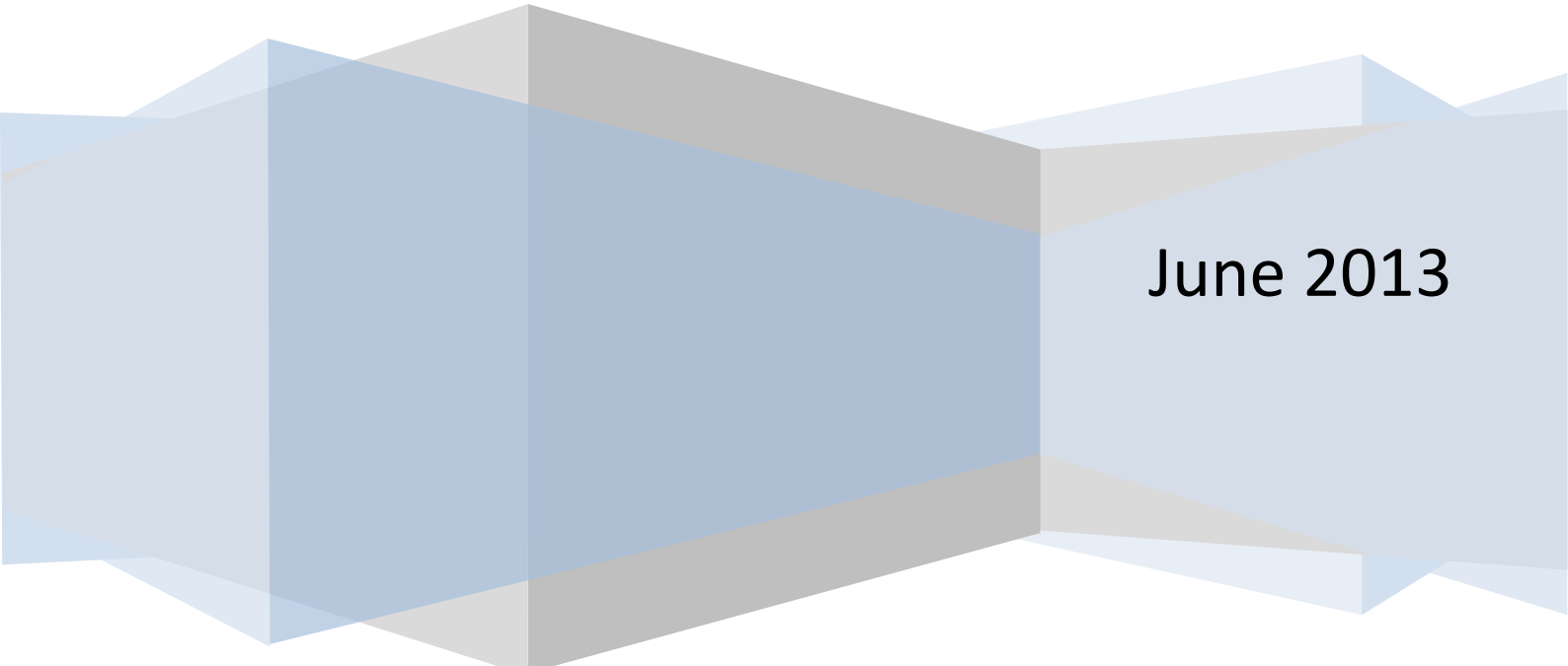


American Association of Cardiovascular and Pulmonary
Rehabilitation

AACVPR Outpatient Pulmonary Rehab Registry

General User Guide v1.0

Cissec Corporation



June 2013

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User Guide v1.0

1. Preface

1.1. Application Overview

The AACVPR Outpatient Pulmonary Rehabilitation Registry is a Web-based application which collects data on outcomes of pulmonary 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 pulmonary rehabilitation processes and information. The 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 Pulmonary 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

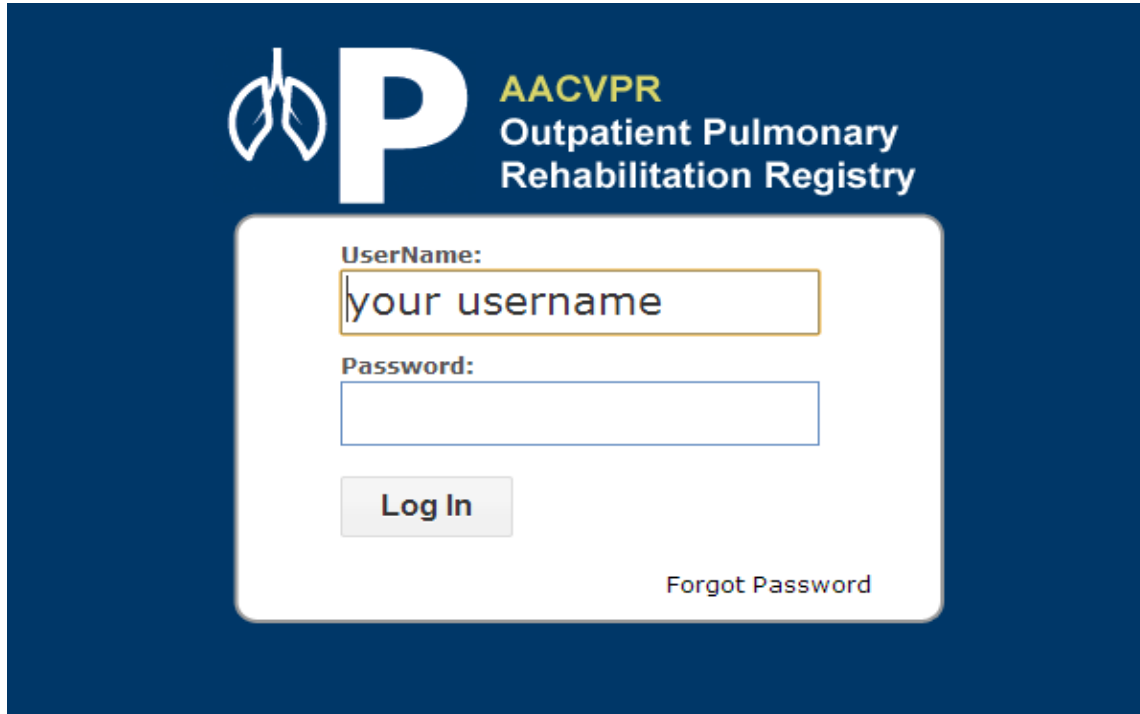
- For registry inquiries and support, please contact registry@aacvpr.org
- For general inquiries regarding AACVPR, please contact aacvpr@aacvpr.org

2. Getting Started

2.1. Launching

The AACVPR Pulmonary 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 supported browsers. (Refer to section 1.3 above.)

The AACVPR 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 administrator. (Refer to section 1.4 to become a member of the AACVPR Pulmonary Rehab Registry.)



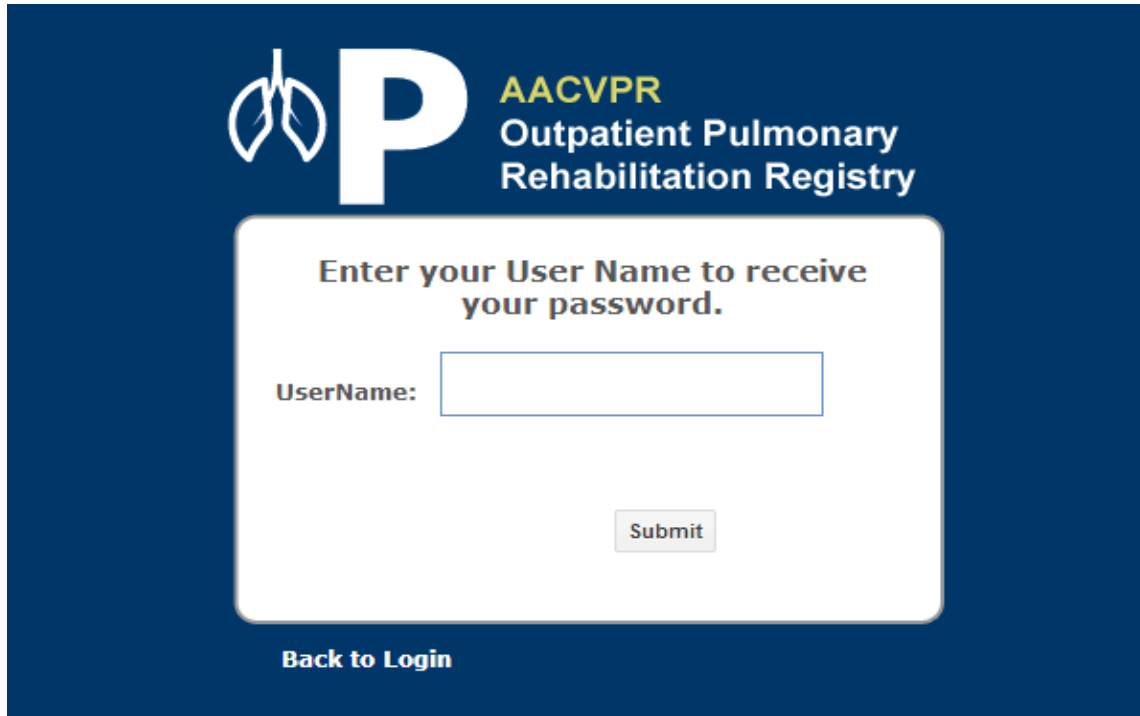
Click on or enter the following URL into your web browser:

<https://registry.pulmonary.aacvpr.org/>

To gain access to the application, simply type your username and password into the provided fields then click on the “Log In” button.

2.2. Password Recovery

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

The screenshot shows a web interface for the AACVPR Outpatient Pulmonary Rehabilitation Registry. At the top left is a logo consisting of a stylized white lung icon next to a large white letter 'P'. To the right of the logo, the text 'AACVPR' is in yellow, and 'Outpatient Pulmonary Rehabilitation Registry' is in white. Below this, a white rectangular box contains the text 'Enter your User Name to receive your password.' in bold. Underneath this text is a label 'UserName:' followed by a text input field. Below the input field is a 'Submit' button. At the bottom of the white box, there is a link that says 'Back to Login'.

Click on the “Forgot Password” link located on the main login page. Enter the username 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 Recovery” will be available.

The screenshot shows the top navigation bar of the AACVPR Outpatient Pulmonary Rehabilitation Registry. The header is dark blue with the AACVPR logo (a stylized 'P' with a lung icon) and the text 'AACVPR Outpatient Pulmonary Rehabilitation Registry'. Below the header is a light blue navigation menu with links: 'Home', 'My Profile', 'Patient List', and 'Reports and Data'. The 'My Profile' link is highlighted, and a dropdown menu is visible with options: 'Profile Management' and 'Change Password'. Below the navigation menu, the text 'WELCOME to the AACVPR Outpatient Pulmonary Rehabilitation Registry!' is partially visible. The main content area is divided into two columns. The left column is titled 'Getting Started' and contains a welcome message and instructions on how to input patient data. The right column is titled 'Pulmonary Registry Resources' and contains links to various resources, including 'About the Registry' and 'Clinical Tools Listing'.

Getting Started

Thank you for participating in the AACVPR Outpatient Pulmonary Rehabilitation Registry. Through the registry, you will enter patient data and run reports to help analyze patient outcomes and program performance

To input patient data:

1. Go to "Patient List" in the menu above. You can "Add a Patient" or select a patient record to update.
2. For each patient, there are five sections:
 - Patient demographics
 - Medical history, including admitting diagnosis and comorbid conditions
 - Program information, such as referral and enrollment dates

Pulmonary Registry Resources

To access the following resource references, [Click Here](#)

About the Registry

- Registry FAQs
- Definitions and Commercial Data Elements
- Data Sheet
- Data Sheet – Follow-up
- Performing Follow-up Assessments

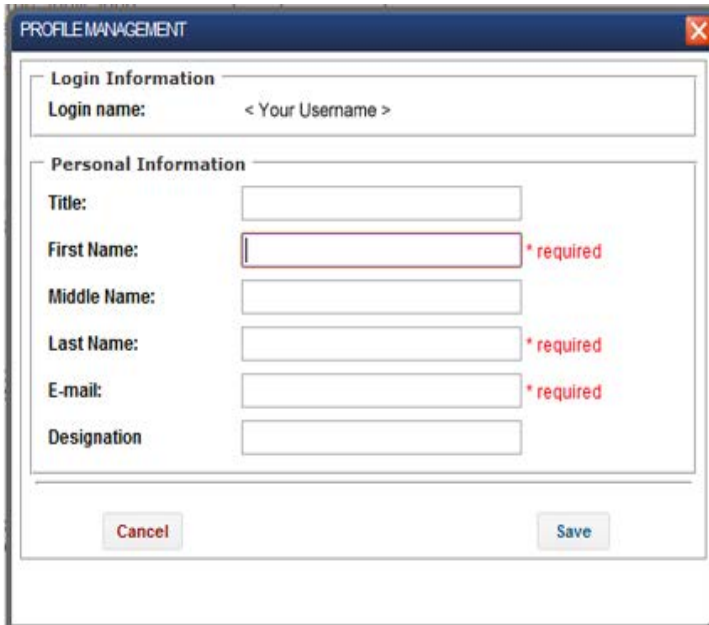
Clinical Tools Listing

- **Smoking**
- **Medication Class**

To update your profile, move your cursor over the "My Profile" option located on the main menu. A drop-down menu of options will appear.

Click on the "Profile Management" item.

Please refer to Section 2.4, Interacting with the Software, for more information.



The PROFILE MANAGEMENT window contains two sections. The 'Login Information' section has a 'Login name:' field with a placeholder '< Your Username >'. The 'Personal Information' section includes fields for 'Title:', 'First Name:', 'Middle Name:', 'Last Name:', 'E-mail:', and 'Designation'. The 'First Name:', 'Last Name:', and 'E-mail:' fields are marked as '* required' in red text. At the bottom are 'Cancel' and 'Save' buttons.

A small window will appear with your basic user information.

Add to 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, click the “Save” button.

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



The CHANGE PASSWORD window contains a 'Change Password' section with three input fields: 'Old Password', 'Password', and 'Re-Password'. At the bottom are 'Cancel' and 'Change Password' buttons.

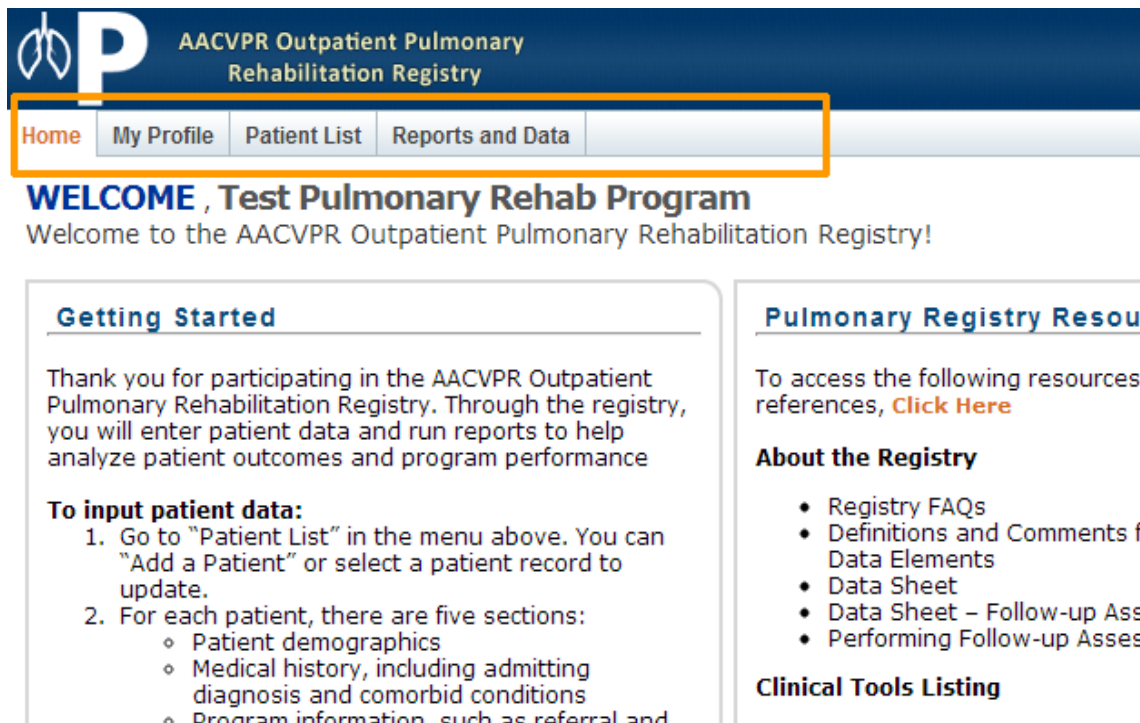
As with the “Profile Management” a small window will appear. Key in your old password in addition to your desired new password and validation into the appropriate fields.

Click on 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 primary menu system located at the top of the page. In many places the menu has sub-items which can be revealed by mousing over the visible menu item. To select an item simply click on the desired feature.



Home My Profile Patient List Reports and Data

WELCOME, Test Pulmonary Rehab Program
Welcome to the AACVPR Outpatient Pulmonary Rehabilitation Registry!

Getting Started

Thank you for participating in the AACVPR Outpatient Pulmonary Rehabilitation Registry. Through the registry, you will enter patient data and run reports to help analyze patient outcomes and program performance

To input patient data:

1. Go to "Patient List" in the menu above. You can "Add a Patient" or select a patient record to update.
2. For each patient, there are five sections:
 - Patient demographics
 - Medical history, including admitting diagnosis and comorbid conditions
 - Program information, such as referral and

Pulmonary Registry Resources

To access the following resources and references, [Click Here](#)

About the Registry

- Registry FAQs
- Definitions and Comments for Data Elements
- Data Sheet
- Data Sheet – Follow-up Assessment
- Performing Follow-up Assessment

Clinical Tools Listing

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.

The screenshot shows a 'PROFILE MANAGEMENT' window with a close button (X) in the top right corner. It contains two sections: 'Login Information' and 'Personal Information'. The 'Login Information' section has a 'Login name:' field with the value 'cissec-support'. The 'Personal Information' section has fields for 'Title:' (Dr.), 'First Name:' (John), 'Middle Name:' (empty), 'Last Name:' (Doe), 'E-mail:' (johndoe@aacvpr.org), and 'Designation' (MD). At the bottom of the window are two buttons: 'Cancel' and 'Save'. Two large orange arrows point from the 'Designation' field area towards the 'Cancel' and 'Save' buttons.

Login Information	
Login name:	cissec-support

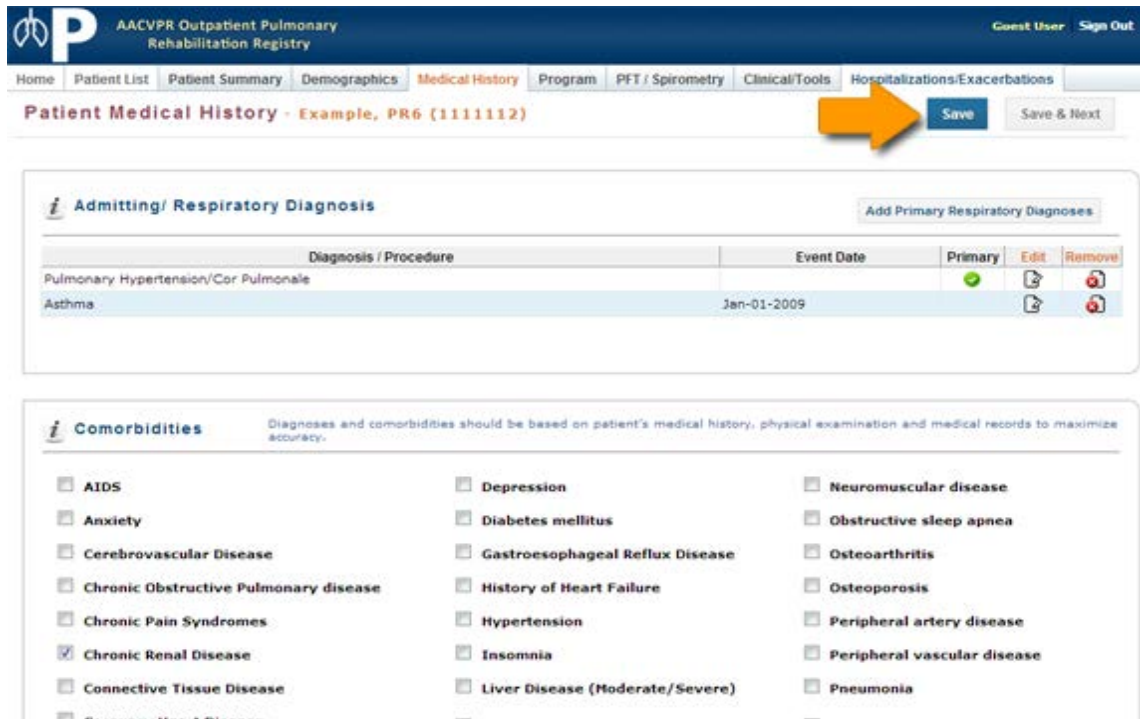
Personal Information	
Title:	Dr.
First Name:	John
Middle Name:	
Last Name:	Doe
E-mail:	johndoe@aacvpr.org
Designation	MD

Cancel Save

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 will be 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 these buttons are clicked, the form will perform the selected action then close.



Patient Medical History - Example, PR6 (1111112)

Admitting/ Respiratory Diagnosis

Diagnosis / Procedure	Event Date	Primary	Edit	Remove
Pulmonary Hypertension/Cor Pulmonale		<input checked="" type="checkbox"/>		
Asthma	Jan-01-2009	<input type="checkbox"/>		

Comorbidities

Diagnoses and comorbidities should be based on patient's medical history, physical examination and medical records to maximize accuracy.

<input type="checkbox"/> AIDS	<input type="checkbox"/> Depression	<input type="checkbox"/> Neuromuscular disease
<input type="checkbox"/> Anxiety	<input type="checkbox"/> Diabetes mellitus	<input type="checkbox"/> Obstructive sleep apnea
<input type="checkbox"/> Cerebrovascular Disease	<input type="checkbox"/> Gastroesophageal Reflux Disease	<input type="checkbox"/> Osteoarthritis
<input type="checkbox"/> Chronic Obstructive Pulmonary disease	<input type="checkbox"/> History of Heart Failure	<input type="checkbox"/> Osteoporosis
<input type="checkbox"/> Chronic Pain Syndromes	<input type="checkbox"/> Hypertension	<input type="checkbox"/> Peripheral artery disease
<input checked="" type="checkbox"/> Chronic Renal Disease	<input type="checkbox"/> Insomnia	<input type="checkbox"/> Peripheral vascular disease
<input type="checkbox"/> Connective Tissue Disease	<input type="checkbox"/> Liver Disease (Moderate/Severe)	<input type="checkbox"/> Pneumonia
<input type="checkbox"/> ...	<input type="checkbox"/> ...	<input type="checkbox"/> ...

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 the 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 through the patient's file by using the "Save" button in combination with the primary navigation menu.

Guest User
Sign Out

story
Program
PFT / Spirometry
Clinical/Tools
Hospitalizations/Exacerbations

112)

Save

Save & Next

Add Primary Respiratory Diagnoses

	Event Date	Primary	Edit	Remove
		✓		
	Jan-01-2009			

ould be based on patient's medical history, physical examination and medical records to maximize

Depression

☐ Neuromuscular disease

The registry offers 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, 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

Patient Listing

Find a Patient
Enter the patient's last name or medical record number to find the patient's record.
Last Name:
Medical Record ID:
Search Clear

Add a Patient
Click on the "Add Patient" button to add a new patient to the system.
Add Patient

Filter Criteria
Program: Test Pulmonary Rehab Program Program Completion Status: Complete File Status: All Display Count: 10
☐ Filter by Enrollment date

Details	Medical Record ID	Last Name	Age	Sex	Enrollment Date	Discharge Date	Program Completion	File Status	Remove
	1111112	Example, PR6	80	Female	Nov-02-2012	Jan-03-2013			
	1111112	Bxxxxxx	48	Male	Sep-03-2012	Nov-04-2012			
	1111113	Example	80	Female		Feb-06-2013			
	3333333	Lxxxxxx	48	Male	Sep-03-2012	Nov-04-2012			
	8686861	blaintest1	69	Female	Jan-09-2013	Feb-25-2013			

Email ASSISTANCE Provide FEEDBACK Live Support OFFLINE

To add a new patient to the system, click on the “Add Patient” button located on the patient list page.

Patient Add

Patient Identifiers

Medical Record ID :

Pulmonary Rehab Program Name :

Patient Information

Last Name :

Date of Birth :

Sex : ☐ Male ☐ Female ☐ Unspecified

Race :

Hispanic/Latino ethnicity : ☐ Yes ☐ No ☐ Unknown

Zip Code :

Highest level of Education :

Social Support :

Insurers

The user will be presented with the “Patient Add” screen.

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

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

The “Medical Record ID” 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 patient’s “Date of Birth” and “Sex” 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 a warning if a user tries to add a patient who is already in the system and who is currently in a pulmonary rehab program cycle.

Patients are permitted to flow through a pulmonary rehab process cycle more than once as long as the dates of the process cycles 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 recorded in the system.

Find a Patient

Enter the patient's last name or medical record number to find the patient's record.

Last Name:

Medical Record ID:

Search Clear

Add a Patient

Click on the "Add Patient" button to add a new patient to the system.

Add Patient

Filter Criteria

Program: Test Pulmonary Rehab Program Program Completion Status: Complete File Status: - All - Display Count: 10

☐ Filter by Enrollment date

Details	Medical Record ID	Last Name	Age	Sex	Enrollment Date	Discharge Date	Program Completion	File Status	Remove
	1111112	Example, PR6	80	Female	Nov-02-2012	Jan-03-2013			
	1111112	Bxxxxxx	48	Male	Sep-03-2012	Nov-04-2012			
	1111113	Example	80	Female		Feb-06-2013			
	3333333	Lxxxxxx	48	Male	Sep-03-2012	Nov-04-2012			
	8686861	blaintest1	69	Female	Jan-09-2013	Feb-25-2013			

Email ASSISTANCE Provide FEEDBACK Live Support OFFLINE

Method 1 – Find a Patient

This feature allows a user to search their catalogue of patients by Last Name or by specific Medical Record ID.

The user may enter the 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 the user’s query.

To clear the search criteria, the user simply clicks 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.

Patient Listing

Find a Patient
Enter the patient's last name or medical record number to find the patient's record.
Last Name:
Medical Record ID:

Add a Patient
Click on the "Add Patient" button to add a new patient to the system.

Filter Criteria
Program: Program Completion Status: File Status: Display Count:
☐ Filter by Enrollment date

Details	Medical Record ID	Last Name	Age	Sex	Enrollment Date	Discharge Date	Program Completion	File Status	Remove
	1111112	Example, PR6	80	Female	Nov-02-2012	Jan-03-2013			
	1111113	Example	80	Female		Feb-05-2013			
	33333333	Looooox	48	Male	Sep-03-2012	Nov-04-2012			
	8685861	blairtest1	69	Female	Jan-09-2013	Feb-25-2013			

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Method 2 – Apply a Filter

This feature allows a user to filter the list of patients to locate a specific patient and/or subset of patients.

The user may apply the following filters to get a subset of the data:

- Pulmonary Program (if permissions allow)
- Program Status (Complete, incomplete, etc.)
- Patient enrollment date range

In addition, the patient list column headers allow the user to reorder the data according to the selected column. A single click will reorder the information in ascending order; a second click will reorder the information in descending order.

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 PR Program's 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.

Patient Listing

Find a Patient
Enter the patient's last name or medical record number to find the patient's record.
Last Name:
Medical Record ID:
Search Clear

Add a Patient
Click on the "Add Patient" button to add a new patient to the system.
Add Patient

Filter Criteria
Program: Test Pulmonary Rehab Program Program Completion Status: Complete File Status: - All - Display Count: 10
☐ Filter by Enrollment date

Details	Medical Record ID	Last Name	Age	Sex	Enrollment Date	Discharge Date	Program Completion	File Status	Remove
	1111112	Example, PR5	80	Female	Nov-02-2012	Jun-03-2013			
	1111113	Example	80	Female		Feb-05-2013			
	33333333	Lxxxxxx	48	Male	Sep-03-2012	Nov-04-2012			
	8686861	blaintest1	69	Female	Jan-09-2013	Feb-25-2013			

[Email ASSISTANCE](#) [Provide FEEDBACK](#) [Live Support ONLINE](#)

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To remove a patient from the system 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 simply need click on the "Remove" icon located in the far right column of the grid.

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

At any time the user may click on the "Cancel" button to stop the remove patient process.

Note:

If the patient list does not contain a "Remove" column 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. Pulmonary Rehabilitation Information and Features

The following features are with respect to a specific patient's Pulmonary 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.)

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

4.1. Patient Summary

The screenshot displays the 'Patient Summary' page for a patient named 'Example, PR6 (1111112)'. The page is divided into several sections:

- Patient Demographics:** Registry ID: 9a1e5c93-97a3-4d9a-b2c5-5a11b5003c9f, Medical Record Number: 1111112, Pulmonary Rehab Program Name: Test Pulmonary Rehab Program, Last Name: Example, PR6, Date of Birth: Jan 05, 1933 [80 yrs], Sex: Female.
- General Information:** Referral Date: 09-Oct-2012, Enrollment Date: 02-Nov-2012, Discharge Date: 03-Jan-2013, Follow-up Date: 10-May-2013.
- File Status - Missing Elements:** A warning icon indicates missing data. The following fields are required to meet the minimum data set requirement:
 - Admitting/ Respiratory Diagnosis: At least one is required (checked).
 - Functional Capacity: Maximum Borg SOB with 6MWT (Intake) (checked), 6Min Walk Distance (Intake) (checked).
 - Psychosocial: At least one mental health measure is required (Intake) (checked).
 - Quality of Life: At least one QOL tool one is required (Intake) (checked).
 - Pulmonary Function / Spirometry: FEV1 (Intake) (checked), FRC (Intake) (checked), FVC (Intake) (checked).
- Individual Report:** A button with a document icon labeled 'Individual Report'.

At the bottom of the page, there are three buttons: 'Email ASSISTANCE', 'Provide FEEDBACK', and 'Live Support OFFLINE'.

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

4.2. Demographics

The screenshot displays the 'Patient Demographics' page for 'Example, PR6 (1111112)'. A yellow banner at the top indicates a required field: 'Medical Record ID is required', with a red arrow pointing to the 'Medical Record ID' input field in the 'Patient Identifiers' section. The 'Patient Identifiers' section also includes a dropdown for 'Pulmonary Rehab Program Name' set to 'Test Pulmonary Rehab Program'. The 'Insurers' section shows 'No items available' and a warning icon. The 'Patient Information' section contains fields for 'Last Name' (Example, PR6), 'Date of Birth' (01/05/1933), 'Sex' (Female selected), 'Race' (American Indian or Alaskan Native), 'Hispanic/Latino ethnicity' (No selected), 'Zip Code' (94016), 'Highest level of Education' (Technical training), and 'Social Support' (Lives with other adult). The footer includes links for 'Email Assistance', 'Provider Feedback', and 'Live Support', and a copyright notice for the American Association of Cardiovascular and Pulmonary Rehabilitation.

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

This section allows users to update information that was 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.)

The screenshot shows the AACVPR Outpatient Pulmonary Rehabilitation Registry interface. The main page is titled 'Patient Demographics - Example, PR6 {1111112}'. A modal window titled 'INSURER UTILITY-EDIT' is open, displaying the following fields: 'Insurer Name' (dropdown menu with 'Medicaid' selected), 'Primary Insurer' (checkbox), and buttons for 'Cancel', 'Save and Close', and 'Save'. An orange arrow points to the 'Add Insurer' button located on the right side of the page. The background page shows various tabs like 'Home', 'Patient List', 'Patient Summary', 'Demographics', 'Medical History', 'Program', 'PFT / Spirometry', 'Clinical Tools', and 'Hospitalizations/Exacerbations'. The footer includes '© Copyright American Association of Cardiovascular and Pulmonary Rehabilitation'.

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. If more than one insurer is listed, the option to mark a primary insurer is available.

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

Patient Medical History - Example, PR6 (1111112)

Save Save & Next

① Patient Medical History saved successfully

Admitting/ Respiratory Diagnosis Add Primary Respiratory Diagnoses

Diagnosis / Procedure	Event Date	Primary	Edit	Remove
Pulmonary Hypertension/Cor Pulmonale		<input checked="" type="checkbox"/>		
Asthma	Jan-01-2009	<input checked="" type="checkbox"/>		

Comorbidities Diagnoses and comorbidities should be based on patient's medical history, physical examination and medical records to maximize accuracy.

<input type="checkbox"/> AIDS	<input type="checkbox"/> Depression	<input type="checkbox"/> Neuromuscular disease
<input type="checkbox"/> Anxiety	<input type="checkbox"/> Diabetes mellitus	<input type="checkbox"/> Obstructive sleep apnea
<input type="checkbox"/> Cerebrovascular Disease	<input type="checkbox"/> Gastroesophageal Reflux Disease	<input type="checkbox"/> Osteoarthritis
<input type="checkbox"/> Chronic Obstructive Pulmonary disease	<input type="checkbox"/> History of Heart Failure	<input type="checkbox"/> Osteoporosis
<input type="checkbox"/> Chronic Pain Syndromes	<input type="checkbox"/> Hypertension	<input type="checkbox"/> Peripheral artery disease
<input checked="" type="checkbox"/> Chronic Renal Disease	<input type="checkbox"/> Insomnia	<input type="checkbox"/> Peripheral vascular disease
<input type="checkbox"/> Connective Tissue Disease	<input type="checkbox"/> Liver Disease (Moderate/Severe)	<input type="checkbox"/> Pneumonia
<input type="checkbox"/> Coronary Heart Disease (excluding previous MI)	<input type="checkbox"/> Malignancy	<input type="checkbox"/> Previous myocardial infarction
<input checked="" type="checkbox"/> Dementia	<input type="checkbox"/> Metastatic Cancer	<input type="checkbox"/> Ulcer Disease

Charlson Comorbidity Index Score : 1

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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 Pulmonary Rehab Registry. This section allows users to define the primary event and date which triggered the referral to pulmonary rehabilitation.

The primary event date is a significant indicator in the patient’s overall timeline of care.

The screenshot displays the AACVPR Outpatient Pulmonary Rehabilitation Registry interface. The main window shows the 'Patient Medical History' for 'Example, PR6 (1111112)'. A modal window titled 'ADD/EDIT ADMITTING/RESPIRATORY/DIAGNOSIS' is open, allowing users to add or edit admission events or respiratory diagnoses. The modal window contains the following fields:

- Respiratory Diagnoses**: A dropdown menu currently set to '- Please Select -'.
- Date of Diagnoses**: A date selection field.
- Primary Diagnoses**: A checkbox field.

At the bottom of the modal window, there are three buttons: 'Cancel', 'Save and Close', and 'Save'. The background interface includes a navigation bar with links like 'Home', 'Patient List', 'Patient Summary', 'Demographics', 'Medical History', 'Program', 'PFT / Spirometry', 'Clinical Tools', and 'Hospitalizations/Exacerbations'. A sidebar on the left lists 'Comorbidities' with checkboxes for various conditions such as AIDS, Anxiety, Cerebrovascular, Chronic Obstructive Pulmonary Disease, Chronic Pain Syndromes, Chronic Renal Disease, Connective Tissue Disease, Coronary Heart Disease, Hypertension, Insomnia, Liver Disease (Moderate/Severe), Peripheral artery disease, Peripheral vascular disease, and Pneumonia.

Add Admitting/ Respiratory Diagnosis

To add a new Admission Event or Respiratory Diagnosis, simply click on the “Add Primary Respiratory Diagnoses” button from the “Patient Medical History” page.

The “Admitting/Respiratory Add Utility” will appear allowing the user to complete each event in turn. Once an Admitting/Respiratory entry is completed the user may click on the “Save and Close” button to return to the “Patient Medical History” page.

The user may otherwise select the “Save” button, which will add the Admitting/Respiratory then clear the form to allow the user to add subsequent Admitting/Respiratory entries without the need to close the utility. Once the “Admitting/Respiratory Add Utility” is closed the “Patient Medical History” screen will update accordingly.

Edit Admitting/Respiratory Diagnosis

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

Remove Admitting/Respiratory Diagnosis

To remove Admitting/Respiratory entries click on the “Remove” button located to the right of the specific Admitting/Respiratory entry 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.

Patient Medical History - Example, PR6 (1111112)

Admitting/ Respiratory Diagnosis

Diagnosis / Procedure	Event Date	Primary	Edit	Remove
Pulmonary Hypertension/Cor Pulmonale		<input checked="" type="checkbox"/>		
Asthma	Jan-01-2009	<input checked="" type="checkbox"/>		

Comorbidities

Diagnoses and comorbidities should be based on patient's medical history, physical examination and medical records to maximize accuracy.

<input type="checkbox"/> AIDS	<input type="checkbox"/> Depression	<input type="checkbox"/> Neuromuscular disease
<input type="checkbox"/> Anxiety	<input type="checkbox"/> Diabetes mellitus	<input type="checkbox"/> Obstructive sleep apnea
<input type="checkbox"/> Cerebrovascular Disease	<input type="checkbox"/> Gastroesophageal Reflux Disease	<input type="checkbox"/> Osteoarthritis
<input type="checkbox"/> Chronic Obstructive Pulmonary disease	<input type="checkbox"/> History of Heart Failure	<input type="checkbox"/> Osteoporosis
<input type="checkbox"/> Chronic Pain Syndromes	<input type="checkbox"/> Hypertension	<input type="checkbox"/> Peripheral artery disease
<input checked="" type="checkbox"/> Chronic Renal Disease	<input type="checkbox"/> Insomnia	<input type="checkbox"/> Peripheral vascular disease
<input type="checkbox"/> Connective Tissue Disease	<input type="checkbox"/> Liver Disease (Moderate/Severe)	<input type="checkbox"/> Pneumonia
<input type="checkbox"/> Coronary Heart Disease (excluding previous MI)	<input type="checkbox"/> Malignancy	<input type="checkbox"/> Previous myocardial infarction
<input checked="" type="checkbox"/> Dementia	<input type="checkbox"/> Metastatic Cancer	<input type="checkbox"/> Ulcer Disease

Charlson Comorbidity Index Score : 1

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Add / Update Comorbidities

To add and/or update a patient's comorbidities simply check or uncheck the provided checkbox associated with the comorbidity 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 will notice the standard **Charlson Comorbidity Index** will automatically recalculate based on your selections.

4.4. Program

P AACVPR Outpatient Pulmonary Rehabilitation Registry [Cissec Support](#) [Sign Out](#)

[Home](#) [Patient List](#) [Patient Summary](#) [Demographics](#) [Medical History](#) **Program** [PFT / Spirometry](#) [Clinical Tools](#) [Hospitalizations/Exacerbations](#)

Patient Program Information - Example, PR6 (1111112) [Save](#) [Save & Next](#)

i Intake Information

Referral Date : 10/09/2012

Enrollment Date : 11/02/2012

Age at Enrollment : 79

i Discharge Information

Program Complete : Yes

Reason For NonComplete : Please Select

Discharge Date : 01/03/2013 [program duration : 63 day(s)]

of Sessions Complete : 20

i Follow-up Information

Follow-up Date : 05/10/2013

Follow-up Method : Clinic Visit

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The “Program” page contains information regarding the patient’s flow through the pulmonary 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” button located at the top of the page to complete the modification.

4.5. PFT / Spirometry & Clinical Tools

Overview

The “Clinical Tools” section refers to the medical-based set of information that is obtained throughout the patient’s pulmonary rehabilitation cycle. The information set is partitioned into eight distinct areas:

1. Pulmonary Function/ Spirometry
2. Smoking
3. Medications
4. Functional Capacity
5. Quality Of Life
6. Oxygen Usage
7. Anthropometric
8. Psychosocial

Each area provides a mechanism for users to enter information at each of the three primary stages of the pulmonary rehabilitation program: Intake, Discharge, and Follow-up. Percent change calculations will automatically occur based on the user’s entries.

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

Icon Legend



Value entered is within defined range.



Value entered is outside of defined range, however is still accepted by the system.



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.)

tilization	
Follow-Up	
110	✓
89	✓

Save Save & Next

% Change DC-FU

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

11%

The AACVPR Pulmonary 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 the displayed percent change by clicking the down arrow from the column heading and selecting the desired range from the presented menu.

P AACVPR Outpatient Pulmonary Rehabilitation Registry [Contact Support](#) [Sign Out](#)

[Home](#) [Patient List](#) [Patient Summary](#) [Demographics](#) [Medical History](#) [Program](#) **PFT / Spirometry** [Clinical Tools](#) [Hospitalizations](#) [Exacerbations](#)

Clinical/Tools - Example, PR6 (1111112) [Save](#) [Save & Next](#)

Pulmonary Function / Spirometry

	Intake	Discharge	% Change	Follow-Up	% Change
FVC (Click to expand/contract section)					
FVC Actual :	2.55 ✓	2.56 ✓	↑ 4%		
% Predicted FVC :	60 ✓	65 ✓	↑ 8%		
Pre/Post Bronchodilator	Pre	Pre		- Please Select -	
FEV1 (Click to expand/contract section)					
FEV1 Actual :					
% Predicted FEV1 :					
Pre/Post Bronchodilator	- Please Select -	- Please Select -		- Please Select -	
FEV1/FVC ratio :					
FRC (Click to expand/contract section)					
FRC Actual :					
% Predicted FRC :					
IC (Click to expand/contract section)					
IC Actual :	3.00 ✓	3.00 ✓	↑ 200%	3.00 ✓	↑ 67%
% Predicted IC :	25 ✓	24 ✓	↓ 4%	29 ✓	↑ 21%
DLCO (Click to expand/contract section)					
Uncorrected DLCO :	10.00 ✓	10.00 ✓	0%	10.00 ✓	0%
% predicted uncorrected DLCO :	10 ⚠	10 ⚠	0%	10 ⚠	0%
Airway Obstruction (Click to expand/contract section)					
Obstruction :	- Please Select -				
Restriction :	- Please Select -				

✓ Inside Expected Range ⚠ Outside Expected Range / Infrequent Score ✗ Invalid Range ↑ Improvement ↓ Worsened

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Pulmonary Function / Spirometry

The user is provided with a means to enter the patient-specific values into the appropriate data fields 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.)

Note:

Airway Obstruction/Restriction is not associated with Intake/Discharge/Follow-up as this data would be applicable throughout the duration of the Pulmonary Rehab Program.

Smoking

Intake	Discharge	Follow-up
Tobacco Status : <input type="text" value="Former smoker"/>	Tobacco Status : <input type="text" value="- Please Select -"/>	Tobacco Status : <input type="text" value="- Please Select -"/>
Average Packs Per Day : <input type="text" value="1"/>		
Years Using Tobacco : <input type="text" value="50"/>		
Pack Years : <input type="text" value="50"/>		
Quit Year : <input type="text" value="2008"/>		

Medication

Intake	Discharge	Follow-up
Long-Acting Beta Agonist		
Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>
Taken : <input type="text" value="No"/>	Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>
Short-Acting Beta Agonist		
Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>
Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>
Long-Acting Anticholinergics		
Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>
Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>
Short-Acting Anticholinergics		
Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>
Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>
Inhaled corticosteroids		
Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>
Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>
Oral corticosteroids		
Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>	Prescribed : <input type="text" value="Yes"/>
Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>	Taken : <input type="text" value="- Please Select -"/>

Smoking and Medication

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.)

AACVPR Outpatient Pulmonary Rehabilitation Registry [Cisec Support](#) [Sign Out](#)

Home Patient List Patient Summary Demographics Medical History Program PFT / Spirometry **Clinical Tools** Hospitalizations/Exacerbations

Clinical Tools - Example, PR6 (1111112) [Save](#) [Save & Next](#)

Functional Capacity Units: ☐ US (ft) ☒ Metric (m)

Functional Capacity	Intake	Discharge	% Change	Follow-Up	% Change
6Min Walk Distance (m):	457.20	494.39	8%	507.80	11%
6Min Walk Distance Type:	Hallway	Hallway		Hallway	
6Min Walk Distance METs:	3.2	3.4 6%		3.4 6%	
Maximum Borg SOB with 6MWT:					
Maximum Borg fatigue with 6MWT:					
IPAQ METs minutes per week:					
Symptoms (Click to expand/contract section)					
MMRC:					
SOBQ:					

Inside Expected Range
 Outside Expected Range / Infrequent Score
 Invalid Range
 Improvement
 Worsened

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Functional Capacity

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.)

AACVPR Outpatient Pulmonary Rehabilitation Registry [Closest Support](#) [Sign Out](#)

[Home](#) [Patient List](#) [Patient Summary](#) [Demographics](#) [Medical History](#) [Program](#) [PFT / Spirometry](#) **Clinical Tools** [Hospitalizations/Exacerbations](#)

Clinical Tools - Example, PR6 (1111112) [Save](#) [Save & Next](#)

Quality of Life

	Intake	Discharge	% Change	Follow-Up	% Change
CRQ (Click to expand/contract section)					
Fatigue :	4	5	25%	5	0%
Emotional Function :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Dyspnea :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Mastery :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Global score :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
SGRQ (Click to expand/contract section)					
Symptoms :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Activity :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Impact :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Global :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
SF36 (Click to expand/contract section)					
Physical Component :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Mental Component :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
QLI Global :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Dartmouth COOP :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
CAT :	<input type="text"/>	<input type="text"/>		<input type="text"/>	

Inside Expected Range
 Outside Expected Range / Infrequent Score
 Invalid Range
 Improvement
 Worsened

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Quality of Life

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.)



AACVPR Outpatient Pulmonary
Rehabilitation Registry

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Clinical/Tools - Example, PR6 (1111112)
[Save](#)
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i
Psychosocial

	Intake	Discharge	% Change	Follow-Up	% Change
PHQ9 :	8	5	37%	2	60%
CESD :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Geriatric Depression Scale-15 :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Geriatric Depression Scale-30 :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
<div> HADS (Click to expand/contract section) </div>					
HADS-Depression :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
HADS-Anxiety :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
<div> PRFS (Click to expand/contract section) </div>					
PRFS-Total Distress :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
PRFS-Depression :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
PRFS-Anxiety :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
PRFS-Hostility :	<input type="text"/>	<input type="text"/>		<input type="text"/>	
PRFS-Social Isolation :	<input type="text"/>	<input type="text"/>		<input type="text"/>	

Inside Expected Range
 Outside Expected Range / Infrequent Score
 Invalid Range
 Improvement
 Worsened

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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.)

P AACVPR Outpatient Pulmonary Rehabilitation Registry Clinical Support | Sign Out

Home Patient List Patient Summary Demographics Medical History Program PFT / Spirometry **Clinical Tools** Hospitalizations/Exacerbations

Clinical Tools - Example, PR6 (1111112) Save Save & Next

Oxygen Usage

	Intake	Discharge	% Change	Follow-Up	% Change
Nasal Cannula (Click to expand/contract section)					
Rest (l/min) :	2.00	2.00	0%	2.00	0%
ADLs (l/min) :	2.00	3.00	50%	3.00	0%
Exercise (l/min) :	2.00	3.00	50%	3.00	0%
Sleep (l/min) :	2.00	2.00	0%	3.00	50%
Mask (Click to expand/contract section)					
O2 evaluation used patient's ambulatory O2 system :	intermittent / pulse / t	intermittent / pulse / t		intermittent / pulse / t	
Type of O2 system patient uses :	<input checked="" type="checkbox"/> Gas E cyl <input type="checkbox"/> Gas M2 <input type="checkbox"/> Gas M4 <input type="checkbox"/> Gas M6 <input type="checkbox"/> Liquid <input type="checkbox"/> Portable oxygen concentrator (POC) <input checked="" type="checkbox"/> Stationary concentrator	<input type="checkbox"/> Gas E cyl <input type="checkbox"/> Gas M2 <input type="checkbox"/> Gas M4 <input type="checkbox"/> Gas M6 <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Portable oxygen concentrator (POC) <input checked="" type="checkbox"/> Stationary concentrator		<input type="checkbox"/> Gas E cyl <input type="checkbox"/> Gas M2 <input type="checkbox"/> Gas M4 <input type="checkbox"/> Gas M6 <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Portable oxygen concentrator (POC) <input checked="" type="checkbox"/> Stationary concentrator	

Inside Expected Range
 Outside Expected Range / Infrequent Score
 Invalid Range
 Improvement
 Worsened
 Patient dependent Improvement/Worsened

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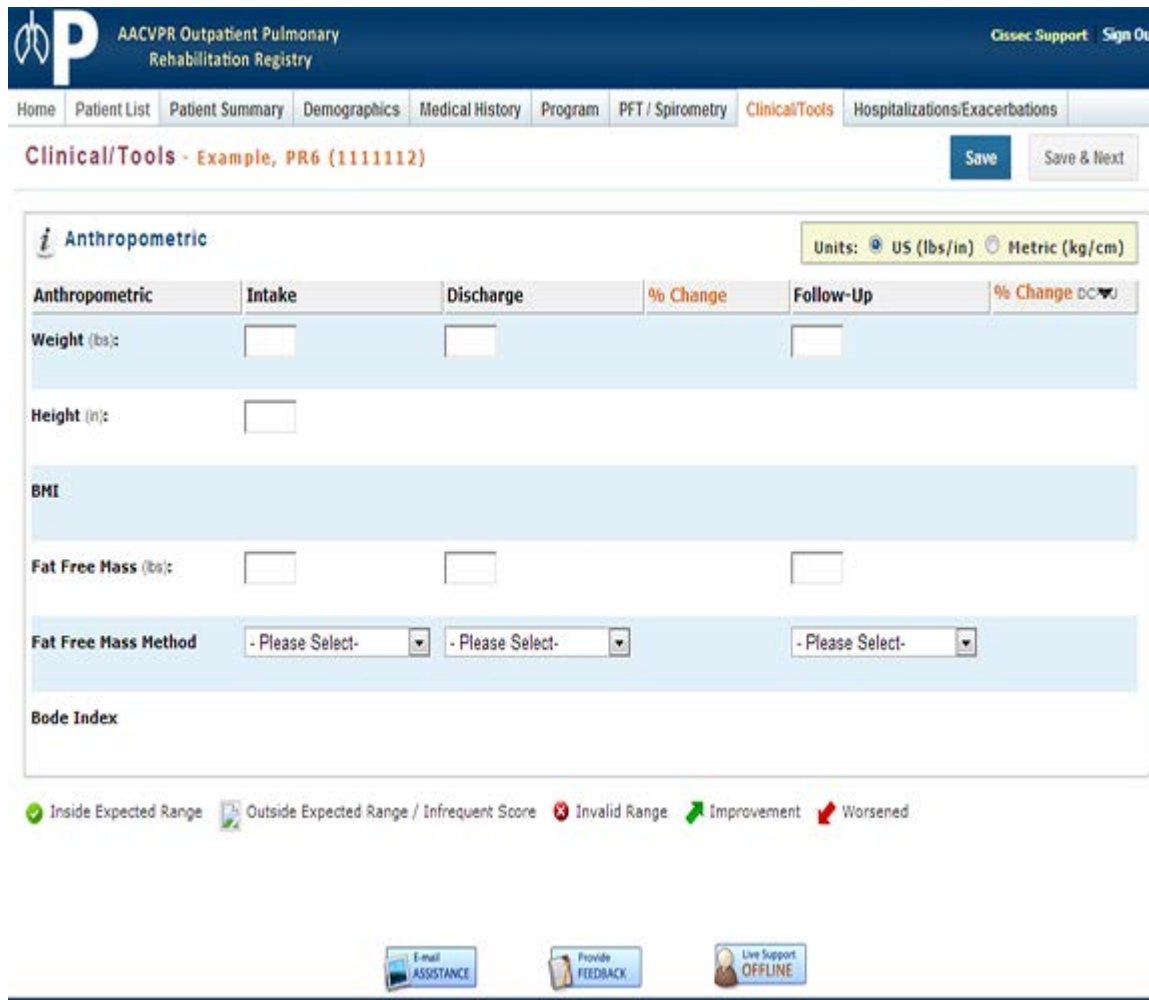
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Oxygen Usage

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.)



AACVPR Outpatient Pulmonary Rehabilitation Registry Cissec Support Sign Out

Home Patient List Patient Summary Demographics Medical History Program PFT / Spirometry **Clinical/Tools** Hospitalizations/Exacerbations

Clinical/Tools - Example, PR6 (1111112) Save Save & Next

Anthropometric Units: ☒ US (lbs/in) ☐ Metric (kg/cm)

Anthropometric	Intake	Discharge	% Change	Follow-Up	% Change DCU
Weight (lbs):	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Height (in):	<input type="text"/>				
BMI					
Fat Free Mass (lbs):	<input type="text"/>	<input type="text"/>		<input type="text"/>	
Fat Free Mass Method	- Please Select -	- Please Select -		- Please Select -	
Bode Index					

✓ Inside Expected Range
⚠ Outside Expected Range / Infrequent Score
✗ Invalid Range
↑ Improvement
↓ Worsened

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Anthropometric

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. Hospitalizations/Exacerbations

AACVPR Outpatient Pulmonary Rehabilitation Registry [Cissec Support](#) [Sign Out](#)

[Home](#) [Patient List](#) [Patient Summary](#) [Demographics](#) [Medical History](#) [Program](#) [PFT / Spirometry](#) [Clinical Tools](#) **Hospitalizations/Exacerbations**

Hospitalizations / Exacerbations - Example, PR6 (1111112) [Save & Return to Summary](#)

Untoward Event(s) / mortality [Add Untoward Event](#)

No items available.

There are currently no items available.

DEFINITION
Untoward events are events that require immediate cessation of exercise, assessment by PR staff and intervention, e.g. immediate contact of physician, transport to emergency department, rapid response call, code blue, and/or other acute intervention. It is assumed that the physician will be contacted regarding the patient's findings and disposition.

Exacerbation [Add Exacerbation Event](#)

Treatment Start Date	Edit	Remove
May-22-2013		

DEFINITION
Exacerbations are defined as an increase in or the new onset of more than one respiratory symptom (cough, sputum, sputum purulence, wheezing, or dyspnea) lasting 3 days or more and requiring treatment with an antibiotic or a systemic corticosteroid.

For more information please [CLICK HERE](#)

Hospitalization [Add Hospitalization Event](#)

Hospitalization Reason	Date	Number of days	Edit	Remove
Asthma	May-22-2013			
Acute coronary syndrome	May-22-2013			

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The “Hospitalizations / Exacerbations” page contains supporting information regarding a patient’s events that may have occurred during the Pulmonary Rehabilitation Program.

The supporting information is categorised into three sections.

- Untoward Event(s) / mortality
- Exacerbation
- Hospitalization

The screenshot displays the AACVPR Outpatient Pulmonary Rehabilitation Registry interface. The top navigation bar includes links for Home, Patient List, Patient Summary, Demographics, Medical History, Program, PFT / Spirometry, Clinical Tools, and Hospitalizations/Exacerbations. The main content area is titled 'Hospitalizations / Exacerbations - Example, PR6 (1111112)' and features a 'Save & Return to Summary' button. Below this, there are sections for 'Untoward Event(s) / mortality' and 'Exacerbation'. An orange arrow points to the 'Add Untoward Event' button. A modal window titled 'UNTOWARD EVENT(S) UTILITY-ADD' is open, showing a form with the following fields: 'Untoward Event(s)' with a dropdown menu set to 'Cardiac arrest', and 'Date of Untoward Event' with a date picker set to '06/05/2013'. The modal window also includes a 'Help' icon, a 'Cancel' button, and 'Save and Close' and 'Save' buttons. The background interface shows a list of hospitalizations and exacerbations, with a 'No items available' message and a 'DEFINITION' section for Untoward events.

Add Untoward Events

To add a new Untoward Event simply click on the “Add Untoward Event” button on the “Hospitalizations / Exacerbations” page.

The “Untoward Events Add Utility” will appear allowing the user to complete each Untoward Event in turn. Once an Untoward Event is completed the user may click on the “Save and Close” button to return to the “Hospitalizations / Exacerbations” page.

The user may otherwise select the “Save” button which will add the Untoward Event then clear the form to allow the user to add additional Untoward Events without the need to close the utility.

Once the “Untoward Events Add Utility” is closed the “Hospitalizations / Exacerbations” screen will update accordingly.

Edit Untoward Events

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

Remove Untoward Events

To remove Untoward Events click on the “Remove” button located to the right of the specific Untoward Event listed. A warning will appear requiring the user to confirm the removal of the Untoward Event. If confirmed the item will be removed from the list.

The screenshot displays the AACVPR Outpatient Pulmonary Rehabilitation Registry interface. The top navigation bar includes links for Home, Patient List, Patient Summary, Demographics, Medical History, Program, PFT / Spirometry, Clinical Tools, and Hospitalizations/Exacerbations. The main content area is titled 'Hospitalizations / Exacerbations - Example, PR6 (1111112)'. An orange arrow points to the 'Add Exacerbation Event' button. A modal window titled 'EXACERBATION EVENT(S) UTILITY-ADD' is open, showing a 'Treatment Start Date' of 06/05/2013 and a 'NOTICE' box. The background page includes sections for 'Untoward Event(s) / mortality' and 'Exacerbation'.

Add Exacerbation

To add a new Exacerbation Event simply click on the “Add Exacerbation Event” button on the “Hospitalizations / Exacerbations” page.

The “Exacerbations Events Add Utility” will appear allowing the user to complete each Exacerbation Event’s information in turn. Once an Exacerbation Event is completed the user may click on the “Save and Close” button to return to the “Hospitalizations / Exacerbations” page.

The user may otherwise select the “Save” button which will add the Exacerbations Event then clear the form to allow the user to add additional Exacerbation Events without the need to close the utility.

Once the “Exacerbation Event Add Utility” is closed the “Hospitalizations / Exacerbations” screen will update accordingly.

Edit Exacerbation Events

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

Remove Exacerbation Events

To remove Exacerbation Events click on the “Remove” button located to the right of the specific Exacerbation Event listed. A warning will appear requiring the user to confirm the removal of the Exacerbation Event. If confirmed the item will be removed from the list.

The screenshot shows the AACVPR Outpatient Pulmonary Rehabilitation Registry interface. A modal window titled "HOSPITALIZATION UTILITY-ADD" is open, allowing a user to add a new hospitalization event. The form includes a dropdown for "Reason for Hospitalization", a date field for "Date of Hospitalization" set to 06/05/2013, and a text field for "Hospital Days". At the bottom of the modal are "Cancel", "Save and Close", and "Save" buttons. In the background, the main page shows a list of hospitalizations with columns for "Hospitalization Reason", "Date", "Number of days", "Edit", and "Remove". An orange arrow points to the "Add Hospitalization Event" button located above the list.

Hospitalization Reason	Date	Number of days	Edit	Remove
Asthma	May-22-2013			
Acute coronary syndrome	May-22-2013			

Add Hospitalization

To add a new Hospitalization Event simply click on the “Add Hospitalization Event” button on the “Hospitalizations / Exacerbations” page.

The “Hospitalization Add Utility” will appear allowing the user to complete each Hospitalization Event in turn. Once a Hospitalization Event is completed the user may click on the “Save and Close” button to return to the “Hospitalizations / Exacerbations” page.

The user may otherwise select the “Save” button which will add the Hospitalization Event then clear the form to allow the user to add additional Hospitalization Events without the need to close the utility.

Once the “Hospitalization Add Utility” has closed the “Hospitalizations / Exacerbations” screen will update accordingly.

Edit Hospitalization

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

Remove Hospitalization

To remove Hospitalizations click on the “Remove” button located to the right of the specific Hospitalization listed. A warning will appear requiring the user to confirm the removal of the Hospitalization Event. If confirmed the item will be removed from the list.

5. Reporting Features

5.1. Understanding Reports

The AACVPR Pulmonary Rehab Registry application offers predefined reports for general review and usage. An in-depth overview of each predefined report 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 PR 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 the user to focus on the more important information.

In addition, the reporting shows the percent 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 pulmonary rehabilitation program cycle. This report indicates changes in a specific patient's information during the course of the pulmonary rehabilitation program, in addition to providing a general outcomes overview of the patient performance.

AACVPR Outpatient Pulmonary Rehabilitation Registry [Cissec Support](#) [Sign Out](#)

Home [Patient List](#) **[Patient Summary](#)** [Demographics](#) [Medical History](#) [Program](#) [PFT / Spirometry](#) [Clinical/Tools](#) [Hospitalizations/Exacerbations](#)

Patient Summary - Example, PR6 (1111112)

Patient Demographics

Registry ID : 9e8e8c93-97a3-4d9d-b2c5-5a11b5803c9f

Medical Record Number : 1111112

Pulmonary Rehab Program Name : Test Pulmonary Rehab Program

Last Name : Example, PR6

Date of Birth : Jan 05, 1933 (80 yrs)

Sex : Female

General Information

Referral Date : 09-Oct-2012

Enrollment Date : 02-Nov-2012

Discharge Date : 03-Jun-2013

Follow-up Date : 03-Jun-2013

File Status - Missing Elements

The following fields are required in order to meet the minimum data set requirement.

- **Admitting/ Respiratory Diagnosis**
 - ☒ At least one is required
- **Functional Capacity**
 - ☒ Maximum Borg SOB with 6MWT (Intake)
 - ☒ 6Min Walk Distance (Intake)
- **Psychosocial**
 - ☒ At least one mental health measure is required (Intake)
- **Quality of Life**
 - ☒ At least one QOL tool one is required (Intake)
- **Pulmonary Function / Spirometry**
 - ☒ FEV1 (Intake)
 - ☒ FRC (Intake)
 - ☒ FVC (Intake)

Individual Report

[E-mail ASSISTANCE](#) [Provide FEEDBACK](#) [Live Support OFFLINE](#)

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To access a specific patient's individual report, open the desired patient's record. (Refer to section 3.)



From the "Patient Summary" page click on the button "Individual Report." A new window will appear with the patient's individual report.

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Example : Individual report

Test Pulmonary Rehab Program									
Individual Report									
Name/Registry ID :		Example, PRS [1111112]		DOB :		01/05/1933 [80 yrs]		Sex :	Female
Diagnoses :		Pulmonary Hypertension/Cor Pulmonale; Asthma [01/01/2009]							
Insurance :									
CATEGORY	Initial	DC	I-DC % Chg	FU	I-FU % Chg	DC-FU % Chg	Goal	Performance	
Enrollment Date	11/02/2012	06/03/2013		06/03/2013					
Sessions		20							
Medications									
Long-Acting Beta Agonist	Yes	Yes		Yes					
Short-Acting Beta Agonist	Yes	Yes		Yes					
Long-Acting Anticholinergics	Yes	Yes		Yes					
Short-Acting Anticholinergics	Yes	Yes		Yes					
Inhaled corticosteroids	Yes	Yes		Yes					
Oral corticosteroids	Yes	Yes		Yes					
Smoking	Former smoker								
Quit year	2008								
Packs Year(s)	50								
FVC Actual	2.55	2.65	↑ 4						
% Predicted FVC	60	55	↓ 8						
IC Actual (lbs)	3	9	↑ 200	3		↓ 67			
% Predicted IC	25	24	↓ 4	29	↑ 16	↑ 21			
Measured FVC pre- or post-bronchodilator	Pre	Pre							
Uncorrected DLCO	10	10		10					
% predicted uncorrected DLCO	10	10		10					
6Min Walk Distance (m)	457.2	494.39	↑ 8	507.5	↑ 11	↑ 3			
6Min Walk Distance Type	Halfway	Halfway		Halfway					
CRQ - Fatigue	4	5	↑ 25	5	↑ 25				
PHQ9	8	5	↑ 38	2	↑ 75	↑ 60			
Rest (l/min)	2	2		2					
ADLs (l/min)	2	3	↓ 50	3	↓ 50				
Exercise (l/min)	2	3	↓ 50	3	↓ 50				
Sleep (l/min)	2	2		3	↓ 50	↓ 50			
O2 evaluation used patient's ambulatory O2 system	Intermittent / pulse / demand	Intermittent / pulse / demand		Intermittent / pulse / demand					
Type of O2 system patient uses	Gas E cyl Stationary concentrator	Liquid Stationary concentrator		Liquid Stationary concentrator					

 Meets or exceeds goal
 Short of goal and moving in the wrong direction

Report Used for:
 Individual Patient Progress Report
 Patient Progress Report For Physician

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5.3. Program Reports

The AACVPR Pulmonary Rehab Registry application contains two separate program reports for review the “Program Outcomes Summary” and the “Program Comparison” report.

The screenshot displays the AACVPR Outpatient Pulmonary Rehabilitation Registry web application. The top navigation bar includes links for Home, My Profile, Patient List, Reports and Data, and Administration. The 'Reports and Data' link is highlighted. Below the navigation bar, the 'Site reports' section is visible. It contains two report options: 'Program Outcomes Summary' and 'Program Comparison'. Both reports allow users to select a program (currently 'Slidell Memorial Hospital') and specify a date range for the report. The 'Program Outcomes Summary' report also includes a checkbox for 'Show all clinical including not entered items.' and a 'Generate Report' button. The 'Program Comparison' report includes a 'Compare to' dropdown (currently 'State Wide') and a 'Generate Report' button. At the bottom of the page, there are three buttons: 'E-mail ASSISTANCE', 'Provide FEEDBACK', and 'Live Support OFFLINE'.

Program Outcomes Summary
Report to show aggregate data for all patients in the specified program that have a defined discharge date. You can specify the range of dates to report on using the date entries below. Patients with a discharge date that exists between the range will be included in the data calculations. Entering no date range will yield calculated data for all patients with a discharge date in that program.

Program:

Start Date: End Date:

☐ Show all clinical including not entered items.

Program Comparison
Report to show a comparison of aggregate data for all patients in the specified program to the selected group of programs. You can specify the range of dates to report on using the date entries below. Patients with a discharge date that exists between the range will be included in the data calculations. Entering no date range will yield calculated data for all patients with a discharge date in that program.

Program:

Compare to:

Start Date: End Date:

To access the program reports, use the primary navigation to select “Reports” from the “Reports and Data” menu.

Test Pulmonary Rehab Program Program Outcomes Summary

Date Range: 1/1/2013 - 6/30/13
Patient Count: 3

Gender	Range	Mean	%	Comorbidities	%	
Female	69 - 80	75	100	AIDS	0	
				Anxiety	33.3	
				Cerebral Vascular Disease	0	
				Chronic Obstructive Pulmonary Disease	0	
				Chronic Pain Syndromes	0	
				Chronic Renal Disease	33.3	
				Connective Tissue Disease	0	
				Coronary Heart Disease	0	
				Disruptive personality disorder	0	
				Dementia	33.3	
				Depression	0	
				Diabetes mellitus	0	
				Endocrinopathy (not Diabetes)	0	
				History of Heart Failure	0	
				Hypertension	0	
				Incontinence	0	
				Liver Disease (Moderate/Severe)	0	
				Malignancy	0	
				Metabolic Disorder	0	
				Neuro-muscular disease	0	
				Obstructive sleep apnea	0	
				Osteoarthritis	0	
				Osteoporosis	0	
				Peripheral artery disease	0	
				Peripheral vascular disease	0	
				Prostatitis	0	
				Previous myocardial infarction	0	
				Uterine Disease	0	
				Unknown Status (Noted)	%	
				Never smoker	33.3	
				Former smoker	33.3	
				Current every day smoker	0	
				Current some day smoker	0	
				Smoker current status unknown	0	
				Exacerbations	%	
				# of distinct Exacerbations	2.0	
				% of patient who have had at least 1 exacerbation	66.7	
Clinical / Tests	Initial	30C	75C	30C % Chg	75C % Chg	30C Pre % Chg
Pulmonary Function / Spirometry						
FEV1 Actual	2.5					
FVC Actual	2.5	2.6	2.5	▲ 5		▲ 5
% Predicted FVC	66	66				
Uncontrolled DLCO	10	10	10			
% predicted uncontrolled DLCO	10	10	10			
IC Actual (liters)	3	3	3	▲ 333		▲ 50
% Predicted IC	20	24	26	▲ 20	▲ 30	▲ 25
PAC Actual	7.2					
Functional Capacity						
6-Min Walk Distance (ft)	1688.7	1967	2093	▲ 18	▲ 15	▲ 5
Maximum Borg SOB with 6-Min	10					
Quality of Life						
CRQ - Fatigue	4	5	5	▲ 25	▲ 25	
CRQ - Global score	23	55	47	▲ 138	▲ 104	▲ 15
Psychosocial						
PHQ-9	11	4	5	▲ 64	▲ 73	▲ 25
Oxygen Usage						
Rest (liters)	2.3	2.3	2.4		▲ 5	▲ 5
ADL (liters)	2	3	3	▲ 50	▲ 50	
Exercise (liters)	2	3	3	▲ 50	▲ 50	
Sleep (liters)	2	2	3		▲ 50	▲ 50
Oxygen System Type % usage						
Size 1 (lit)	33.3	0	0			
Liability	0	33.3	33.3			
Stationary concentrator	33.3	33.3	33.3			
Anthropometric						
BMI - Male						
BMI - Female	19					
Fat Free Mass (kg) - Male						
Fat Free Mass (kg) - Female	75					
Body Index - Male						
Body Index - Female						
Medications(%) % usage						
Long-Acting Beta Agonist	66.7	66.7	33.3			
Short-Acting Beta Agonist	33.3	66.7	33.3			
Long-Acting Anticholinergic	66.7	66.7	33.3			
Short-Acting Anticholinergic	33.3	66.7	33.3			
Inhaled corticosteroids	66.7	66.7	33.3			
Oral corticosteroids	33.3	66.7	33.3			

▲ Meets or exceeds goal ▲ Short of goal and missing it the wrong direction

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Comparison Report								
Program Name :		Test Pulmonary Rehab Program			Comparing to :		Entire Registry (12 programs)	
Program Patient Count :		#			Comparing Patient Count :		#	
Gender	Program	Compassion			Comorbidities	Program %	Compare %	
	Range	Mean	%	Range	Mean	%		
Female	89 - 60	76	79	60 - 60	56	71		
Male	42 - 43	40	29	40 - 43	40	21		
Race		Program %	Compare %					
American Indian or Alaskan Native		50	50					
Asian		0	0					
Black or African-American		0	0					
Ethnic category not listed		0	0					
Ethnic category unknown or not given		0	0					
Native Hawaiian or Pacific Islander		0	0					
Non-white Hispanic or Latino ethnicity		0	0					
White		50	50					
Mean completed session		Program %	Compare %					
(Mean completed session(s))		17	17					
Admitting Respiratory Diagnosis		Program %	Compare %					
Alpha 1 antitrypsin deficiency		25	25					
Asthma		50	50					
Bronchiectasis		0	0					
Chest wall abnormality (kyphosis / scoliosis)		0	0					
Chronic Bronchitis		0	0					
Chronic Obstructive Pulmonary Disease		0	0					
Cystic Fibrosis		0	0					
Emphysema		0	0					
Hypoventilation due to Obesity		0	0					
Idiopathic pulmonary fibrosis		0	0					
Interstitial Lung Disease		0	0					
Lung Cancer		0	0					
Lung Transplant		0	0					
Neuromuscular lung disease (ALS, good poor syndrome)		0	0					
Pulmonary fibrosis		0	0					
Pulmonary Hypertension/Cor Pulmonale		25	25					
Unintended Events		Program %	Compare %					
# of distinct unintended events		2.0	2.0					
% of patient who have had at least 1 unintended event		50.0	50.0					
Rehospitalization Events		Program %	Compare %					
# of distinct rehospitalization events		3.0	3.0					
% of patient who have had at least 1 rehospitalization event		50.0	50.0					
Disease / Tests		Program Initial	OC	IPF	Compassion Initial	OC	IPF	
Pulmonary Function / Spirometry								
FEV1 Actual		2.6			2.6			
% Predicted FEV1								
FVC Actual		2.5	2.8	2.5	2.1	2.6	2.5	
% Predicted FVC		80	55		60	55		
FEV1/FVC ratio								
Uncorrected DLCO		10	10	10	10	10	10	
% predicted uncorrected DLCO		10	10	10	10	10	10	
KC Actual (liter)		5.5	5.5	5.5	5.5	5.5	5.5	
% Predicted K		37	37	38	37	37	38	
FRC Actual		1.2			1.2			
% Predicted FRC								
Functional Capacity								
Borg task Distance (ft)		1000.7	1001	2002	1000.7	1001	2002	
Borg task Distance METs								
Maximum Borg SOB with ERWT		10			10			
Maximum Borg fatigue with ERWT								
PRG METs minutes per week								
mmHg								
SODG								
Quality of Life								
CRQ - Fatigue		#	5	5	#	5	5	
CRQ - Emotional Function								
CRQ - Dyspnea								
CRQ - Mobility								
CRQ - Global score		20	55	47	23	55	47	
SGRQ - Symptom								
SGRQ - activity								
SGRQ - Impact								
SGRQ - Global								
SF36 - Physical Component								
SF36 - Mental Component								
GU - Global								
Bartlett COOP								
CA7								
Psychosocial								
PHQ9		11	4	3	11	4	3	
CTSD								
Geriatric Depression Scale-15								
Geriatric Depression Scale-20								
sa75-Depression								

Report 2 – Program Comparison

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

This report indicates general statistics and overall performance of patients within the specified timeframe 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 on the "Generate" button.

Note:

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

6. Extracting Your Data


6.1. Data Manager

The AACVPR Pulmonary 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 screenshot shows the AACVPR Outpatient Pulmonary Rehabilitation Registry interface. The 'Data Manager' section is active, displaying a 'Download Manager' tab and a 'New Data Request' button. Below this, a table lists extraction history with columns: Download, Created Date, Title, Description, Created by, and Remove. Two rows are visible: one for 'Test1' created on Jan-15-2013 and another for 'test' created on Jun-01-2013. Both rows have a green checkmark icon in the 'Download' column. An orange arrow points to the green checkmark in the 'Download' column of the 'test' row. At the bottom, there are buttons for 'E-mail ASSISTANCE', 'Provide FEEDBACK', and 'Live Support OFFLINE'.

The primary screen of the “Data Manager” module is merely a viewing portal to previously extracted information. In addition, a listing of currently pending data requests that the application is presently buffering is visible.

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  icon next to the desired extraction.

6.2. New Data Extractions

The screenshot shows the 'DATA REQUEST WIZARD' window. It has a title bar with a close button. Below the title bar is a text box explaining the wizard's purpose. The wizard is divided into three steps:

- STEP 1 - Create/Select the dataset to report**: Includes a 'Dataset:' dropdown menu showing 'Patient File By Organization - Data Extraction'. To the right is an 'Add/Remove dataset' button with 'New' and 'Remove' sub-buttons. A blue arrow points from the 'New' button to the 'Dataset:' dropdown, labeled 'Select predefined dataset'. A red arrow points from the 'New' button to the 'Add/Remove dataset' button, labeled 'Create a custom dataset'.
- STEP 2 - Define the Extraction Information**: Includes fields for 'Request Title:', 'Description:', and a 'Priority:' dropdown menu set to 'Normal'.
- STEP 3 - Choose the Extraction Filter(s)**: Includes 'Enrollment Date:' fields with a date picker, and a grid of checkboxes for various organizations and programs, including 'Fort Sanders Cardiac Wellness and Rehab', 'Allen Cardiac Rehabilitation', 'Euclid Cardiac Rehab', 'FAIRVIEW RIDGES CARDIAC REHABILITATION', 'CR Program 5', 'CR Program 4', 'CR Program 3', 'CR Program 1', and 'CR Program 2'.

At the bottom are 'Cancel' and 'Save' buttons.

To create a new data extraction for download, click on the “New Data 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.

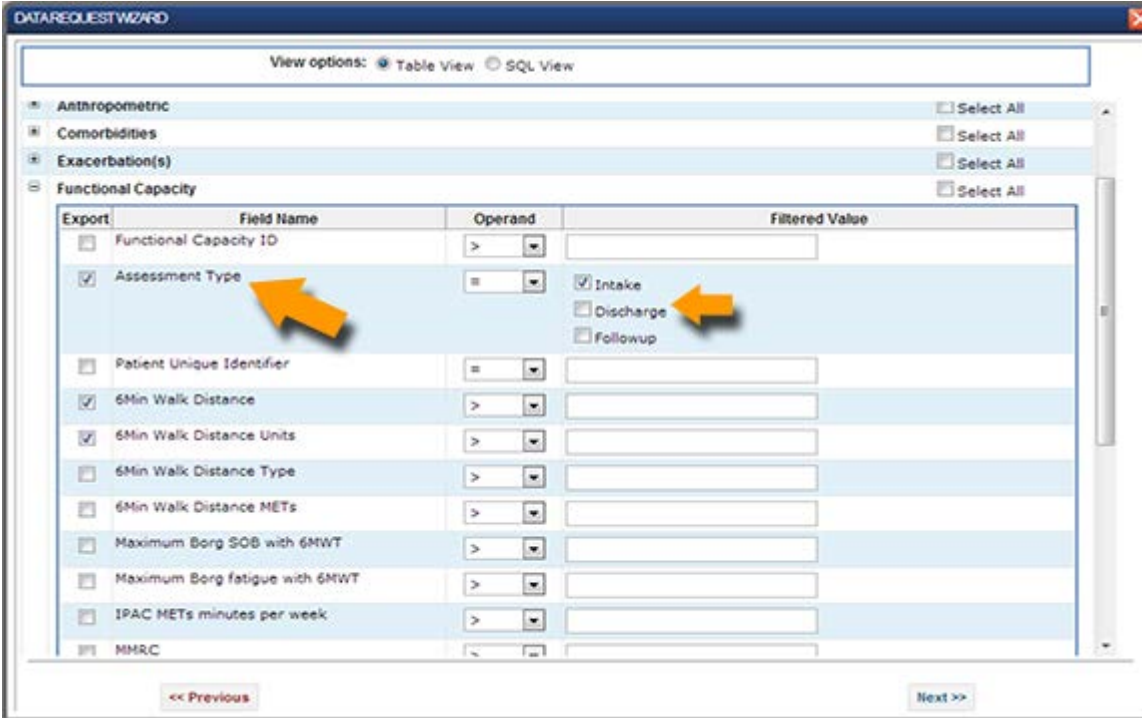
Predefined datasets are not specific to a timeframe or a specific organization. Essentially the predefined datasets are a template of information to be extracted. A user will be required to indicate the timeframe and the desired PR Program in order to request information from the application.

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

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

Note: Users only have access to extract data for PR Programs they currently have privileges to. Access to information regarding PR Programs outside of their defined privileges is strictly prohibited by the AACVPR Pulmonary Rehab Registry application.

6.3. New Dataset Templates



The screenshot shows the 'Data Request Wizard' window with 'Table View' selected. The left sidebar shows a tree-like view of categories: Anthropometric, Comorbidities, Exacerbation(s), and Functional Capacity. The 'Functional Capacity' category is expanded, revealing a list of variables. Two orange arrows point to the '+' icon next to 'Assessment Type' and the 'Intake' checkbox under its 'Filtered Value' column. The main table has columns for 'Export', 'Field Name', 'Operand', and 'Filtered Value'. The following variables are selected for export (checked in the 'Export' column):

Export	Field Name	Operand	Filtered Value
<input type="checkbox"/>	Functional Capacity ID	>	
<input checked="" type="checkbox"/>	Assessment Type	=	<input checked="" type="checkbox"/> Intake <input type="checkbox"/> Discharge <input type="checkbox"/> Followup
<input type="checkbox"/>	Patient Unique Identifier	=	
<input checked="" type="checkbox"/>	6Min Walk Distance	>	
<input checked="" type="checkbox"/>	6Min Walk Distance Units	>	
<input type="checkbox"/>	6Min Walk Distance Type	>	
<input type="checkbox"/>	6Min Walk Distance METs	>	
<input type="checkbox"/>	Maximum Borg SOB with 6MWT	>	
<input type="checkbox"/>	Maximum Borg fatigue with 6MWT	>	
<input type="checkbox"/>	IPAC METs minutes per week	>	
<input type="checkbox"/>	MMRC	<	

At the bottom of the window are '<< Previous' and 'Next >>' buttons.

To create a new dataset template simply click on the “New” button from the “Data Request Wizard” page. (See above instructions.)

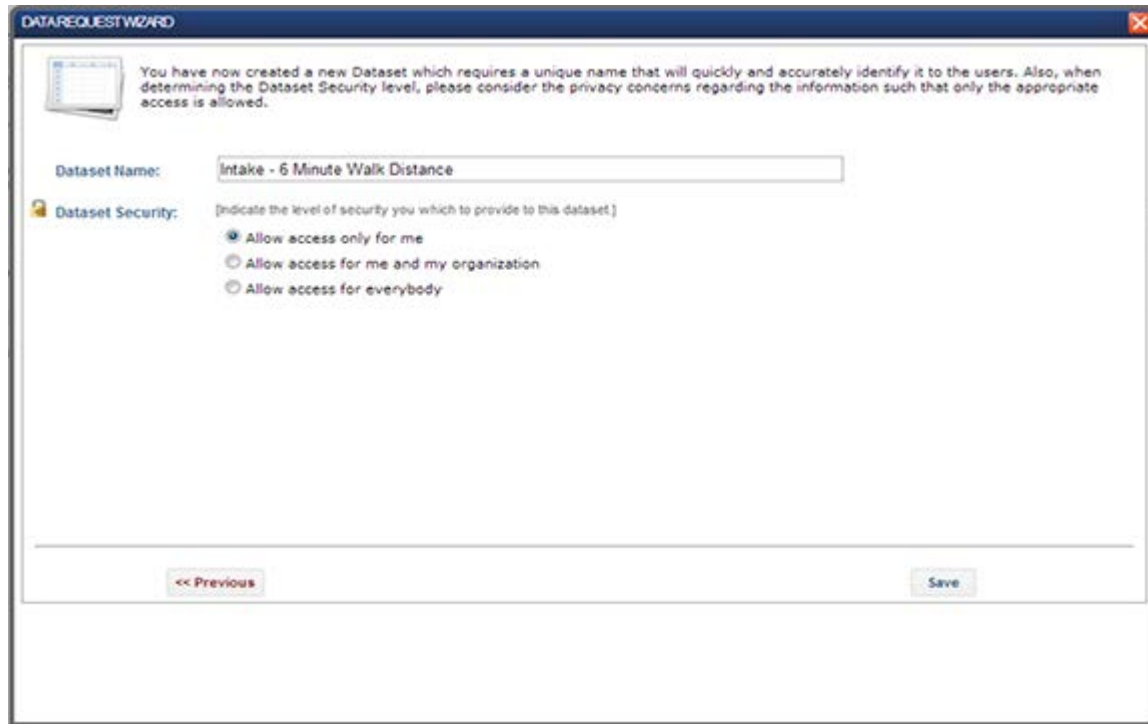
The Data Request Wizard will provide the user with a tree-like view of information that exists within the AACVPR Pulmonary Rehab Registry. The user may select the [+] icon located to the left of each category to view the subset of data variables within that category.

The user then selects the associated checkbox next to the desired 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 patients’ Functional Capacity. The user has revealed the subset of Functional Capacity information by selecting the [+] icon next to the Functional Capacity heading. The user has also selected the following variables to be included in the extraction :

- 6Min Walk Distance
- 6Min Walk Distance Units
- Assessment Type

In addition, the example indicates that the user has



The screenshot shows a window titled "DATAREQUEST WIZARD" with a close button in the top right corner. Inside the window, there is a message: "You have now created a new Dataset which requires a unique name that will quickly and accurately identify it to the users. Also, when determining the Dataset Security level, please consider the privacy concerns regarding the information such that only the appropriate access is allowed." Below this message, there are two sections: "Dataset Name:" with a text input field containing "Intake - 6 Minute Walk Distance", and "Dataset Security:" with a sub-label "[Indicate the level of security you wish to provide to this dataset:]". Under "Dataset Security", there are three radio button options: "Allow access only for me" (which is selected), "Allow access for me and my organization", and "Allow access for everybody". At the bottom of the window, there are two buttons: "<< Previous" and "Save".

requested a filter to be applied to the extraction where only values at Assessment Type - Intake are to be included.

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

Once the dataset template variables have been defined, the user may select "Next" in the wizard, at which point 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 to the above documentation on how to extract specific data from a dataset template.

7. Security

7.1. Application Security

The AACVPR Pulmonary 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.

Additionally, the application is a closed access system, which requires a primary individual to register and administrate users to the system. The AACVPR Pulmonary 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 user's privileges based on the user's defined role. Users are generally limited to accessing a single PR Program. The application strictly prohibits users from accessing information which is external to their defined PR Programs.

Lastly the application is fully HIPAA 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

AACVPR values your privacy and the information you provide in the AACVPR Pulmonary Rehab Registry. All of your information will be treated with the utmost sensitivity and care. The AACVPR Pulmonary Rehab Registry application is intended for professionals involved in Cardiovascular and Pulmonary Rehabilitation and 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. Please refer to the AACVPR Outpatient Pulmonary Rehabilitation Registry Protocol and Participation Agreement for details regarding confidentiality, safeguards, and security.