Contents

1. Preface ............................................................................................................................................ 3
  1.1. Application Overview .............................................................................................................. 3
  1.2. Intended Audience .................................................................................................................. 3
  1.3. Supported Browsers ................................................................................................................ 3
  1.4. Support and Contact ............................................................................................................... 3

2. Getting Started ............................................................................................................................... 4
  2.1. Launching ................................................................................................................................ 4
  2.2. Password Recovery ................................................................................................................. 5
  2.3. Setting up your profile ............................................................................................................ 5
  2.4. Interacting with the software ................................................................................................. 8

3. Patient Features ........................................................................................................................... 12
  3.1. Adding Patients ..................................................................................................................... 12
  3.2. Finding a Patient ................................................................................................................... 14
  3.3. Deleting a Patient .................................................................................................................. 16

4. Cardiac Rehabilitation Information and Features ....................................................................... 17
  4.1. Patient Summary ................................................................................................................... 17
  4.2. Demographics ....................................................................................................................... 18
  4.3. Medical History ..................................................................................................................... 20
  4.4. Program ................................................................................................................................ 23
  4.5. Clinical / Tools ....................................................................................................................... 24
  4.6. Hospital Utilization ................................................................................................................ 32

5. Reporting Features ....................................................................................................................... 37
  5.1. Understanding reports .......................................................................................................... 37
  5.2. Individual reports .................................................................................................................. 37
  5.3. Program Reports ................................................................................................................... 40

6. Extracting Your Data .................................................................................................................... 44
  6.1. Data Extraction Wizard ......................................................................................................... 44
  6.2. Advanced Data Extraction Manager ..................................................................................... 50

7. Security ......................................................................................................................................... 54
  7.1. Application Security ............................................................................................................. 54
  7.2. Privacy ................................................................................................................................... 54
1. Preface

1.1. Application Overview
The AACVPR Outpatient Cardiac Rehab Registry is a web based application which collects data on outcomes of cardiac rehabilitation to help prove performance measures; and to allow facilities to pull reports and compare their outcomes to others across the nation.

1.2. Intended Audience
This document is intended for individuals who have knowledge of Cardiac Rehabilitation processes and information. This document's intent is to help a general user understand the features and information that the registry application will provide.

1.3. Supported Browsers
The AACVPR Outpatient Cardiac Rehab Registry application supports a wide variety of Web browsers. This includes Internet Explorer, Mozilla Firefox, Apple Safari, Chrome, and most other Web browsers on computers running UNIX, Apple Macintosh, or Windows. A list of support versions are indicated below.

- Chrome 3.0.195.27 and later versions
- Internet Explorer 7 and later versions
- Safari 3.2 and later versions
- Firefox 3.0.1 and later versions

1.4. Support and Contact

- For general inquiries please contact aacvpr@aacvpr.org
- For general support please contact support@aacvpr.org
2. Getting Started

2.1. Launching

The AACVPR Outpatient Cardiac Rehab Registry application is a fully online application so you may gain access simply by clicking on or entering the following website URL into one of the support browsers. (Refer to section 1.3 above)

The AACVPR Outpatient Cardiac Rehab Registry application is a secured website thus is not open to the public domain. An account must be provided to you by AACVPR or by your local registry principle user. (Refer to section 1.4 to become a member of the AACVPR registry)

Click on or enter the following URL into your web browser.

https://registry.aacvpr.org/

To gain access to the application simply type your registered email and password into the provided fields then click the “Login” button
2.2. Password Recovery

If you have a registry account, however, and you are unable to login due to a password failure, the application contains a password recover feature located on the main Login page.

Click on the “forgot password” link located on the main login page. Enter the email address that you used in the “My Profile” section of the system.

The registry application will automatically send an email with a new password to the registered email account.

If the issue remains please contact your local registry administrator or the AACVPR support team. (Refer to section 1.4)

2.3. Setting up your profile

Once you have been provided with access to the registry application; it is highly recommended that you verify and/or complete your profile so that features such as “Password Recover” will be available.
To update your profile move your cursor over the “My Profile” option located on the main menu. A drop down of options will appear.

Click on the “Profile Management” item.

Please refer to Section 2.4 interacting with the software for more information.
A small window will appear with your basic user information.

Add or update the form as necessary to provide your most accurate information.

Please note that a number of fields are required. For example the “E-mail” field is required as it is the primary mechanism used in the above mentioned “Password recovery” feature.

When you have completed updating your profile simply click the “Save” button.

To change your password click on the “Change Password” item also located under the “My Profile” menu.

As with the “Profile Management” a small window will appear. Simply key in your old password in addition to your desired new password and validation into the appropriate fields.

Click the Change Password button. A confirmation message will appear indicating that your password has been successfully changed.

Please refer to Section 2.4 interacting with the software for more information.
2.4. Interacting with the software

General interaction with the software is done through the use of the primary menu system located at the top of the page. In many places the menu has sub-items which can be revealed simply by hovering the mouse pointer over the visible menu item. To select an item simply click on desired feature.

The menu system may change based on your identified role or if you are in pages specific to a patient. The fundamental “Home” feature is always present and allows you to return to the page you were initially presented with upon login.
In many areas of the application, the user is provided with a pop-up window to facilitate data entry.

While this pop-up is present all features that are currently available in the background are disabled until the pop-up is closed.

Buttons located at the bottom of the pop-up indicate completion or cancellation of the information on the form. When clicked the form will perform the selected action then close.
Within a specific patient’s file the primary menu changes to allow the user access to the clinical areas housed within the registry.

In addition a secondary navigation process is available to the user. The application provides a “Save and Next” option which will save the current information on the current page then automatically shift the user to the next page in the sequence.

This wizard-like implementation provides a consistent method for user to access the patient’s information while reducing the number of selections a user has to perform.

The “Save and Next” feature is simply an additional navigational tool, the user still has the ability to navigate the patient file by using the “Save” button in combination with the primary navigation menu.
The registry provides a convenient method to log out, which is located on all pages of the system. It is recommended that when users have finished with the application that they use the “Sign Out” feature.
3. Patient Features

The basic features regarding a patient such as Add, Find, Edit and Delete are all accessible from the “Patient list” component of the system. To navigate to the patient list simply use the main navigation menu to select “Patient list”.

3.1. Adding Patients

To add a new patient to the system, click on the “Add Patient” button located from the patient list page.
The user will be presented with the “Patient Add” screen.

The application requires a user to enter a unique “Medical Record Number” in addition to selecting the associated “Cardiac Rehab Program”.

Users are only permitted to add patients to programs they are associated with so in most cases the “Cardiac Rehab Program” will be preselected.

The “medical record number” may be any alpha-numeric combination less than 255 characters. It is important that this identifier be unique to a specific individual and relevant to the program so that others may locate this patient at a later time.

All other data fields on the form are optional; however, it is highly recommended that the patients “Date of Birth” and “Gender” are entered. These values are used in many calculations which will not be available if these data points are left incomplete.

**NOTE:**
The application will provide warnings if a user tries to add a patient who is already in the system and who is currently in a Cardiac Rehab Program Cycle.

Patients are permitted to flow through a Cardiac Rehab process cycle more than once as long as the dates of the process cycle do not intersect.
3.2. Finding a Patient
Locating an existing patient within the system is a quick and easy process. The application provides two methods to find a patient contained in the system.

Method 1 – Find a Patient
This feature allows a user to search their catalogue of patients by Last Name or by specific Medical record number.

The user may simply enter in the appropriate information into the provided textboxes within the “Find a Patient” feature and click the Search button.

The patient list will automatically refresh to display all matches to users inquiry.

To clear the search criteria the user may simply click on the Clear button also located within the “Find a Patient” section.

Note:
Any previously set filter options will be reset. A filter may not be applied to search criteria.
Note:
The patient list headers are selectable to allow the user to reorder the data as per the selected column. A single click will reorder the information ascending; a second click will reorder information descending.
3.3. Deleting a Patient

The registry’s purpose is to gather data over time with respect to a wide variety of patients. The removal of a patient is not recommended for everyday usage or to minimise a CR Programs list of active patients. It is recommended that the remove patient feature be used only when duplicate data is identified or when invalid information is inadvertently added to the system.

To remove a patient from the system simply use one of the “Locate” patient features indicated in the above section 3.2.

Once a patient is located and is appearing in the patient list the user need simply click on the remove icon located in the right most column of the grid.

Warnings will appear requiring the user to validate the removal of a patient. This will prevent accidental or inadvertent removal of patients.

At any time the user may click the cancel button to stop the remove patient process.

Note:
If the patient list does not contain a column entitled “Remove” then your account does not have appropriate permissions to remove patients from the system.

Please contact your local registry administrator to have your account privileges increased or to request that the administrator remove the patient for you.
4. Cardiac Rehabilitation Information and Features

The following features are with respect to a specific patient’s Cardiac Rehabilitation Program record. These features are only available when a specific patient has been selected or added from the patient list section. (Refer to section 3 above regarding adding or locating a patient.)

4.1. Patient Summary

The term record refers to the set of clinical information the registry captures for a specific patient, during a specific cycle through a Cardiac Rehabilitation Program.

The “Patient Summary” page is the initial page a user is shown once a patient has been selected for the patient list.

The purpose of this page is to provide the user with a brief overview of the patient’s record, in addition to being a launching point for patient specific reports.

The File Status section is a visual representation of the current patient’s data as compared to the AACVPR recommended minimum data set. The file status is not a requirement however is the ideal baseline data set a patient should have for accurate comparisons amongst other programs in your state and across the country.
4.2. Demographics

The “Demographics” page contains the same information as was present in the “Add Patient” section.

This section allows users to update information that was previous unavailable at the time of addition to the registry.

To assist in the data entry process, the registry application provides feedback to the user at the top of the page if information entered is invalid or required. (Refer to the example image adjacent.)
Also located on the Demographics page is the “Insurers Utility”. This section allows a user to enter each of the patient’s associated insurers.

**Add Insurers**
To add new insurers simply click on the “Add Insurers” button from the demographics page.

The “Insurers Add Utility” will appear allowing the user to select each insurer in turn. Once an insurer is selected the user may click on the “Save and Close” button to return to the demographics page. The user may, otherwise, select the “Save” button which will add the insurer, then clear the form to allow the user to add additional insurers without the need to close the utility.

Once the “Insurer Add Utility” is closed the demographics screen will update accordingly.

**Edit Insurers**
To edit Insurers simply click on the “Edit” button located to the right of the specific insurer listed. The “Insurers Edit Utility” will appear allowing the user to modify the insurer information. To save the revised information simply click on the “Update” button provided.

**Remove Insurers**
To remove insurers click on the “Remove” button located to the right of the specific insurer listed. A warning will appear requiring the user to confirm the removal of the insurer. Once confirmed the item will be removed from the list.
4.3. Medical History

The “Medical History” page contains information regarding the patient’s Admission Event and general Comorbidities.

The admission event section is an important segment within the AACVPR Outpatient Cardiac Rehab Registry. This section allows users to define the primary event and date which triggered the referral to Cardiac Rehabilitation.

The primary event date is a significant indicator in the patient’s overall timeline of care.
Add Admission Events
To add a new Admission Event simply click on the “Add Admission Events” button from the “Past Medical History” page.

The “Admission Events Add Utility” will appear allowing the user to complete each Admission Event in turn. Once an Admission Event is completed the user may click on the “Save and Close” button to return to the past medical history page. The user may, otherwise, select the “Save” button which will add the Admission Event then clear the form to allow the user to add subsequent Admission Events without the need to close the utility. Once the “Admission Event add utility” is closed the past medical history screen will update accordingly.

Edit Admission Events
To edit admission events simply click on the “Edit” button located to the right of the specific Admission Event listed. The “Admission Events Edit Utility” will appear allowing the user to modify the Admission Event information. To save the revised information simply click on the “Update” button provided.

Remove Admission Events
To remove Admission Events click on the “Remove” button located to the right of the specific Admission Event listed. A warning will appear requiring the user to confirm the removal of the Admission Event. Once confirmed the item will be removed from the list.
Add / Update Comorbidities, CV History, and/or Risk Factors

To add or update a patient’s comorbidities, CV History simply check or uncheck the provided checkbox associated with the comorbidity item.

To add or update the patient’s Risk Factors simply modify the dropdown associated with the desired item.

When finished use the “Save” or “Save and Next” buttons located at the top of the page to commit the modification.

Note
As you check or uncheck a comorbidity item you’ll notice the standard Charlson Comorbidity Index will automatically recalculate based on your selections.
4.4. Program

The “Program” page contains information regarding the patient’s flow through the Cardiac Rehabilitation process.

Each of the three fundamental stages is indicated on this page.

- Intake
- Discharge
- Follow-up

Note
In many places throughout the registry the dates supplied on the Program form are used for validation of data in other areas.

For example: The system will prevent a referral date that is earlier than the primary admission event date.

When complete use the “Save” or “Save and Next” buttons located at the top of the page to commit the modification.
4.5. Clinical / Tools

Overview
The clinical tools section refers to the medical based set of information that is obtained throughout the patient’s Cardiac Rehabilitation cycle. The information set is partitioned into nine distinct areas:

1. Lipids
2. Glucose
3. Blood Pressure
4. Dietary
5. Medications
6. Tobacco Usage
7. Anthropometric
8. Functional Assessments
9. Psychosocial

Each area provides a mechanism for users to enter information at each of the three primary stages of the Cardiac Rehabilitation program (i.e. Intake, Discharge, and Follow-up). Percent change calculations will automatically occur based on the user entry.

The AACVPR Outpatient Cardiac Rehab Registry application not only calculates the percent change but also provides visual feedback to the user regarding the patient progress in the specific data item. The application automatically determines if the given item results in an improvement or a worsening through the use of visual indicators. A legend of the icon meaning is provided on each page for the user’s reference as well as below.

Icon Legend

- ![Icon](image) Value entered is within defined range
- ![Icon](image) Value entered is outside of defined range, however is still accepted by the system
- ![Icon](image) Value entered is outside of defined limits. The value must be corrected before the system will allow a save.

The % change value indicates an improvement.
(Note: Improvement is based on a change toward the norm rather than a physical increase/decrease in a value over time)

The % change value indicates a worsening or decline.
(Note: Worsening/Decline is based on a change away from the norm rather than a physical increase/decrease in a value over time)
The AACVPR Outpatient Cardiac Rehab Registry application also provides a mechanism for the user to review the percent change value for either

- Intake to Follow-up
- OR
- Discharge to Follow-up

By default the Discharge to Follow-up is pre-selected. The user may modify displayed percent change simply by clicking the down arrow from the column heading and selecting the desired range from the presented menu.
Lipids and Glucose Measurements

The user is provided with a means to enter the patient specific values into the appropriate data field as well as timeframe.

The application will validate the legitimacy of the entered value and calculate the percent change value if applicable.

(Refer to the icon key in section 4.5 for a description of specific icons.)

Note:
Dates for Lipid Panel, Fasting Blood Glucose, and Hemoglobin A1C validate against dates entered within the Program tab.
Blood Pressure and Dietary

The user is provided with a means to enter in the patient specific values into the appropriate data field and timeframe.

The application will validate the legitimacy of the entered value and calculate the percent change value if applicable.

(Refer to the icon key in section 4.5 for a description of specific icons.)
Medications and Tobacco Usage

The user is provided with a means to enter in the patient specific values into the appropriate data field and timeframe.

The application will validate the legitimacy of the entered value and calculate the percent change value if applicable.

(Refer to the icon key in section 4.5 for a description of specific icons.)
Anthropomorphic

The user is provided with a means to enter in the patient specific values into the appropriate data field and timeframe.

The application will validate the legitimacy of the entered value and calculate the percent change value if applicable.

(Refer to the icon key in section 4.5 for a description of specific icons.)
Functional Assessments

The user is provided with a means to enter in the patient specific values into the appropriate data field and timeframe.

The application will validate the legitimacy of the entered value and calculate the percent change value if applicable.

(Refer to the icon key in section 4.5 for a description of specific icons.)
Psychosocial

The user is provided with a means to enter in the patient specific values into the appropriate data field and timeframe.

The application will validate the legitimacy of the entered value and calculate the percent change value if applicable.

(Refer to the icon key in section 4.5 for a description of specific icons.)
4.6. Hospital Utilization

The “Hospital Utilization” page contains supporting information regarding a patient’s events that may have occurred during the Cardiac Rehabilitation Program.

The supporting information is categorised into three sections.

- Unexpected Event(s)
- Adverse Event(s)
- Hospital Readmission(s)
Add Unexpected Events
To add a new Unexpected Event simply click on the “Add Unexpected Events” button from the “Hospital Utilization” page.

The “Unexpected Events Add Utility” will appear allowing the user to complete each Unexpected Event in turn. Once an Unexpected Event is completed the user may click on the “Save and Close” button to return to the Hospital Utilization page. The user may otherwise select the “Save” button which will add the Unexpected Event then clear the form to allow the user to add additional Unexpected Events without the need to close the utility. Once the “Unexpected Event utility” is closed the Hospital Utilization screen will update accordingly.

Edit Unexpected Events
To edit Unexpected Events simply click on the “Edit” button located to the right of the specific Unexpected Event listed. The “Unexpected Events Edit Utility” will appear allowing the user to modify the Unexpected Event information. To save the revised information simply click on the “Update” button provided.

Remove Unexpected Events
To remove Unexpected Events click on the “Remove” button located to the right of the specific Unexpected Event listed. A warning will appear requiring the user to confirm the removal of the Unexpected Event. If confirmed the item will be removed from the list.
Add Adverse Events
To add a new Adverse Event simply click on the “Add Adverse Events” button from the “Hospital Utilization” page.

The “Adverse Events Add Utility” will appear allowing the user to complete each adverse event in turn. Once an Adverse Event form is completed the user may click on the “Save and Close” button to return to the Hospital Utilization page. The user may otherwise select the “Save” button which will add the Adverse Event then clear the form to allow the user to add in additional Adverse Events without the need to close the utility. Once the “Adverse Event utility” is closed the Hospital Utilization screen will update accordingly.

Edit Adverse Events
To edit Adverse Events simply click on the “Edit” button located to the right of the specific Adverse Event listed. The “Adverse Events Edit Utility” will appear allowing the user to modify the Adverse Event information. To save the revised information simply click on the “Update” button provided.

Remove Adverse Events
To remove Adverse Events click on the “Remove” button located to the right of the specific Adverse Event listed. A warning will appear requiring the user to confirm the removal of the Adverse Event. If confirmed the item will be removed from the list.
Add Hospital Readmissions
To add a new Hospital Readmission simply click on the “Add Readmissions Event” button from the “Hospital Utilization” page.

The “Hospital Readmissions Add Utility” will appear allowing the user to complete each Hospital Readmission in turn. Once a Hospital Readmission form is completed the user may click on the “Save and Close” button to return to the Hospital Utilization page.

The user may, otherwise, select the “Save” button which will add the Readmission then clear the form to allow the user to add in additional Readmissions without the need to close the utility.

Once the “Hospital Readmission utility” has closed the Hospital Utilization screen will update accordingly.

Edit Hospital Readmissions
To edit Hospital Readmissions simply click on the “Edit” button located to the right of the specific Hospital Readmission listed. The “Hospital Readmissions Edit Utility” will appear allowing the user to modify the Hospital Readmission information. To save the revised information simply click on the “Update” button provided.

Remove Hospital Readmissions
To remove Hospital Readmissions click on the “Remove” button located to the right of the specific Hospital Readmission listed. A warning will appear requiring the user to confirm the removal of the Hospital Readmission. If confirmed the item will be removed from the list.
Add Emergency Department Visit
To add a new ED Visit simply click on the “Add ED Visit” button from the “Hospital Utilization” page.

The “ED Visit Add Utility” will appear allowing the user to complete each ED Visit in turn. Once an ED Visit form is completed the user may click on the “Save and Close” button to return to the Hospital Utilization page. The user may, otherwise, select the “Save” button which will add the ED Visit then clear the form to allow the user to add in additional Readmissions without the need to close the utility. Once the “ED Visit utility” has closed the Hospital Utilization screen will update accordingly.

Edit Emergency Department Visit
To edit ED Visit simply click on the “Edit” button located to the right of the specific ED Visit listed. The “ED Visit Edit Utility” will appear allowing the user to modify the ED Visit information. To save the revised information simply click on the “Update” button provided.

Remove Emergency Department Visit
To remove ED Visit click on the “Remove” button located to the right of the specific ED Visit listed. A warning will appear requiring the user to confirm the removal of the ED Visit. If confirmed the item will be removed from the list.
5. Reporting Features

5.1. Understanding reports

The AACVPR Outpatient Cardiac Rehab Registry application offers predefined reports for general review and usage. An in depth overview of each predefined reports is outlined in the below sections. (Sections 5.2 and 5.3)

In general the reports are designed with a minimalistic presentation approach. The reports will only display data to the user where information actually exists in the system. For example, if the patient health survey SF-36 is not used in a particular CR program then the reports will never display the SF-36 rows. This approach prevents the reports from displaying data which is irrelevant to the user and allows them to focus on the more important information.

In addition, the reporting also shows the percentage change and associated improvement/decline icons from the clinical tools dataset. Refer to section 4.5 for an overview of the icon meanings. It is again important to note that the icons which describe the percent change are determined based on an improvement toward or away from the baseline. The physical number decreasing or increasing over time in partnership with the predefined AACVPR baseline target range is used to dynamically calculate an improvement/decline.

5.2. Individual reports

The individual report is specific to a patient and cardiac rehabilitation program cycle. This report indicates changes in a specific patient’s information during the course of the cardiac rehabilitation program, in addition to providing a general outcomes overview of the patient’s performance.
To access a specific patient’s individual report open the desired patient’s record. (refer to section 3)

From the “Patient Summary” a user may select one of two reporting buttons. The “View Individual Report” button will create the individual report in a new window for the user to quick review. The user may then use the browser’s built-in printing capability to print the screen. Secondly the user may select the “Download Individual Report” button. This feature will automatically convert the Individual report to a PDF and begin a download of the report.

Please note that some computers/browsers have security restrictions which may prompt to prevent the download from occurring. If the download does not occur please review your screen for security prompts and/or contact your local IT department for assistance.

The Individual report also contains options to transform aspects of the report. The checkboxes provided above the reporting buttons will allow users to hide or show the “within defined target/goal checkmarks” and/or the “percent change columns”.

[Image: Patient Summary - fakePatient (000001) with options for View Individual Report and Download Individual Report]
**Example: Individual report**

### Cardiac Rehabilitation Program 5

**Name/MR#:** FakePatient [0000001]  
**DOB:** 03/01/1969 (44 yrs)  
**Sex:** Female  
**Diagnoses:** PCI (05/29/2013)  
**Influenza Vacc:** Yes  
**Pneumococcal Vacc:** No  
**Risk Factors:** Hypertension, Hyperlipidemia  

<table>
<thead>
<tr>
<th>Assessment Date</th>
<th>Initial</th>
<th>DC</th>
<th>I-DC % Chg</th>
<th>FU</th>
<th>I-FU % Chg</th>
<th>Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>06/23/2013</td>
<td>134</td>
<td>133</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09/21/2013</td>
<td>124</td>
<td>124</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Sessions

- **Prescribed:** 18  
- **Attended:** 18  

#### Assessments

- **Systolic BP:** 134 (133)  
- **Diastolic BP:** 83 (85)  
- **Max METs:** 8.6 (10.7)  
- **Max METs Mode:** Treadmill  
- **Peak METs during CR:** 8.5  
- **Exercise Minutes Per Week:** 0  
- **DASI METs:** 9.8 (8.9)  
- **Waist Circumference (in):** 35.0  
- **Weight (lb):** 170.6 (170.3)  
- **Height (in):** 73.0  
- **BMI:** 22.4 (22.5)  
- **Rate Your Plate-Heart:** 40 (30)  
- **Meditations:** 40 (47)  

#### Lipid Profile

- **Total Cholesterol (mg/dl):** 250 (167)  
- **Triglycerides (mg/dl):** 189 (103)  
- **HDL-Cholesterol (mg/dl):** 39 (42)  
- **LDL-Cholesterol (mg/dl):** 134 (59)  
- **Non-HDL-Cholesterol (mg/dl):** 211 (125)  

#### FBG Date

- **09/21/2013**
5.3. Program Reports

The AACVPR Outpatient Cardiac Rehabilitation Registry application contains three separate program reports for review: the “Program Outcomes Summary”, the “Program Comparison”, and the “Program Performance” report.
Report 1 – Program Outcomes Summary

The program outcomes summary report is a program specific aggregate report consisting of all patients in the program that have a defined discharge date within the user defined time frame.

This report indicates general statistics and overall performance of patients within the specified time frame.

To generate this report simply select the desired program (if applicable) and date range. You may then either click on the “View Report” button which will open a new window containing the report, or the “Generate PDF” button which will then automatically download the report in a PDF format.

Note
To select all data regardless of timeframe simply leave the date selections blank.

Also some computers/browsers have security restrictions which may prompt to prevent the download from occurring. If the download does not occur please review your screen for security prompts and/or contact your local IT department for assistance.
Report 2 – Program Comparison

The program comparison report shows a comparison of the aggregate date for all patients in the specified program to the selected group of programs. The select set of patients for both the program and the group of programs will have a defined discharge date within the user defined time frame.

This report indicates general statistics and overall performance of patients within the specified time frame for each of the two distinct sets of data.

The group of programs always includes the comparing program. Thus as a minimum the report will generate a comparison to itself.

To generate this report select the desired program (if applicable), comparing group and date range. Click the “Generate” button.

**Note**

To select all data regardless of timeframe simply leave the date selections blank.
The Performance Report displays your program’s aggregated values in a number of key secondary prevention areas and benchmarks your program’s performance to your selected comparison group. The data for this report is obtained from patient records of patients who have completed their program (per Registry definitions) during the year and quarter selected.

To generate this report select the desired program (if applicable), comparing group and the desired year/quarter.

Click the “View Report” button to view the report in a new window and the “Generate PDF” report to download a PDF version of the report.
6. Extracting Your Data

6.1. Data Extraction Wizard

The AACVPR Outpatient Cardiac Rehab registry allows you to quickly and easily extract the patient information you have entered into the system.

The data extraction wizard will allow you to filter your set of patients based on simple criteria and then extract the entire set of patient data associated with those filtered patients.

**Step 1**
If applicable choose the program you wish to extract data from using the provided dropdown.

**Step 2**
Use the "Filter Utility" (indicated by arrow 1) to filter patients on a desired criteria. Note that the count of patients that meets your criteria will change based on the criteria you select. (indicated by arrow 2)

To begin simply select an item from the "Section" dropdown provided. Once selected the "Field" options dropdown will appear. Select the desired field you would like to filter on from the dropdown. Depending on the field selected, different filter options may appear. For example: Numerical fields such as LDL will allow you to filter based on patients Intake/Discharge/Follow-up values. Other fields such as Comorbidities will provide you with a checkbox list to choose from. Once you have selected the desired filter criteria simply click the "Add Criteria" button. You may add multiple filters to your filter set.

**Step 3**
Click the "Generate Excel" button below to download your data.
Criteria" button. You may add multiple filters to the criteria set. To remove a criteria simply click on the “remove” icon to the right of the criteria.

Step 3
Click the "Generate Excel" button to begin your extraction download.

The extraction will return all associated data for each patient that meets the criteria specified. Each patient will be separated by rows whereby their associated information is segregated by column. Data that has a one-to-many relationship such as Comorbidities will be returned in a single column with the selected values comma separated.

The data extraction is one of the most important aspects of the AACVPR Outpatient Cardiac Rehab Registry. For your convenience the following example has been created to indicate the ease of extracting data.

EXAMPLE
For this example our desired output is the set of patients where
1. The patient has a history of one or more of the following: STEMI, NSTEMI, CABS, and /or PCI
2. The patient has a LDL of less than 100 (mg/dl) at Discharge

STEP 1
Login into the AACVPR Outpatient Cardiac Rehabilitation Registry and from the top menu select “Data Extraction”
STEP 2
Select a Program from the dropdown provided *(if you are associated with more than one)*
Notice that in this case we have 250 patients indicated in green.

STEP 3
- Select “Admission Events” from the Section dropdown. *(The fields Dropdown will automatically appear)*
- Then choose “Admission Events” from the Field dropdown *(The listing of possible admission events will appear)*
- Click the check boxes for STEMI, NSTEMI, CABS, and PCI
- Click the Add Criteria button
American Association of Cardiovascular and Pulmonary Rehabilitation
Version Number: v 1.1

(Note selecting multiple items from the checkbox list means “has at least one of the following”. To indicate that a patient has both a second criteria will need to be made)

STEP 4

• (The criterion in step 3 is now displayed in the “Your current filters criteria” panel. Also notice the patient count indicated in green has changed)
• Select “Lipids” from the Section dropdown. (The fields Dropdown will automatically appear)
• Then choose “LDL Cholesterol” from the Field dropdown (The criteria filter panel will appear)
• Select Discharge from the first dropdown (We are only interested in filtering discharge values).
• Select “Less than” from the Operator dropdown (Our desired criteria is and LDL less than 100)
• Type the value of 100 into the provided text box (Again our desired upper limit is the value of 100)
• Click the Add Criteria button
STEP 5

- (The criterion in step 4 is now displayed in the “Your current filters criteria” panel. Also notice the patient count indicated in green has changed)
- Click the “Generate Excel” button (Your download will begin containing the patients in the criteria)

Important Note
Each item in the “Your Current Filter Criteria” panel filters the set of patients. Therefore is the same as saying **AND ALSO HAS**
For the above example the criteria is:

a) Admission Events [Any] HAS VALUE(S) [PCI, CABS, STEMI, NSTEMI] AND ALSO HAS

b) LDL Cholesterol (mg/dl) [Discharge] Less Than 100
6.2. Advanced Data Extraction Manager

The AACVPR Outpatient Cardiac Rehab Registry application provides a unique and innovative means for users to extract information from the registry. The data manager section will allow users to make predefined requests to retrieve data or to create custom requests for their needs. Since many complex data routines are server intensive the download manager was created to help manage the requested data without negatively impacting the server and/or running application. As such data requests are buffered until such time as the application determines it is safe to perform the extraction.

The primary screen of the data manager module is merely a viewing portal to previously extracted information in addition to a listing of currently pending data requests that the application is presently buffering.

The extraction history panel provides users a quick reference to the date of the request, a description of the information contained, and who initially created the dataset.

To download a newly completed or previously processed dataset simply click on the checkmark icon next to the desired extraction.
To create a new data extraction for download click on the “New Data Set Request” button from the Data Manager page.

A modal window will appear allowing the user to select from an existing dataset or to create a new dataset.

Predefined datasets are not specific to a timeframe or a specific organization. Essentially the predefined datasets are a template of information to be extracted. A user will be required to indicate the timeframe and the desired CR Program in order to request information from the application.

Through the use of the dataset templates a user may create distinct data extractions over time and/or for distinct CR Programs. This concept will provide a consistent and know structure for ease in analysis.

For example: A user may define a specific dataset template regarding “Adverse Event(s)”. They may then create data requests on a quarterly basis. The output will provide them with ongoing analysis of “Adverse Event(s)” monitoring for the desired CR Program.

**NOTE:**

Users only have access to extract data for CR Programs they currently have privileges to. Access to information regarding CR Programs outside of their defined privileges is strictly prohibited by the AACVPR Outpatient Cardiac Rehab Registry application.
To create a new dataset template simply click on the “New” button from the Data Request Wizard page. (See above instructions)

The data request wizard will provide the user with a tree like view of information that exists within the registry.

The user may select the [+] icon located to the left of each category to view the subset of data variables within that category.

The user then selects the associated checkbox next to the desire data element they wish to include in their dataset template. In addition the user may filter each selected data item by selecting or entering the desired filter criteria into the Operand and filtered value columns.

**Example:** The image to the left indicates that a user wants to extract data regarding patient’s Lipids. The user has revealed the subset of Lipids information by selecting the [+] icon next to the Patient Lipids heading. The user has also selected
- Patient Unique ID
- Units
- LDL-Cholesterol
- Assessment Type
variables to be included in the extraction.

In addition the example indicates that the user has requested a filter to be applied to the extraction where only values at *Assessment Type - Discharge* and where
the LDL-Cholesterol is greater than the value of 100.

Any field where the Export checkbox is selected and no filter criteria are entered into the Filter Value column will result in all data being returned. Essentially no filter.

The user may traverse the entire set of available information and create a fully custom extraction to their current needs.

Once the dataset template variables have been defined the user may select next in the wizard where they will be required to provide a name for their newly created dataset template. Upon “Save” of the template the user will be presented with the Dataset Request Wizard where their newly created dataset template name will appear in the predefined dataset dropdown.

Refer above the above documentation on how to extract specific data from a dataset template.
7. Security

7.1. Application Security
The AACVPR Outpatient Cardiac Rehab Registry application is safeguarded by a number of security protocols. Primarily the application is secured under the standard 128 bit encryption Secure Socket Layer protocol (SSL). Thus all data transmitted to the registry will be in an encrypted state.

Additional, the application is a closed access system, which requires a primary individual to register and administrate users to the system. The AACVPR Outpatient Cardiac Rehab Registry does not allow users to self-register thus limiting access to known and controlled user sets.

The application requires registered users to sign in using a two factor authentication process. The authentication process will limit the users privileges based on the users defined role. Users are generally limited to accessing a single CR Program. The application strictly prohibits users from accessing information which is external to their defined CR Programs.

Lastly the application is fully HIPPA compliant providing administrative, physical and technical safeguards to the system in addition to providing a complete audit trail of information modifications. For more information regarding the application security and safeguards please contact AACVPR. (Refer to section 1.4)

7.2. Privacy

Protecting your privacy
AACVPR values your privacy and the information you provide to us. To that end, we have created a Privacy Policy to address any questions or concerns that you may have, and to assure you that we treat all of your information with the utmost sensitivity and care.

This AACVPR Outpatient Cardiac Rehab Registry application is intended for professionals involved in Cardiovascular and Pulmonary Rehabilitation. This policy states how data information is collected from our intended users and how it is used.

The information we collect
AACVPR Outpatient Cardiac Rehab Registry collects information that you, the user, provide through online forms/applications such as de-identified clinical information, etc. The information you provide is kept confidential and is not available for public use. Some information may be used in an aggregate format; however, no direct one to one comparisons are available.