip

<table>
<thead>
<tr>
<th>File Name Component</th>
<th>Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>11242012 (November 24, 2012)</td>
<td>Export Date</td>
</tr>
<tr>
<td>013518 (hours/minutes/seconds)</td>
<td>Last six digits of Export timestamp.zip</td>
</tr>
</tbody>
</table>

#### Table 19: File Name Components of a Sample XLS File Named IQR-AMI_11242012_42093.xls

<table>
<thead>
<tr>
<th>File Name Component</th>
<th>Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMI</td>
<td>Measure Set</td>
</tr>
<tr>
<td>11242012 (November 24, 2012)</td>
<td>Export Data</td>
</tr>
</tbody>
</table>
### File Name Component

<table>
<thead>
<tr>
<th>File Name Component</th>
<th>Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>42093 (Milliseconds)</td>
<td>Last five digits of Export timestamp.xls</td>
</tr>
</tbody>
</table>

**Table 20: File Name Components of a Sample CSV File Named 11242010_42093.csv**

<table>
<thead>
<tr>
<th>File Name Component</th>
<th>Represents</th>
</tr>
</thead>
<tbody>
<tr>
<td>11242012 (November 24, 2012)</td>
<td>Export Data</td>
</tr>
<tr>
<td>42093 (Milliseconds)</td>
<td>Last five digits of Export timestamp.xls</td>
</tr>
</tbody>
</table>

#### 4.5.1.2 Export Data – Standalone Database Options

Depending on whether you are using multiple PCs or one PC at your site to collect CART – Inpatient data, there are two options for exporting the data:

- You can export the data from each PC and submit each export file to the IQR Clinical Warehouse.
- You can also export the data from each PC and import it into one PC. You can then export the data from the one PC that contains all of the data and submit it to the IQR Clinical Warehouse.

#### 4.5.2 Data Submission

After an export file has been created, it can be submitted for inclusion into the IQR Clinical Warehouse by uploading the files via the secure pages of the [QualityNet website](http://www.qualitynet.org).

An Alert will pop-up that states: ALERT! Your data submission to the IQR Clinical Warehouse is NOT complete. Would you like to update the data now?

**Figure 70: Export File Alert Dialog**

My QualityNet is a secure, interactive website that enables the direct exchange of files between two or more individuals and/or organizations over the Internet. QualityNet is the only CMS-approved method for the electronic transmission of private data.

For further information regarding QualityNet, please access the QualityNet website at [http://www.qualitynet.org](http://www.qualitynet.org) and refer to [Getting started with QualityNet](Getting%20started%20with%20QualityNet). To upload data via My
QualityNet (the secure section of QualityNet), you must be a registered user with the “RHQDAPU Data Upload” role. Complete instructions for uploading data to the IQR Clinical Warehouse and roles required to submit data and view reports can be found in the QualityNet User’s Guide available on the QualityNet website.

4.6 Integrate Modules

The integration functionality allows modules created or edited in CART Module Designer to be integrated into CART – Inpatient. These modules can be expansions of current core measure sets as well as new measure sets.

Only files that have been generated by the Module Designer export process can be successfully integrated into CART – Inpatient. During the integration process, CART – Inpatient will validate that the CART Module Designer-created ZIP files were not modified. If a ZIP file is invalid, a message displays.

Once the modules are integrated, users will be able to query for the integrated measure set on the abstraction screen and abstract data for these user-defined measures.

The CART Module Designer application is available for download from the Data Collection (& CART) page of the QualityNet website. The web page includes detailed information about the application, integration instructions of CART core measure sets into the module, and a user guide.

4.6.1 Integrate Modules

The Integrate Modules function enables a user to integrate user-defined measure sets into CART – Inpatient. To integrate measure sets:

1. On the File menu, click Integrate Modules. The Integrate Modules dialogue box displays.

2. Navigate to the folder where the measure set XXX.zip file was saved when it was exported from CART Module Designer.

3. Select the XXX.zip file and click Open. A Progress Information box may display briefly.

   If the selected CART Module Designer-created ZIP files pass validation, CART – Inpatient will check for any existing files that may be duplicates. If a duplicate is found, a warning message appears, asking whether you want to replace the existing file. If a match is not found, CART – Inpatient integrates the selected CART Module Designer-created ZIP files into CART – Inpatient, and then a ‘Module has been successfully integrated’ message displays.

4. Click OK.
4.6.2 Preparing Integrated Modules

Once you integrate a measure set, you can set preferences for it, view the measure set on the abstraction screen, and abstract data. To verify successful module integration:

1. On the Administration menu, click Provider. The Provider Information screen appears.

2. In the Provider Preferences section, select the desired time period from the Time Period list. The integrated modules are displayed. Figure 71 displays a sample selection.

![Figure 71: Provider Preferences](image)

3. To add the module as a preference, select the desired measure set check boxes.

4. Click Save.

4.6.3 Uninstall Modules

CART – Inpatient enables you to uninstall user-defined integrated modules.

Modules that are expansions of current core measure sets cannot be uninstalled. If these expansions are no longer wanted, integrate the core measure set ZIP file and replace the existing files.

Modules with existing abstractions cannot be uninstalled. If abstractions exist for the module, you will receive a warning that abstractions have been found and that you must delete abstractions for the selected measure sets. Once you have deleted existing abstractions, you may try the uninstall procedure again.

To uninstall modules:

1. On the File menu, click Uninstall Modules. The Uninstall Modules dialog box displays.
2. Select the modules to be uninstalled and click OK. A confirmation message appears, asking you to confirm the uninstall process.

3. To proceed with the uninstall process, click OK; to cancel the requested action, click Cancel.

5. Troubleshooting & Support

5.1 Support

For help desk support/system support, contact:

QualityNet Help Desk

8866-288-8912

TTY:277-715-6222

qnetsupport@sdps.org

5.2 Verify Version of CART – Inpatient

There are several instances when you may need to check the version of the tool and/or platform you are using. For example, this may be necessary when calling the QualityNet Help Desk for troubleshooting assistance or prior to doing an upgrade of the application.

To verify the version and features of CART – Inpatient installed on your PC:

1. Click About Quality Management System, located under the Help menu or on the Login screen.

2. The About Quality Management System message displays. In the example below (Figure 73), the user has both inpatient and outpatient CART installed in the same directory. The associated version of each tool is highlighted in yellow. Click OK to close.
5.3 Uninstall Instructions

CART – Inpatient has an uninstall option available that enables you to uninstall the CART – Inpatient /QMS software. The same instructions apply whether you are uninstalling a Standalone, Client, or Server installation. It is recommended that all clients uninstall the software, before the server is uninstalled.

**WARNING:** Uninstalling QMS/CART – Inpatient will uninstall all archive files for standalone installations. Archives should be saved to a different directory. To uninstall QMS/CART – Inpatient:

1. Verify that QMS/CART – Inpatient is closed.
2. Navigate to the drive and directory where QMS/CART – Inpatient is installed.
3. In the _uninstall folder, double click the **QMS-uninstall.exe** file.
4. In the QMS Uninstall dialog window, click **Uninstall:**
5. The progress of the uninstall process will be displayed (see Figure 75).

6. When the dialog window displays Uninstall Complete, click Close.
Figure 76: QMS Uninstall Window Showing Uninstallation Complete

7. Navigate to the drive and directory where QMS/CART – Inpatient was installed. The directory as well as a few files will remain following the uninstall process.

8. Delete the directory and all of its contents to complete the uninstall process.

9. Reboot your workstation.
 Appendix A – Quick Start Reference Guide

The CART – Inpatient tool is a free software product that is set up on the QMS platform. It allows hospitals to abstract and edit medical record data on hospital inpatient measure sets selected by CMS.

CART – Inpatient Initial Login after Installation

1. Enter cart in the User ID field. (case sensitive)
2. Enter p@ssw0rd in the Password field. (case sensitive)

Figure 77: CART – Inpatient Login Screen

Provider Setup

1. On the Administration menu, click Provider. The Provider Information screen displays.

Figure 78: CART – Inpatient Administration Menu

2. Click New Provider. The New Provider screen displays. (Required fields are in bold type with an asterisk).
3. Enter data in the Provider Detail fields.
4. Click **Save**.

**User Setup**

1. On the **Administration** menu, click **User**. The User Information screen displays.

2. Click **New User**. The New User screen displays. (Required fields are in bold type with an asterisk)

3. Enter data in the User Detail section. In the User Type field, select **System Administrator**.

4. Enter data in the Activation Detail and Provider Detail sections.

5. Click **Save**.

6. Logout of the tool. On the **Security** menu, click **Logout**.
Login with New User ID

1. Enter your new User ID created by the System Administrator in both the User ID and Password fields and click Login.

2. When prompted, enter a new password in the New Password field, and then enter it again in the Confirm New Password field. Click Continue.

3. When prompted, answer a minimum of six security questions. To enable the OK button, press Tab after your last security question has been answered. Click OK.
Preference Setup

1. On the Administration menu, click **Provider**. The Provider Information screen appears.

2. In the Provider Preferences section, select the desired **Time Period**.

   ![Figure 84: Provider Preferences Section of the Provider Information Screen](image1)

3. Select the desired **Measure Set** check boxes. All measures for that measure set will be selected. Refer to the QualityNet website for Hospital Inpatient Quality Reporting Program details.

   ![Figure 85: Measure Set Check Boxes](image2)

4. Click **Save**.

5. Repeat the measure set selection process for each timeframe.
Acronyms

This section describes the acronyms used in this document.

Table 21: Acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Literal Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMI</td>
<td>Acute Myocardial Infarction</td>
</tr>
<tr>
<td>CART</td>
<td>CMS Abstraction and Reporting Tool</td>
</tr>
<tr>
<td>CMS</td>
<td>Centers for Medicare &amp; Medicaid Services</td>
</tr>
<tr>
<td>CSV</td>
<td>Comma Separated Value</td>
</tr>
<tr>
<td>ED</td>
<td>Emergency Department</td>
</tr>
<tr>
<td>HF</td>
<td>Heart Failure</td>
</tr>
<tr>
<td>IMM</td>
<td>Immunization</td>
</tr>
<tr>
<td>IQR</td>
<td>Hospital Inpatient Quality Reporting</td>
</tr>
<tr>
<td>PDF</td>
<td>Portable Document Format</td>
</tr>
<tr>
<td>PN</td>
<td>Pneumonia</td>
</tr>
<tr>
<td>QIO</td>
<td>Quality Improvement Organization</td>
</tr>
<tr>
<td>SCIP</td>
<td>Surgical Care Improvement Project</td>
</tr>
<tr>
<td>STK</td>
<td>Stroke</td>
</tr>
<tr>
<td>VTE</td>
<td>Venous Thromboembolism</td>
</tr>
<tr>
<td>XLC</td>
<td>CMS eXpedited Life Cycle (XLC)</td>
</tr>
</tbody>
</table>
Glossary

Abstraction: A collection of information from a patient's medical record that is relevant to a given measure. CART provides the questions relevant to the measure and the abstracter supplies the information either via direct input or import.

Measure: A provider activity which is being evaluated for the purpose of improving the quality of health care. Measures belong to categories called Measure Sets. For example, a measure within the AMI Measure Set is “AMI-1 Aspirin at Arrival”. Data for a measure is gathered from a set of abstractions.

Measure Set: In CART inpatient, any of the clinical areas defined either in The Specifications Manual for National Hospital Inpatient Quality Measures or by a CART user. Some examples of inpatient measure sets are: Acute Myocardial Infarction (AMI), Heart Failure (HF), and Stroke (STK). Each measure set is divided into individual measures.

Provider: A person or facility providing health care services, e.g., Hospital, nursing home, doctor’s office.

The Joint Commission (TJC) is a nonprofit organization that accredits more than 20,500 health care organizations and programs in the United States. Its goal is to improve the quality of health care. TJC collaborates with CMS to create the Specifications Manual for National Hospital Inpatient Quality Measures, which in turn defines most of the measures collected by CART. Refer also to Measure Set.
Referenced Documents

Not applicable
# Record of Changes

## Table 22: Record of Changes

<table>
<thead>
<tr>
<th>Version Number</th>
<th>Date</th>
<th>Author/Owner</th>
<th>Description of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>01/26/15</td>
<td>CSC/Nancy Goldberg</td>
<td>Initial Version</td>
</tr>
</tbody>
</table>