



HEALTH QUALITY ONTARIO

Quality Improvement Reporting & Analysis Platform

User Guide

Prepared by Dapasoft Inc.
and Health Quality Ontario
March 23, 2014
Version 2.2



Contents

- 1. Introducing QIRAP 3
- 2. User Access 3
 - 2.1 Functionalities..... 3
- 3. QIRAP Interface at a Glance 4
 - 3.1 Left Navigation Menu 4
 - 3.1.1 Measures..... 4
 - 3.2 Table Grids..... 4
 - 3.2.1 Action Buttons..... 5
 - 3.2.2 Pagination Bar..... 5
- 4. Data Entry..... 5
 - 4.1 Select Team/Health Service Provider..... 5
 - 4.2 View Change Area 6
 - 4.2.1 Add Data Point..... 7
 - 4.2.2 Run Charts 8
 - 4.2.3 View All..... 8
 - 4.2.3.1 Add Data Point for Measure 10
 - 4.2.3.2 Edit Data Point for Measure 10
 - 4.2.3.3 View Run Chart for Measure..... 12
 - 4.2.4 Manage Favourites 13
- 5. View Report..... 14
 - 5.1 Viewing Reports 14
 - 5.1.1 View Run Chart..... 14
 - 5.1.2 Print Report 18
 - 5.1.3 Export Report..... 19
- 6. Custom Measure..... 19
 - 6.1 Create Custom Measure..... 19
 - 6.2 Edit Custom Measure..... 42
 - 6.3 Clone Custom Measure 44
- 7. Exiting QIRAP 47

Common Acronyms used in QIRAP User Manual	
HQO	Health Quality Ontario
QIRAP	Quality Improvement Reporting & Analysis Platform
LTC	Long-term Care
PC	Primary Care

Figure 1 - Common Acronyms

1. Introducing QIRAP

The Quality Improvement Reporting and Analysis Platform (QIRAP) provides a single, integrated platform for reporting and analysis of quality improvement (QI) measures for Health Quality Ontario's initiatives, as well as the Senior Friendly Hospitals initiative. End users can enter data for measures through intuitive web pages, as well as use the reporting capability of the platform to view Run Charts for each measure. Administrators of the system are HQO staff who have the ability to perform tasks such as: manage users and their roles, manage measures, and run numerous analysis reports.

2. User Access

2.1 Functionalities

The following table outlines the permissions that the Data Entry user and View Only user have in the application:

User Access		
Functionality	Data Entry	View Only
Add data	X	
Edit data	X	
View data	X	X
Run reports	X	X
Create custom measures	X	
Edit custom measures	X	
View custom measures	X	X

Figure 2 - User roles

3. QIRAP Interface at a Glance

3.1 Left Navigation Menu

The QIRAP user interface displays a fixed left navigation panel on the left-hand side of the page for easy access on each page of the application.

Please Note: depending on users' role and privileges, the left navigation menu may display different menu items.

3.1.1 Measures

Data Entry

The Data Entry interface is used by users to view or enter data points for measures.

View Report

The View Report interface is used by users to view Run Charts for measures.

Custom Measure

The Custom Measure Interface is used to create and manage Custom Measures.

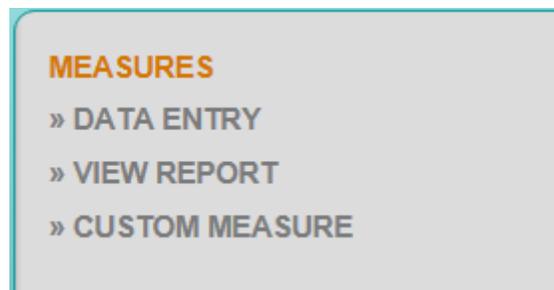


Figure 3 - Left Navigation Menu - Measures

3.2 Table Grids

Table grids exist throughout the application allowing users to easily view data and perform tasks.

Name	Team	Cycle	Health Service Provider	Type	Collection Plan
Percentage of patients complete care plan	Team #1__Cohort 1: Coordinated Care Plan	Cohort 1_	Hospital A (Test)	Outcome	Monthly
Wait time to elective hip surgery in Emergency (in hours)	Team #1__Cohort 1: Coordinated Care Plan	Cohort 1_	Hospital A (Test)	Outcome	Monthly

3.2.1
+
✎
🗑
📄 Clone

3.2.2
⏪
⏩
Page 1
of 1
⏴
⏵
10

View 1 - 2 of 2

Figure 4 - Table Grids

3.2.1 Action Buttons

Action buttons are located in almost all of the grids within QIRAP. These buttons are features for users to perform various functions within the interface.

3.2.2 Pagination Bar

Pagination bar exists in all the grids. Select the left or right arrow to navigate pages, or select a value in the dropdown to display more fields within the grid at a time.

4. Data Entry

4.1 Select Team/Health Service Provider

To View Change Areas and Associated Measures for a Selected Team/Health Service Provider:

1. Click **Data Entry** from the navigation menu on the left panel
2. Select Team/Health Service Provider from the dropdown menu
3. Click **Go**

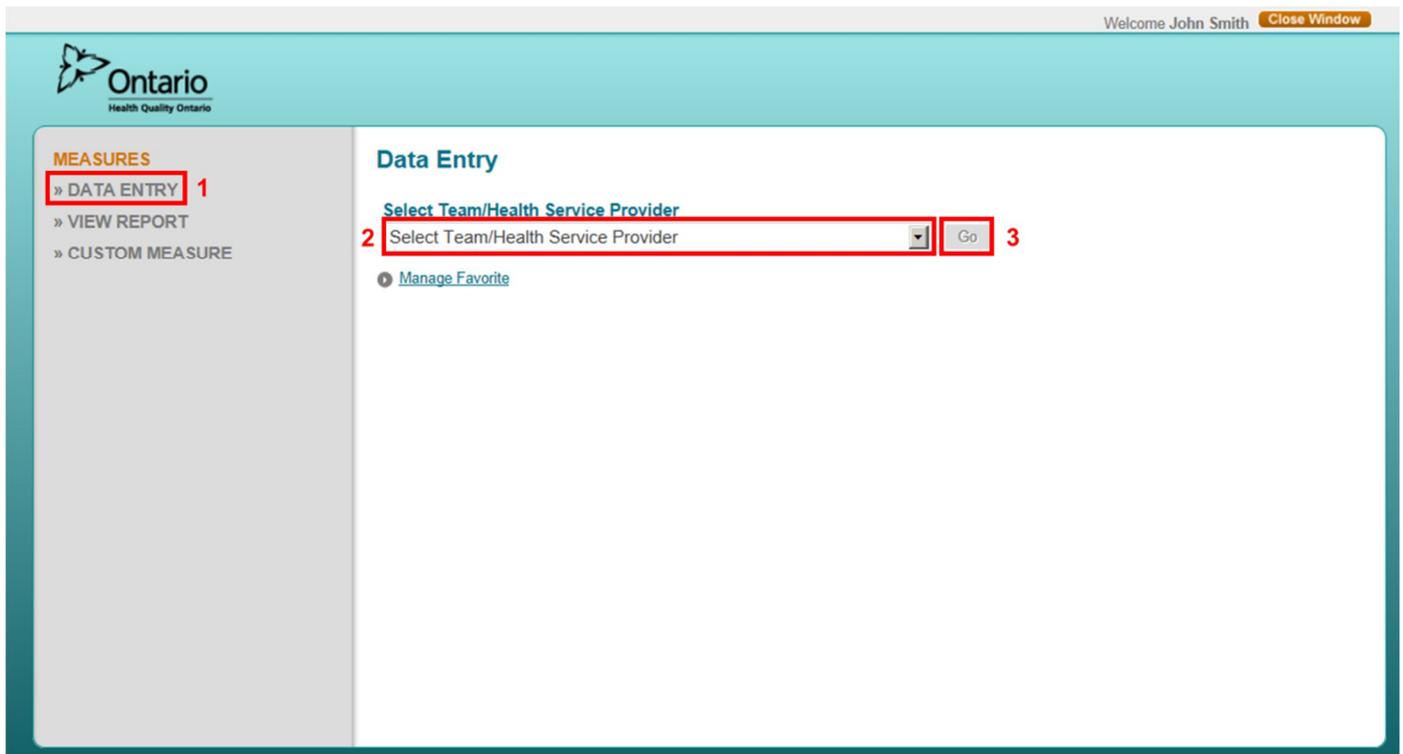


Figure 5 - Data Entry

The application will proceed to the Change Area page, which displays each Change Area available to the selected Team/Health Service Provider within the initiative.

4.2 View Change Area

Each Change Area within the initiative will be displayed on the Change Area page.

To View Measures Associated with Selected Change Area:

1. Click on the **Arrow**  icon next to a Change Area to view the measures associated with that Change Area.

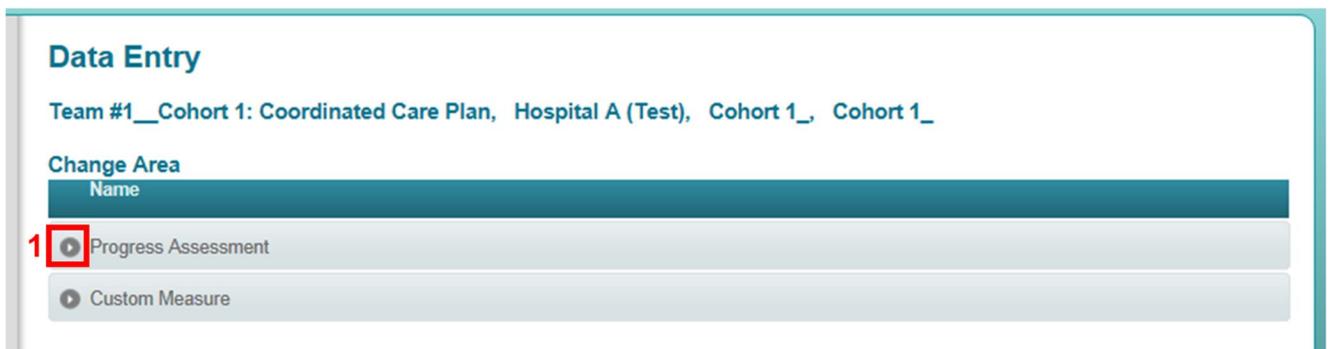


Figure 6 - Data Entry - View Change Area

- Each measure will have three (3) action buttons next to it: Add Measure , View Chart , View All 



Figure 7 - Data Entry - View Change Area - Expanded Measure View

4.2.1 Add Data Point

Users can enter data for quality improvement measures.

To Add Data for Selected Measure:

- In the expanded measures view, click on the **Add**  icon next to a measure to add a data point for the measure

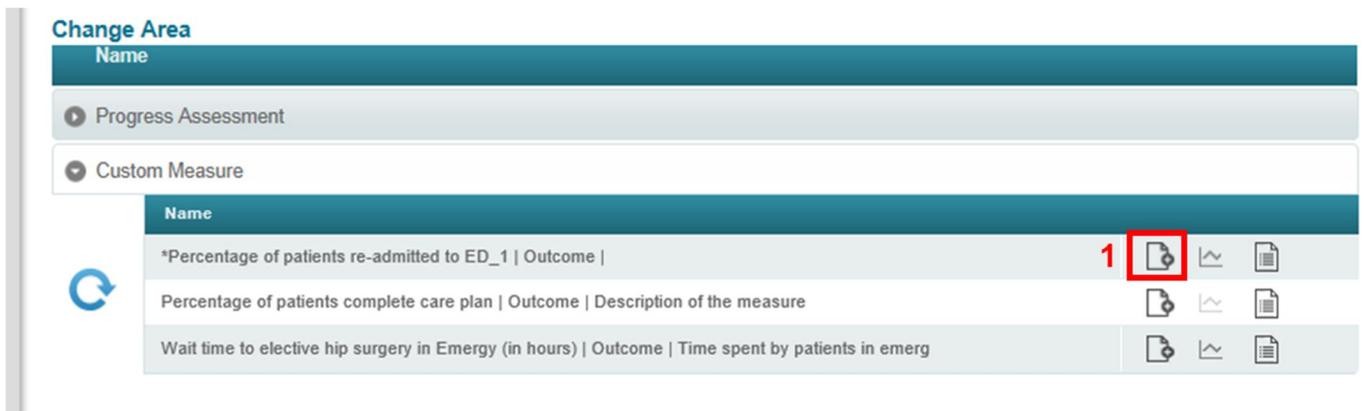


Figure 8 - Data Entry - Add Data Point

- The data entry screen will pop up for the selected measure
 - Click on the **Calendar Control**  icon beside Start Date
 - Select a **Start Date** for the data point
- Note:** An End Date will be auto-populated by the system based on the selected Start Date.

5. Enter any notes to be associated with this data point in the **Annotations** text box (e.g. description of an event that occurred during the selected data reporting period). This step is optional.
6. Enter **Field** values for the measure
Note: Asterisks (*) indicate mandatory fields
7. Once the mandatory fields are filled out, any calculated values for the measure value will appear under **Formulas**.
8. If user would like to add more data in the next step, click **Save & New** and repeat steps 3-6. Otherwise, proceed to step 9
9. Click **Save**

4.2.2 Run Charts

Run Charts for measures can be viewed through either the Data Entry Change Area page or through View Reports (See section 5.1)

To Access Chart:

1. Click on the Change Area name to see associated measures
2. Click on the **Chart**  icon to view Run Chart
(The system loads the Run Chart report)



Figure 9 - Data Entry - Chart

3. A pop-up window containing a Run Chart for the selected measure is displayed, along with a data table below

Note: The Run Chart and data table will be blank for measures with no data points. For more information on the Run Chart Reports, see section 5.1.1

4.2.3 View All

Users can view all the data points that have been entered for a measure through the View All page. Data points can be added, edited, and/or viewed for the selected measure through the grid. Run Charts can also be viewed from here.

To View All Entered Data Point(s) for Selected Measure:

1. Click on the Change Area name to see the associated measures

- Click on the **View All**  icon



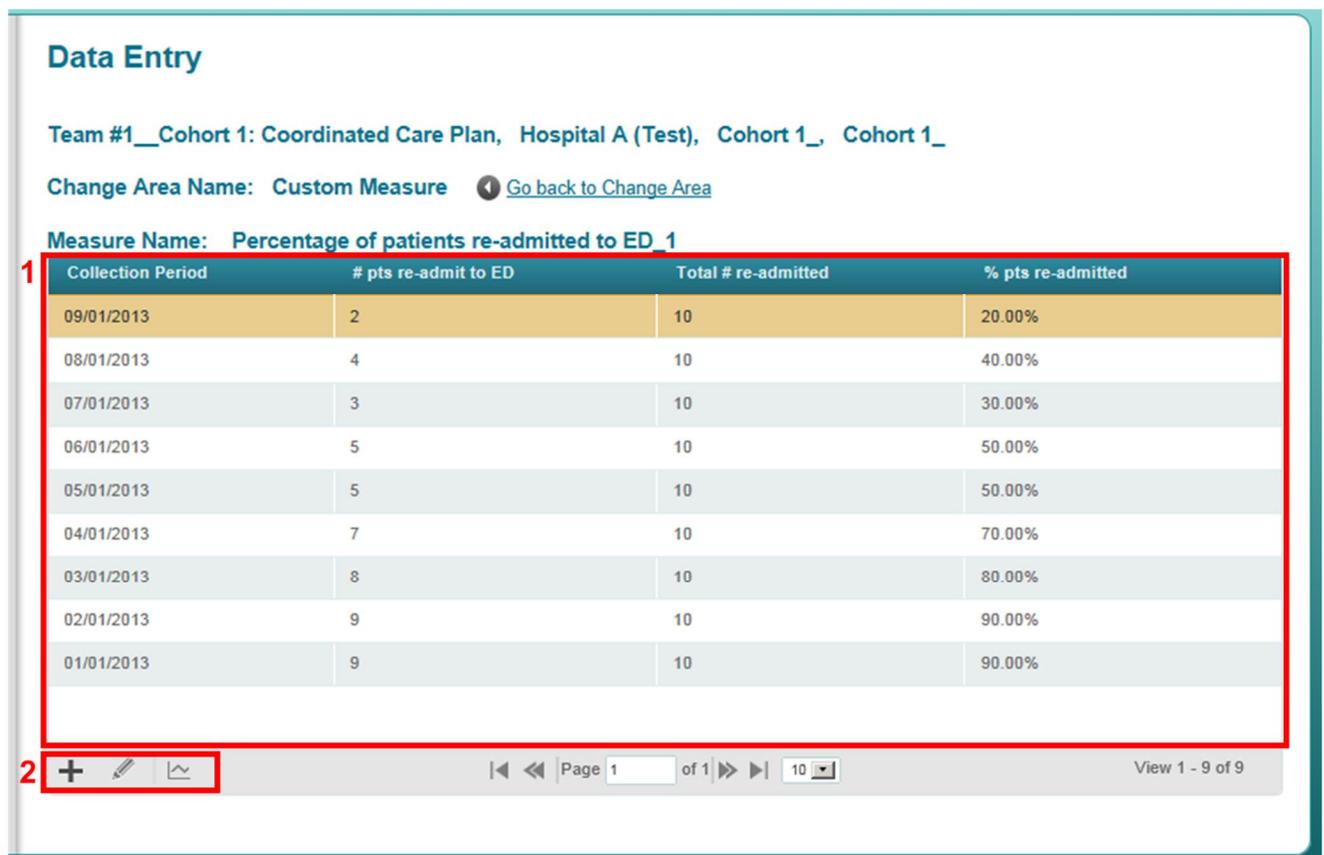
Change Area

Name

- Progress Assessment
- Custom Measure
 - *Percentage of patients re-admitted to ED_1 | Outcome |  2
 - Percentage of patients complete care plan | Outcome | Description of the measure   
 - Wait time to elective hip surgery in Emery (in hours) | Outcome | Time spent by patients in emerg   

Figure 10 - Data Entry - View All

- The View all page will display all data points entered for the measure (1). Users also have access to several action buttons (2) within this page, including: Add Data Point, Edit Data Point and View Chart.



Data Entry

Team #1__Cohort 1: Coordinated Care Plan, Hospital A (Test), Cohort 1_, Cohort 1_

Change Area Name: Custom Measure [Go back to Change Area](#)

Measure Name: Percentage of patients re-admitted to ED_1

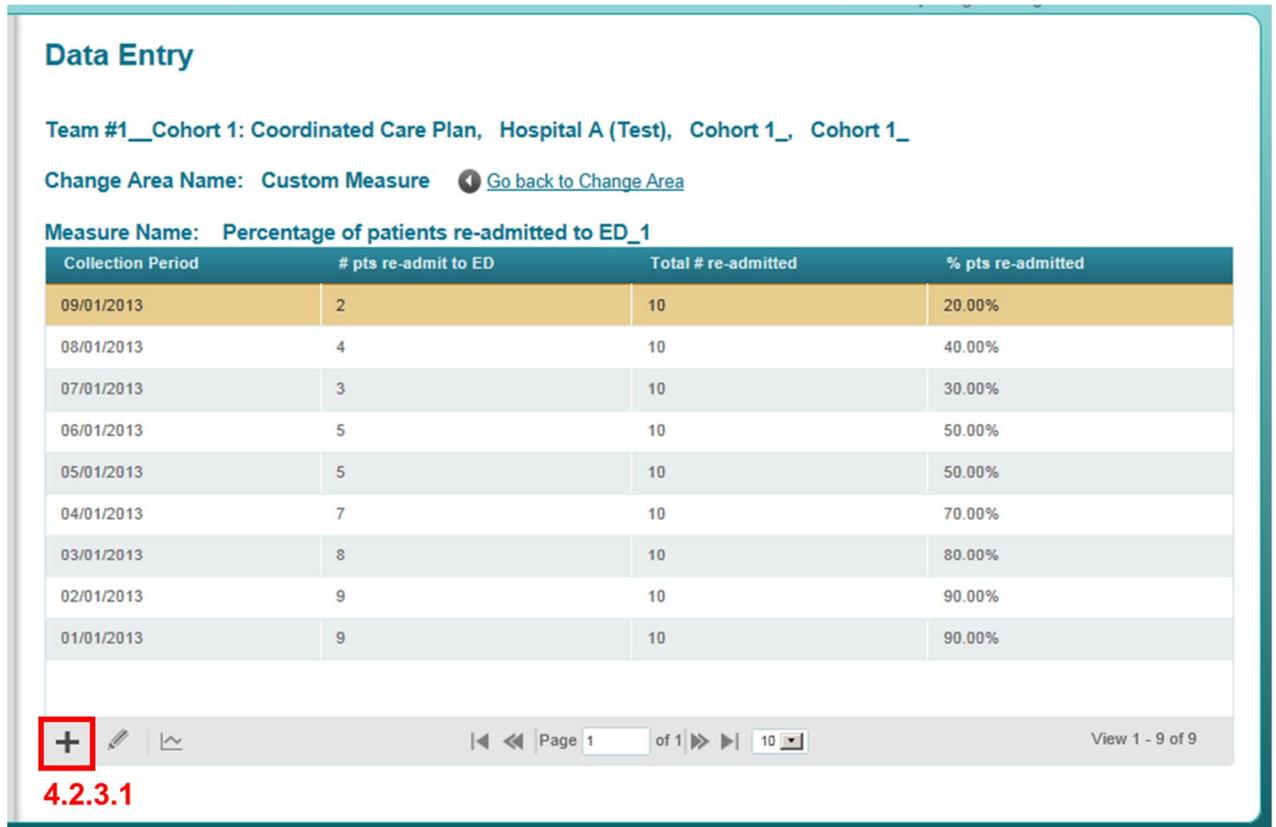
Collection Period	# pts re-admit to ED	Total # re-admitted	% pts re-admitted
09/01/2013	2	10	20.00%
08/01/2013	4	10	40.00%
07/01/2013	3	10	30.00%
06/01/2013	5	10	50.00%
05/01/2013	5	10	50.00%
04/01/2013	7	10	70.00%
03/01/2013	8	10	80.00%
02/01/2013	9	10	90.00%
01/01/2013	9	10	90.00%

2    Page 1 of 1 10 View 1 - 9 of 9

Figure 11 - Data Entry - View All Chart

4.2.3.1 Add Data Point for Measure

Users can enter data for measures for selected Team/Health Service Provider from the View All grid by clicking on the  icon. (See 4.2.1 Add Data Point)



Data Entry

Team #1__Cohort 1: Coordinated Care Plan, Hospital A (Test), Cohort 1_, Cohort 1_

Change Area Name: Custom Measure [Go back to Change Area](#)

Measure Name: Percentage of patients re-admitted to ED_1

Collection Period	# pts re-admit to ED	Total # re-admitted	% pts re-admitted
09/01/2013	2	10	20.00%
08/01/2013	4	10	40.00%
07/01/2013	3	10	30.00%
06/01/2013	5	10	50.00%
05/01/2013	5	10	50.00%
04/01/2013	7	10	70.00%
03/01/2013	8	10	80.00%
02/01/2013	9	10	90.00%
01/01/2013	9	10	90.00%

   |< << Page 1 of 1 >> >| 10 | View 1 - 9 of 9

4.2.3.1

Figure 12 - Data Entry - View All - Add Data Point

4.2.3.2 Edit Data Point for Measure

Users can edit data points for measures for selected Team/Health Service Provider from the View All grid by clicking on the **Edit**  icon.

To Edit Entered Data Point from View All Grid:

1. Select a data point by clicking on it
2. Click the **Edit**  icon to edit selected data point

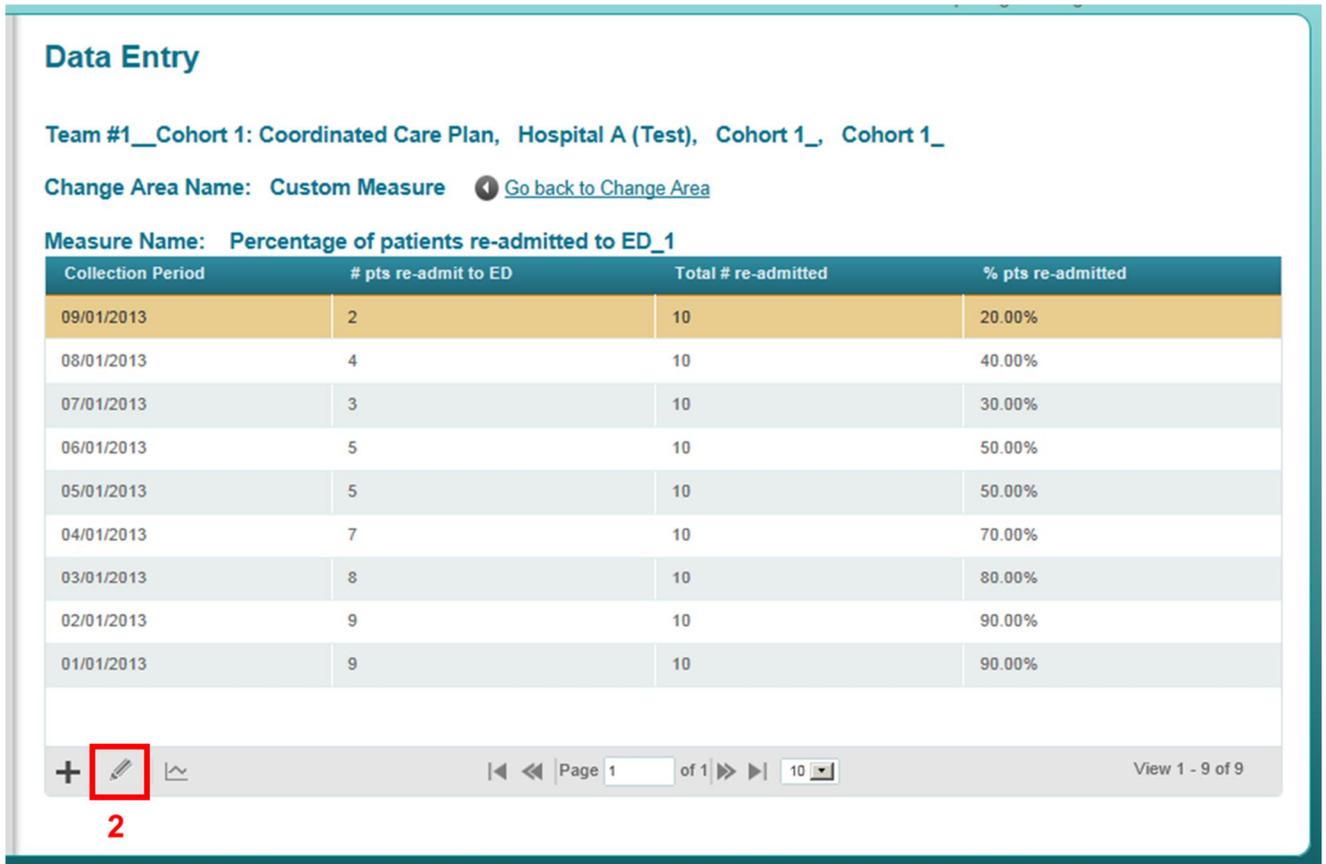


Figure 13 - Data Entry - View All - Edit Data Point

3. The data entry pop-up window will be displayed, and any fields within the pop-up can be edited:
 - a. Edit **Start Date** by clicking on the **Calendar Control**  icon beside Start Date
Note: An End Date will be auto-populated by the system based on the selected Start Date.
 - b. Edit **Annotations**
 - c. Edit **Field** values for a measure
 - d. If user would like to add more data in the next step, click **Save & New** to add a new data point. Otherwise, proceed to step 4
4. Click **Save**

Percentage of patients re-admitted to ED_1 Outcome Measure - Edit

Description
 <Description of measure>

Instructions to data entry user

Collection plan: Monthly * Start date Sep 2013 **3a** End Date Sep 2013

3b Annotations

3c Fields
 *Number of patients re-admitted to ED | 2
 *Total number of patients re-admitted to ED | 10

Formulas
 Percentage of patients re-admitted to ED | 20.00(%)

3d **4**
 Save & New Save Cancel

Figure 14 - Data Entry - View All - Edit Data Point

4.2.3.3 View Run Chart for Measure

Users can view the Run Chart for the selected measure within the Team/Health Service Provider from the View All grid by clicking on the **View Chart**  icon.

To Access Run Charts from View All:

1. Click on the **View Chart**  icon on the View All page to view the Run Chart Report *(The system loads the Run Chart Report)*

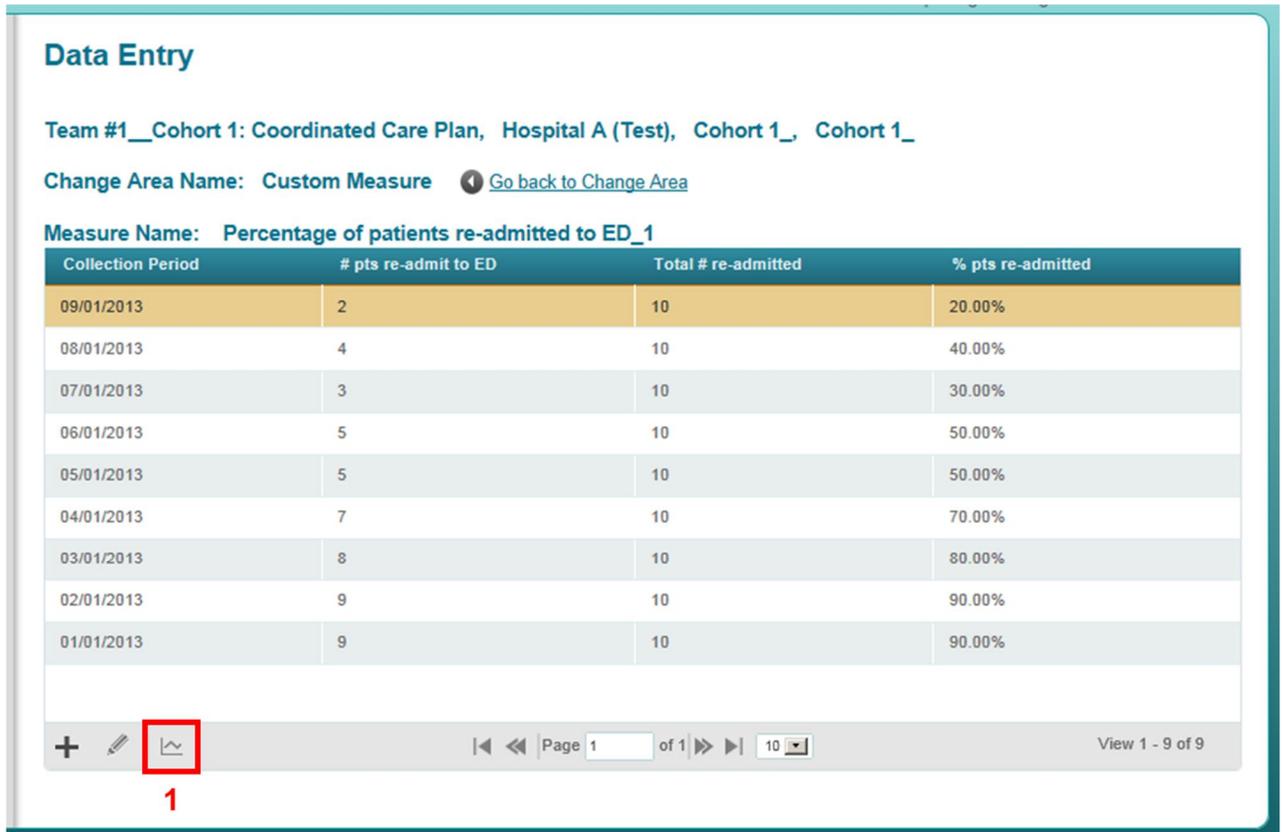


Figure 15 - Data Entry - View All - View Chart

2. A pop-up window containing a Run Chart for the selected measure is displayed, along with a data table below.

*Note: Run Chart and data table will be blank for measures with no data points.
For more information on the Run Chart Reports, please see section 5.1*

4.2.4 Manage Favourites

Users can manage favourite Change Areas allowing easy access to selected Change Areas for selected Team/Health Service Provider.

To Manage Favourites:

1. Click **Data Entry** from the navigation menu on the left panel
2. Click the **Manage Favourite** link

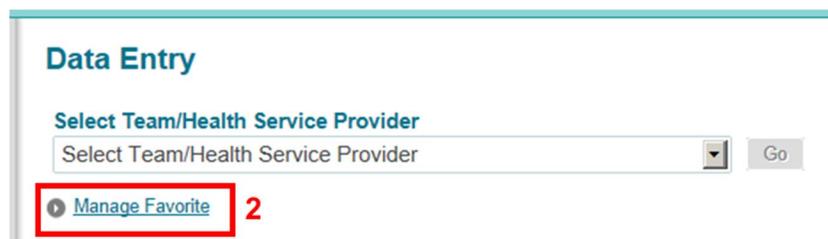


Figure 16 - Data Entry - Manage Favourite

3. Tick the Change Areas for Team/Health Service Provider that you would like to have displayed for data entry
4. Uncheck Change Areas that you would like to have hidden for data entry
5. Click the **Save**  icon on the Manage Favourite grid

Data Entry

Select Team/Health Service Provider

Select Team/Health Service Provider

Manage Favorite

	Team Name	Health service provider	Stream	Group	Change Area	Description
<input checked="" type="checkbox"/>	Team #1__Cohort 1: Coordinated Care Plan	Hospital A (Test)	Cohort 1_	Cohort 1_	Custom Measure	Custom Measure
<input checked="" type="checkbox"/>	Team #1__Cohort 1: Coordinated Care Plan	Hospital A (Test)	Cohort 1_	Cohort 1_	Progress Assessment	IDEAS Progress Assessment measure

3, 4

5 

Page 1 of 1 10 View 1 - 2 of 2

Figure 17 - Data Entry - Manage Favourite

5. View Report

5.1 Viewing Reports

Users can access Run Chart Reports for their associated Team(s). A Run Chart is a graph that illustrates changes in quality over time. Measurements are taken at frequent points in time and connected with a line. This provides a graphical display of variation across time, and can help a QI team see if their changes have led to improvement.

5.1.1 View Run Chart

To View Report:

1. Click **View Report** from the navigation menu on the left panel



Figure 18 - View Report

2. Select the report from the dropdown menu
3. Click **View** button



Figure 19 - View Report - Select Report

4. A pop-up window will display the Reports page.
Note: If you receive a pop-up blocker message, select "Allow pop-ups for qirap.hqontario.ca"

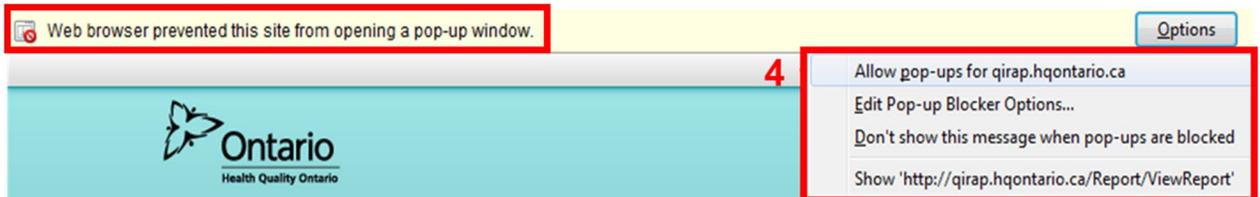


Figure 20 - View Report - Pop-up Blocker

5. Reports can be viewed for all measures with associated data points. The following Report Parameters are used to create a report:

Report Parameters:

Group (Team): Users can select a Team enrolled in the initiative that they are associated with from the Group dropdown.

Sector: Users can select the health care sector of the organization whose measure they would like to view in the Run Chart from the dropdown.

Health Service Provider: Users can select a Health Service Provider from the selected Team that they are associated with from the dropdown.

Enrollment Group: The sub group within the initiative that the Team belongs to can be selected from the dropdown.

Measure: Users have the ability to select a measure to view on the Run Chart.

Field: Users can select a field or formula from the selected measure to view on the Run Chart.

Visibility: Users have the ability to display or hide the Median, Target and Annotations entered for each data point on the Run Chart by using the checkboxes in the dropdown.

6. Select Report Parameters.

7. Click **View Report** button.

The screenshot shows a web-based form for selecting report parameters. The form is organized into two columns. The left column, highlighted with a red box and labeled '6', contains the following fields: 'Group' (dropdown menu with '<Select a Value>'), 'Health Service Provider' (dropdown menu), 'Change Area' (dropdown menu), 'Field' (dropdown menu), 'Start Date' (text input with a calendar icon), 'Sector' (dropdown menu), 'Enrollment Group' (dropdown menu), 'Measure' (dropdown menu), 'Visibility' (dropdown menu with 'Median, Target' selected), and 'End Date' (text input with a calendar icon). The right column, highlighted with a red box and labeled '7', contains a single button labeled 'View Report'.

Figure 21 - View Report - Report Parameters

8. The run chart will be displayed according to the selected parameters, along with the data table.

Group: Team #1__Cohort 1: Coordinated Care Plan | Sector: Teams | View Report
 Health Service Provider: Team #1__Cohort 1: Coordinated Care Plan | Enrollment Group: Cohort 1_
 Change Area: Custom Measure | Measure: Percentage of patients re-admitted to ED_1
 Field: % pts re-admitted(Formula) | Visibility: Median, Target
 Start Date: 1/1/2013 | End Date: 3/23/2014

1 of 1 | 75% | Find | Next

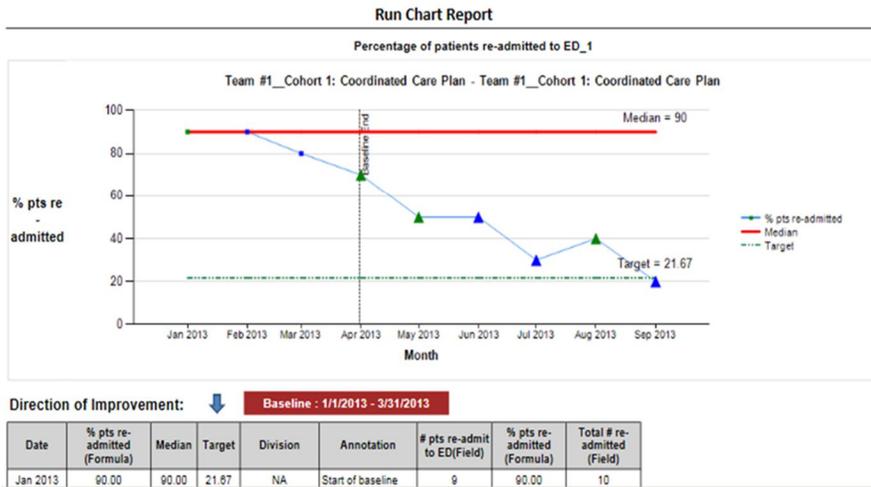


Figure 22 - View Report - Run Chart Report

Note: Reports with a large dataset may have multiple pages. The pagination bar can be used to navigate through the report.

Group: Team #1__Cohort 1: Coordinated Care Plan | Sector: Teams | View Report
 Health Service Provider: Team #1__Cohort 1: Coordinated Care Plan | Enrollment Group: Cohort 1_
 Change Area: Custom Measure | Measure: Percentage of patients re-admitted to ED_1
 Field: % pts re-admitted(Formula) | Visibility: Median, Target
 Start Date: 1/1/2013 | End Date: 3/23/2014

1 of 1 | 75% | Find | Next

Figure 23 - View Report - Pagination

Run Chart Features:

Run charts can display the following features:

- **Median:** a horizontal line across the graph, which represents the median value of the baseline data
- **Target:** a horizontal line across the graph indicating the target of the QI team
- **Annotations:** comments associated with the data points to provide details such as when improvement ideas were tested
- **Direction of Improvement:** an arrow indicating the direction of improved quality is displayed underneath the chart
- **Baseline:** baseline end date is represented by a vertical line on the Run Chart, and the baseline range is stated underneath the chart

Significant improvement in the QI data can be detected through two (2) tests on a Run Chart:

- Six (6) or more consecutive points above or below the median
- Six (6) consecutive points moving upward or downward

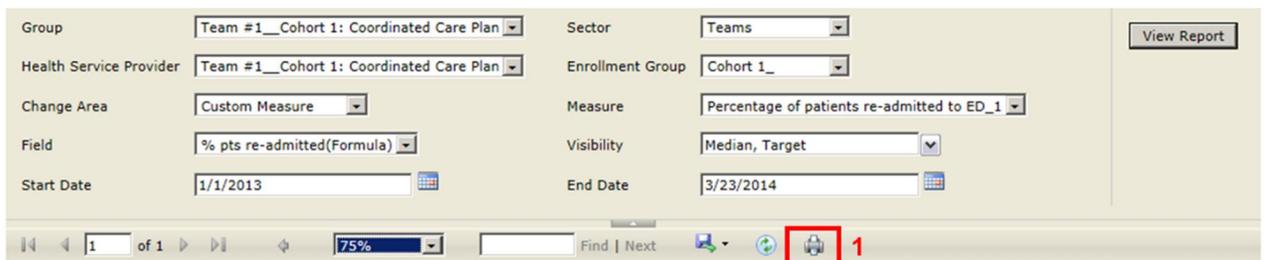
The following markers are used on the run charts:

- [■]: An annotation exists for the data point, which is displayed when you scroll over the point on the graph
- [▲]: Six (6) or more consecutive points above or below the median (Run Chart rule)
- [◆]: Six (6) or more consecutive points moving upward or downward (Run Chart rule)
- [★]: Both Run Chart rules are achieved

5.1.2 Print Report

To Print Report:

1. Click on the **Print**  icon underneath the report parameters to print the run chart and data table.



The screenshot shows a report configuration interface with various dropdown menus and input fields. At the bottom, a navigation bar includes a 'Print' icon (a printer symbol) which is highlighted with a red rectangular box. To the right of the 'Print' icon is a small red circle containing the number '1'. The interface also includes a 'View Report' button in the top right corner and a search bar with 'Find | Next' text.

Figure 24 - View Report - Print Report

5.1.3 Export Report

To Export Report:

1. Click on the **Export**  icon underneath the report parameters to export the Run Chart and data table into a variety of formats (Available formats include: XML file with report data, CSV – comma delimited, PDF, MHTML – web archive, Excel, TIFF file, Word).

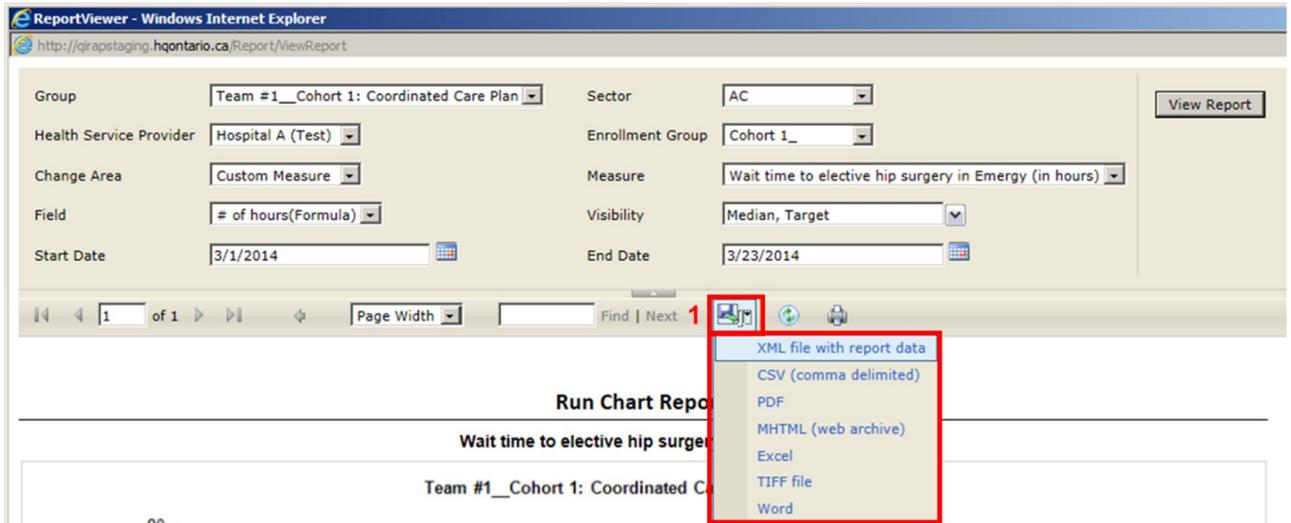


Figure 25 - View Report - Export Report

6. Custom Measure

6.1 Create Custom Measure

Users can create a customized measure from the Custom Measure page.

To Create Custom Measure:

1. Click **Custom Measure** from the navigation menu on the left panel

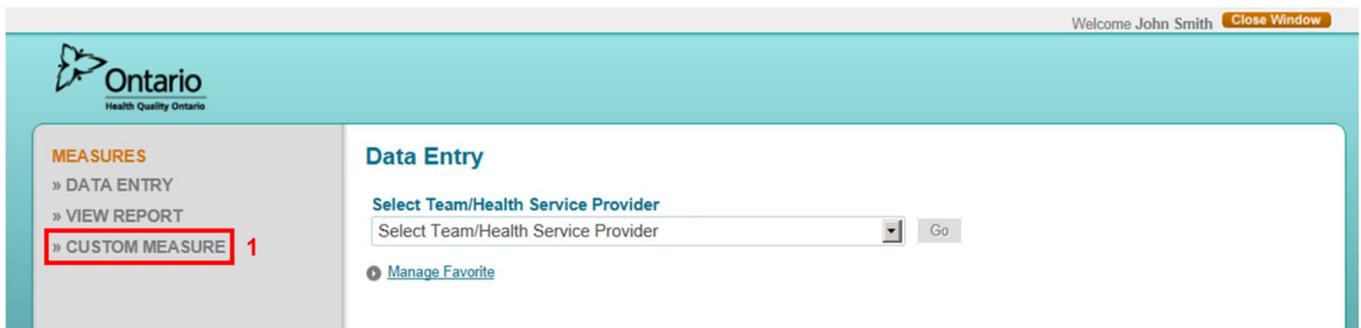


Figure 26 - Custom Measure

2. Click on the **Add**  icon below the grid

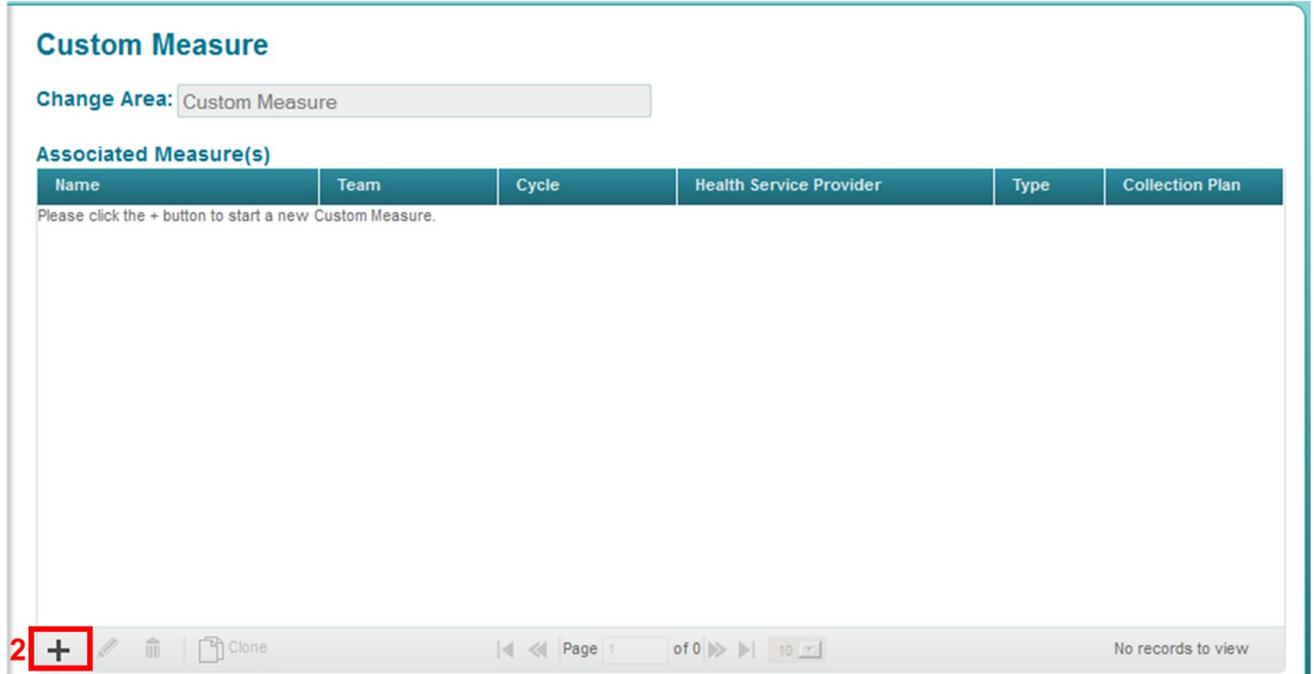


Figure 27 - Custom Measure

- Step 1: Select Team*
3. Select **Team** from Team dropdown menu
Note: Asterisks () indicate mandatory fields*
 4. Click **Next**
 5. Note: Each step in the Custom Measure creation wizard contains a **Help** option. To display additional instructions for the step, place cursor over the  icon.

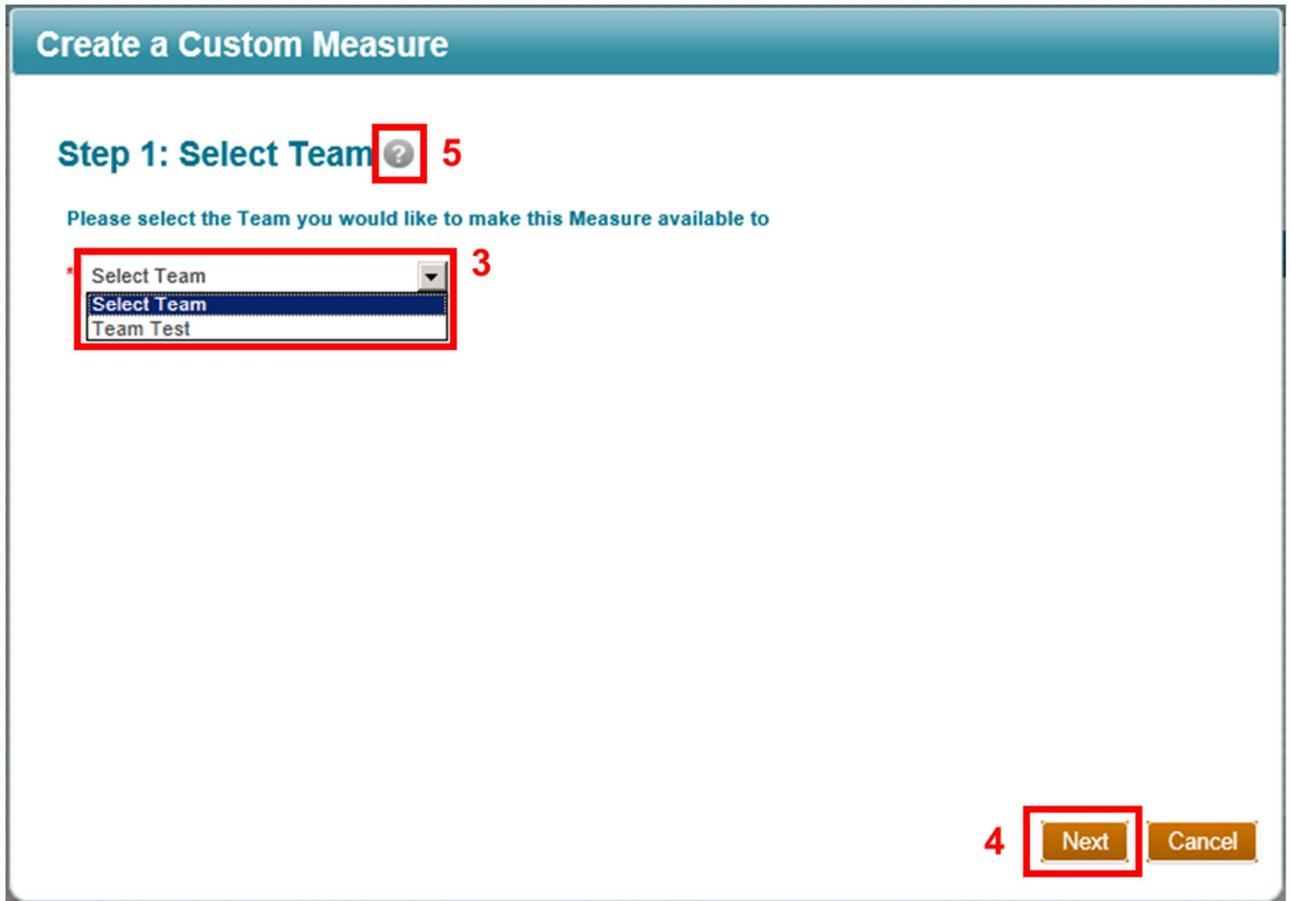


Figure 28 - Custom Measure - Select Team

Step 2: Define measure name and description

6. Enter the name of the measure in the **Measure Name** textbox
7. Enter a description for the measure in the **Description** text area. This field is optional.
8. Click **Next**
9. Note: To return to the previous step in the wizard and make alterations, click **Back** and follow the steps outlined

Create a Custom Measure

Step 2: Define measure name and description

6 * Measure Name:

7 Description: ?

9 Back 8 Next Cancel

Figure 29 - Custom Measure - Create Custom Measure - Define Measure Name and Description

Step 3: Select Format, Collection Plan, and Measure Type

10. Select the format for the measure (i.e., a number or percentage) from the **Select Format** dropdown menu
11. Select the frequency of data reporting for the measure (i.e., weekly or monthly) from the **Collection Plan** dropdown menu
12. Select the type for the measure (i.e., outcome, process or balancing) from the **Measure Type** dropdown menu
13. Click **Next**

Create a Custom Measure

Step 3: Select Format, Collection Plan, and Measure Type

10 Select Format: ? ▼

11 Collection Plan: ? ▼

12 Measure Type: ? ▼

13

Back
Next
Cancel

Figure 30 - Custom Measure - Create Custom Measure - Select Format, Collection Plan, Measure Type

Step 4: Define Baseline Range and Target

14. Define the Baseline period for the measure. Click on the **Calendar Control**  icon next to the **Baseline Start Date** field to select the start date for the baseline.
15. Click on the **Calendar Control**  icon next to the **Baseline End Date** field to select the end date for the baseline
16. Define the target for the measure. Select the type of target (i.e., a number – a specific value for the target, or a percentage – the specified percentage of improvement that would be applied to the baseline average to calculate the target value) from the **Target Type** dropdown menu.
17. Select an operator for the target (i.e., should the measure value be greater than [$>$], greater than or equal to [$>=$], less than [$<$], or less than or equal to [$<=$] the specified target?) from the **Target** dropdown menu.
 Note: If the direction of improvement for the measure is up/higher, please select the operator greater than [$>$] or [$>=$]. If the direction of improvement for the measure is down/lower, please select the operator [$<$] or [$<=$].

18. Enter a numeric value in the textbox next to the **Target** dropdown. If the target type selection was number, enter the specific target value. If the target type selection was percentage, enter the percentage of improvement that should be applied to the baseline to calculate the target value (the target value will be automatically calculated based on the percentage specified).
Note: This field should only contain numbers. Do not include any special characters. This is an optional step (i.e., if a target for the measure has not been defined, this field can be left blank).
19. Click **Next**

The screenshot shows a web form titled "Create a Custom Measure" with a sub-header "Step 4: Define Baseline range and Target". A note states: "Note: If you do not wish to have a Target line show on our graph at this time simply leave the Target Value Blank. You can always edit the measure to enter a Target Value at a later date." The form contains the following elements:

- "* Baseline Start Date:" followed by a date picker icon (14).
- "Baseline End Date:" followed by a date picker icon (15).
- "* Target Type:" followed by a dropdown menu showing "Number" (16).
- "* Target:" followed by a dropdown arrow (17) and an empty text input box (18).
- At the bottom right, three buttons: "Back", "Next" (19), and "Cancel".

Figure 31 - Custom Measure - Create Custom Measure - Select Format, Collection Plan, Measure Type

Step 5: Create Field – Define Field Label, Alias and Format

20. This step involves creating fields for the measure (e.g., numerator field, denominator field). Enter the name of the field in the **Label to display on screen** textbox.
21. Enter a shortened version of the field label, limited to 20 characters, in the **Alias** textbox. The alias will be displayed on some pages of the application where space is limited.

Step 6: Define Maximum and Minimum Values and Number of Decimals

The values defined in this step will serve as validation for the input for the field being created to ensure data quality.

- 22. Define the minimum value for the field by entering in a numeric value in the **Min** textbox
 - 23. Define the maximum value for the field by entering in a numeric value in the **Max** textbox.
- Note: This step is optional.
- 24. Define the number of decimal places that can be entered for the field by entering in a numeric value in the **# of decimals** textbox.

Step 7: Mandatory Field

- 25. Select whether the field is mandatory or optional. If the field is mandatory, click on the Yes radio button next to **Is this field Mandatory?**; if the field is optional, click on the No radio button.
- 26. Click **Next**

The screenshot shows a dialog box titled "Create a Custom Measure". It is divided into three sections:

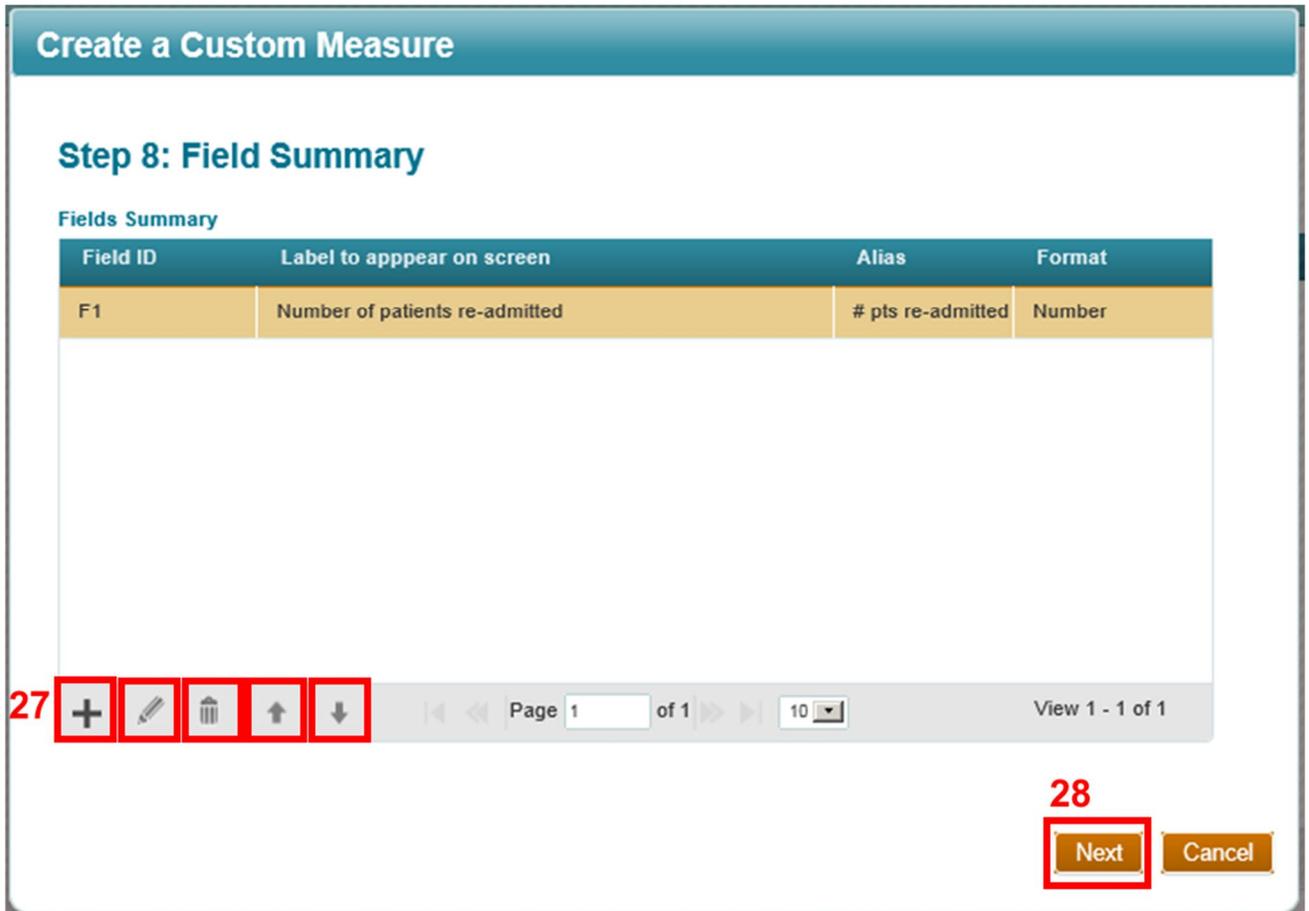
- Step 5: Create Field - Define Field Label, Alias and Format**
 - 20. A text input field for "Label to display on screen?".
 - 21. A text input field for "Alias?".
- Step 6: Define Maximum and Minimum Values and Number of Decimals**
 - 22. A text input field for "Min?".
 - 23. A text input field for "Max?".
 - 24. A text input field for "# of decimals?".
- Step 7: Mandatory Field**
 - 25. A section titled "Is this field Mandatory?" with a question mark icon, a "Yes" radio button, and a selected "No" radio button.

At the bottom right, there are three buttons: "Back", "Next", and "Cancel". The "Next" button is highlighted with a red box and labeled with the number 26.

Figure 32 - Custom Measure - Create Custom Measure - Create Field, Define Max and Min, Number of Decimals, Mandatory

Step 8: Field Summary

27. A summary of all fields that have been created can be viewed through the grid. A number of **action buttons** are located at the bottom of the fields grid that can be used to **add** another field , **edit** an existing field , **delete** a field  or re-order fields for the measure using the **up**  or **down**  arrow icons.
28. Click the **Next** button to proceed



Create a Custom Measure

Step 8: Field Summary

Fields Summary

Field ID	Label to appear on screen	Alias	Format
F1	Number of patients re-admitted	# pts re-admitted	Number

27     

Page 1 of 1 10 View 1 - 1 of 1

28 **Next** Cancel

Figure 33 - Custom Measure - Create Custom Measure - Field Summary

Step 9: Create Formula: Define Formula Label and Alias

29. This step involves creating a formula for the measure using the fields. Enter the name of the formula field in the **Label to display on screen** textbox.
30. Enter a shortened version of the formula label, limited to 20 characters, in the **Alias** textbox. The alias will be displayed on some pages of the application where space is limited.
31. Click **Next**

Create a Custom Measure

Step 9: Create Formula: Define Formula Label and Alias

29 * Label to display on screen: ?

30 * Alias: ?

31

Back Next Cancel

Figure 34 - Custom Measure - Create Custom Measure - Create Formula

Step 10: Create Formula: Select Format

32. Select the type of formula (i.e., a number or percentage) from the **Select Format** dropdown menu

Step 11: Create Formula: Create Formula

33. Define the formula for calculating the measure. To select a field for the formula, double click on a field from the **List of Fields** grid. The field (e.g., F1) will be populated in the **Formula** text box. To select an operator for the formula, double click on an operator from the **Operators** list. The selected operator (e.g., +) will be populated in the **Formula** text box. Numeric values are also permitted in the **Formula** text box. To add a numeric value, type in the value directly into the text box. To clear the **Formula** text box, click on the **X** button next to the text box.

Note: A minimum of one operator must be included in the formula. If formula only consists of one field (e.g., formula = F1), then use the following formula: F1+0.

34. Click **Next**

Create a Custom Measure

Step 10: Create Formula: Select Format ?

32 * Select Format: Number

Step 11: Create Formula: Create Formula ?

Use the List of fields and Operator tables to create a formula by double clicking on the values. A preview of the formula will display under Formula. To reset click X.

33 **List of Fields**

Field	Description	Test
F1	Number of patients re-admitted	1
F2	Total number of patients	2

33 **Operators**

Operators
(
)
+
-

* Formula

X 33

34 **Next** Back Cancel

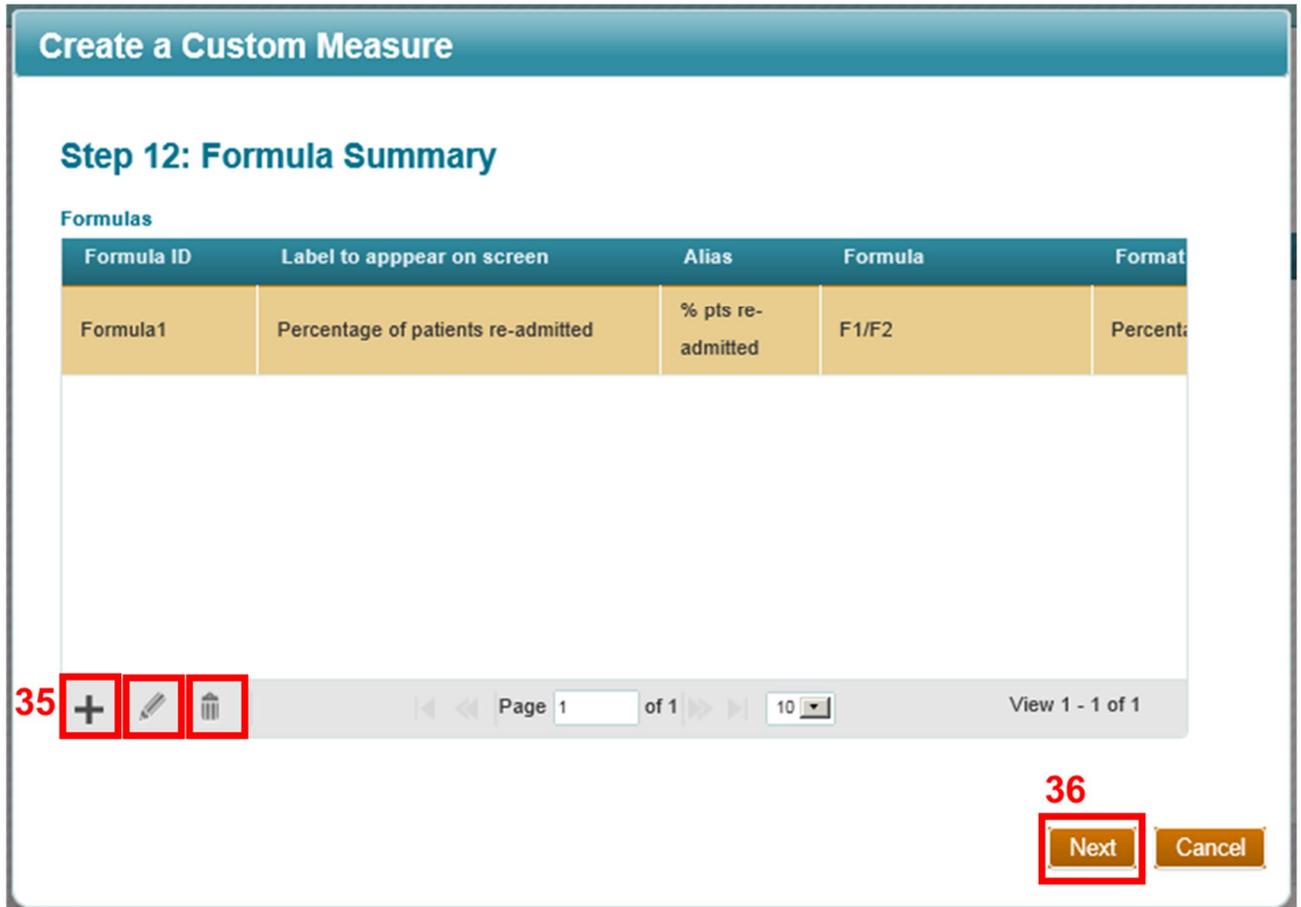
Figure 35 - Custom Measure - Create Custom Measure - Create Formula

Step 12: Formula Summary

35. A summary of all formulas that have been created can be viewed through the grid. A number of **action buttons** are located at the bottom of the formulas grid that can be

used to **add** another formula , **edit** an existing formula , or **delete** a formula .

36. Click the **Next** button to proceed



The screenshot shows a web interface titled "Create a Custom Measure". Underneath, it says "Step 12: Formula Summary". There is a section labeled "Formulas" containing a table with the following data:

Formula ID	Label to appear on screen	Alias	Formula	Format
Formula1	Percentage of patients re-admitted	% pts re-admitted	F1/F2	Percenta

Below the table, there are three action buttons: a plus sign (+), a pencil (edit), and a trash can (delete). These buttons are highlighted with a red box and labeled "35". To the right of these buttons is a pagination control showing "Page 1 of 1" and "View 1 - 1 of 1". At the bottom right, there are two buttons: "Next" and "Cancel". The "Next" button is highlighted with a red box and labeled "36".

Figure 36 - Custom Measure - Create Custom Measure - Formula Summary

Step 13: Run Chart Field

- 37. Select field(s) and formula(s) to be displayed in the Run Chart Report by ticking the checkbox next to each field or formula row in the grid.
- 38. Click **Next**

Display in Run Chart	Field/Formula
<input type="checkbox"/>	Number of patients re-admitted
<input type="checkbox"/>	Total number of patients
<input checked="" type="checkbox"/>	Percentage of patients re-admitted

37

Page 1 of 1 | 10 | View 1 - 3 of 3

38

Back Next Cancel

Figure 37 - Custom Measure - Create Custom Measure - Run Chart Field

- 39. Click **Yes** to view a preview of the measure, or **No** to skip preview and continue

Confirm

Would you like to preview the measure?

39 Yes No

Figure 38 - Custom Measure - Create Custom Measure - Run Chart Preview

40. If **Yes** was selected in #39, a page previewing the measure data entry will be displayed.
Click **OK** to continue.

Custom Measure Preview

Preview

Description:
<Enter description of measure>

Collection Plan: Weekly Start Date: End Date:

Annotations:

* Number of patients re-admitted

* Total number of patients

Percentage of patients re-admitted

40

Figure 39 - Custom Measure - Create Custom Measure - Custom Measure Preview

41. The Create a Custom Measure page will be displayed, which includes all aspects defined for the measure (i.e., measure name, measure type, collection plan, description, field(s), formula(s), baseline, target). To save the measure, click **Save**.
 Note: If any aspect of the measure must be edited, proceed to next section.

Create a Custom Measure

Change Area:

*** Name** **Team**

Type **Collection Plan**

Description

Field Formula

Field ID	Label to appear on screen	Alias	Format	Run Chart Field
F1	Number of patients re-admitted	# pts re-admitted	Number	<input type="checkbox"/>
F2	Total number of patients	Total # pts	Number	<input type="checkbox"/>

+ ✎ 🗑 ⬆ ⬇

Page 1 of 1 10

View 1 - 2 of 2

[Manage baseline](#)

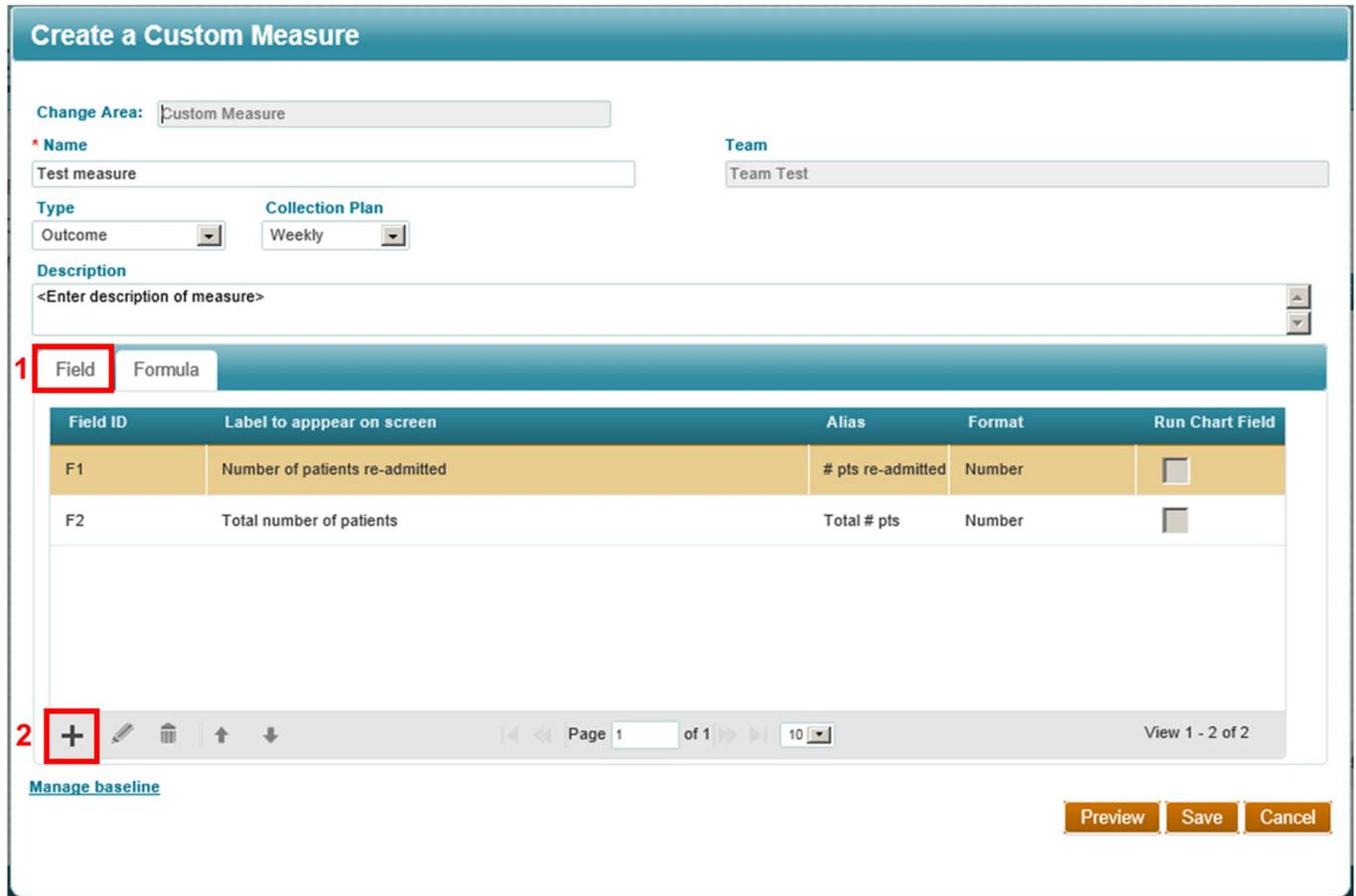
41

Figure 40 - Custom Measure - Create Custom Measure - Create a Custom Measure

42. The new custom measure will appear in the Associated Measure(s) grid on the Custom Measure page.

To Add a Field:

1. Select the **Field** tab in the bottom grid
2. Click the **Add**  icon under the grid



Create a Custom Measure

Change Area: Custom Measure

* Name: Test measure Team: Team Test

Type: Outcome Collection Plan: Weekly

Description: <Enter description of measure>

1 **Field** Formula

Field ID	Label to appear on screen	Alias	Format	Run Chart Field
F1	Number of patients re-admitted	# pts re-admitted	Number	<input type="checkbox"/>
F2	Total number of patients	Total # pts	Number	<input type="checkbox"/>

2      Page 1 of 1 10 View 1 - 2 of 2

[Manage baseline](#) Preview Save Cancel

Figure 41 - Custom Measure - Create a Custom Measure - Add Field

Add Field: Step 1 - Define Field Label and Alias

3. This step involves creating fields for the measure (e.g., numerator field, denominator field). Enter the name of the field in the **Label to display on screen** textbox.
4. Enter a shortened version of the field label, limited to 20 characters, in the **Alias** textbox. The alias will be displayed on some pages of the application where space is limited.

Add Field: Step 2 – Create Field: Define Max, Min and # of Decimals

The values defined in this step will serve as validation for the input for the field being created to ensure data quality.

5. Define the minimum value for the field by entering in a numeric value in the **Min** textbox

6. Define the maximum value for the field by entering in a numeric value in the **Max** textbox.
Note: This step is optional.
7. Define the number of decimal places that can be entered for the field by entering in a numeric value in the **# of decimals** textbox.

Add Field: Step 3

8. Select whether the field is mandatory or optional. If the field is mandatory, click on the Yes radio button next to **Is this field Mandatory?**; if the field is optional, click on the No radio button.

Add Field: Step 4

9. To be able to display the field on the Run Chart Report, click on the Yes radio button next to **Run Chart Field?**. To exclude the field from the Run Chart Report, click on the No radio button.
10. Click **Next**

Edit Custom Measure

Add Field: Step 1 - Define Field Label and Alias

3 * Label to display on screen: ?

4 * Alias: ?

Add Field: Step 2 - Create Field: Define Max, Min and # of Decimals

5 * Min ? 6 Max ? 7 * # of decimals ?

Add Field: Step 3

8 Is this field Mandatory? ? Yes No

Add Field: Step 4

9 Run Chart Field? ? Yes No

10 **Next** Cancel

Figure 42 - Custom Measure - Create a Custom Measure - Create Field

To Edit a Field:

1. Select the **Field** tab in the bottom grid.
2. Select the field to edit and click the **Edit**  icon under the grid.

Field ID	Label to appear on screen	Alias	Format	Run Chart Field
F1	Number of patients re-admitted	# pts re-admitted	Number	<input type="checkbox"/>
F2	Total number of patients	Total # pts	Number	<input type="checkbox"/>

Figure 43 - Custom Measure - Create a Custom Measure - Edit Field

3. The field label (**Label to display on screen**), field alias (**Alias**), field minimum (**Min**), field maximum (**Max**), number of decimals places (**# of decimals**), mandatory field option (**Is this field Mandatory?**) and display field on Run Chart option (**Run Chart Field?**) can be edited.
4. Click **Next** to save changes and return to Custom Measure page

Edit Custom Measure

Edit Field

Field ID
F1

3 * Label to display on screen: ?
Number of patients re-admitted

* Alias: ? # of pts re-admitted

* Min ? Max ? * # of decimals ?
0 0

Is this field Mandatory? ? Yes No

Add Field: Step 4

Run Chart Field? ? Yes No

4

Figure 44 - Custom Measure - Create a Custom Measure - Edit Field

To Add a Formula:

1. Select the **Formula** tab in the bottom grid.
2. Click the **Add +** icon under the grid.

The screenshot shows the 'Create a Custom Measure' interface. At the top, there is a header 'Create a Custom Measure'. Below it, there are several input fields: 'Change Area: Custom Measure', '* Name: Test measure', 'Team: Team Test', 'Type: Outcome', and 'Collection Plan: Weekly'. A 'Description' field contains the placeholder text '<Enter description of measure>'. Below the description is a tabbed interface with a 'Field' tab and a 'Formula' tab. The 'Formula' tab is selected and contains a table with one row of data. The table has columns for 'Formula ID', 'Label to appear on screen', 'Alias', 'Formula', 'Format', and 'Run Chart Field'. The row contains 'Formula1', 'Percentage of patients re-admitted', '% pts re-admitted', 'F1/F2', 'Percentage', and a checked checkbox. Below the table is a toolbar with an 'Add +' icon, a pencil icon, and a trash icon. The 'Add +' icon is highlighted with a red box and a '2' next to it. The 'Formula' tab is also highlighted with a red box and a '1' next to it. At the bottom right, there are 'Preview', 'Save', and 'Cancel' buttons. A 'Manage baseline' link is located at the bottom left.

Formula ID	Label to appear on screen	Alias	Formula	Format	Run Chart Field
Formula1	Percentage of patients re-admitted	% pts re-admitted	F1/F2	Percentage	<input checked="" type="checkbox"/>

Figure 45 - Custom Measure - Create a Custom Measure - Add Formula

Step 1 – Add Formula: Define Formula Label and Alias

3. This step involves creating a formula for the measure using the fields. Enter the name of the formula field in the **Label to display on screen** textbox.
4. Enter a shortened version of the formula label, limited to 20 characters, in the **Alias** textbox. The alias will be displayed on some pages of the application where space is limited.
5. Click **Next**

Create a Custom Measure

Step 1 - Add Formula: Define Formula Label and Alias

3 * Label to display on screen: ?

4 * Alias: ?

5 Next Cancel

Figure 46 - Custom Measure - Create a Custom Measure - Create Formula

Step 2 – Add Formula: Select Format and Formula

6. Select the type for the formula (i.e., a number or percentage) from the **Select Format** dropdown menu
7. Define the formula for calculating the measure. To select a field for the formula, double click on a field from the **List of Fields** grid. The field (e.g., F1) will be populated in the **Formula** text box. To select an operator for the formula, double click on an operator from the **Operators** list. The selected operator (e.g., +) will be populated in the **Formula** text box. Numeric values are also permitted in the **Formula** text box. To add a numeric value, type in the value directly into the text box. To clear the **Formula** text box, click on the **X** button next to the text box.

Note: A minimum of one operator must be included in the formula. If formula only consists of one field (e.g., formula = F1), then use the following formula: F1+0.

8. Click **Next**

Create a Custom Measure

Step 2 - Add Formula: Select Format and Formula

6 * **Select Format:** Number

7 **List of Fields**

Field	Description	Test
F1	Number of patients re-admitted	1
F2	Total number of patients	2
F3	Number of patients_2	3

7 **Operators**

- (
-)
- +
-

* **Formula**

X

8

Back Next Cancel

Figure 47 - Custom Measure - Create a Custom Measure - Create Formula

To Edit a Formula:

1. Select the **Formula** tab in the bottom grid.
2. Select the formula to edit and click the **Edit**  icon below the grid

Create a Custom Measure

Change Area:

* Name Team

Type Collection Plan

Description

Field **Formula** ¹

Formula ID	Label to appear on screen	Alias	Formula	Format	Run Chart Field
Formula1	Percentage of patients re-admitted	% pts re-admitted	F1/F2	Percentage	<input checked="" type="checkbox"/>

²  

Page 1 of 1 10 View 1 - 1 of 1

[Manage baseline](#)

Figure 48 - Custom Measure - Create a Custom Measure - Edit Formula

3. The formula label (**Label to display on screen**), formula alias (**Alias**), formula type (**Select Format**), formula (**Formula**), and whether the formula should be displayed on the Run Chart Report (**Run Chart Field?**) can be edited.
4. Click **Next** to save changes and return to Custom Measure page

Create a Custom Measure

Edit formula

3 * **Label to display on screen:**

* **Alias:** * **Select Format:** Percentage ▾

List of Fields

Field	Description	Test
F1	Number of patients re-admitted	1
F2	Total number of patients	2
F3	Number of patients_2	3

Operators

Operators
(
)
+
-

* **Formula**

X

Run Chart Field? Yes No

4 Next Cancel

Figure 49 - Custom Measure - Create a Custom Measure - Edit Formula

6.2 Edit Custom Measure

Custom Measures can be edited from the Custom Measure Page.

To Edit Custom Measure:

1. Click on the Custom Measure link from the navigation menu on the left panel
2. Select a measure from the **Associated Measure(s)** grid
3. Click on the **Edit**  icon under the grid

Custom Measure

Change Area:

Associated Measure(s)

Name	Team	Cycle	Health Service Provider	Type	Collection Plan
Percentage of patients complete care plan	Team #1__Cohort 1: Coordinated Care Plan	Cohort 1_	Hospital A (Test)	Outcome	Monthly
Wait time to elective hip surgery in Emergency (in hours)	Team #1__Cohort 1: Coordinated Care Plan	Cohort 1_	Hospital A (Test)	Outcome	Monthly

2

3

+   Clone | Page 1 of 1 | 10 | View 1 - 2 of 2

Figure 50 - Custom Measure - Edit Custom Measure

- On the Edit Custom Measure page, any aspect of the measure can be edited, including the measure name, measure type, collection plan, description, field(s), formula(s), baseline, target.
- Click **Save** to save changes to the Custom Measure

Edit Custom Measure

Change Area:

Name
 Team

Type
 Collection Plan

Description

Field ID	Label to appear on screen	Alias	Format	Run Chart Field
F1	Number of patients with complete care plan	# of comp care plan	Number	<input type="checkbox"/>
F2	Total number of patients	Total # pts	Number	<input type="checkbox"/>

Page 1 of 1 | 10 | View 1 - 2 of 2

[Manage baseline](#)

5

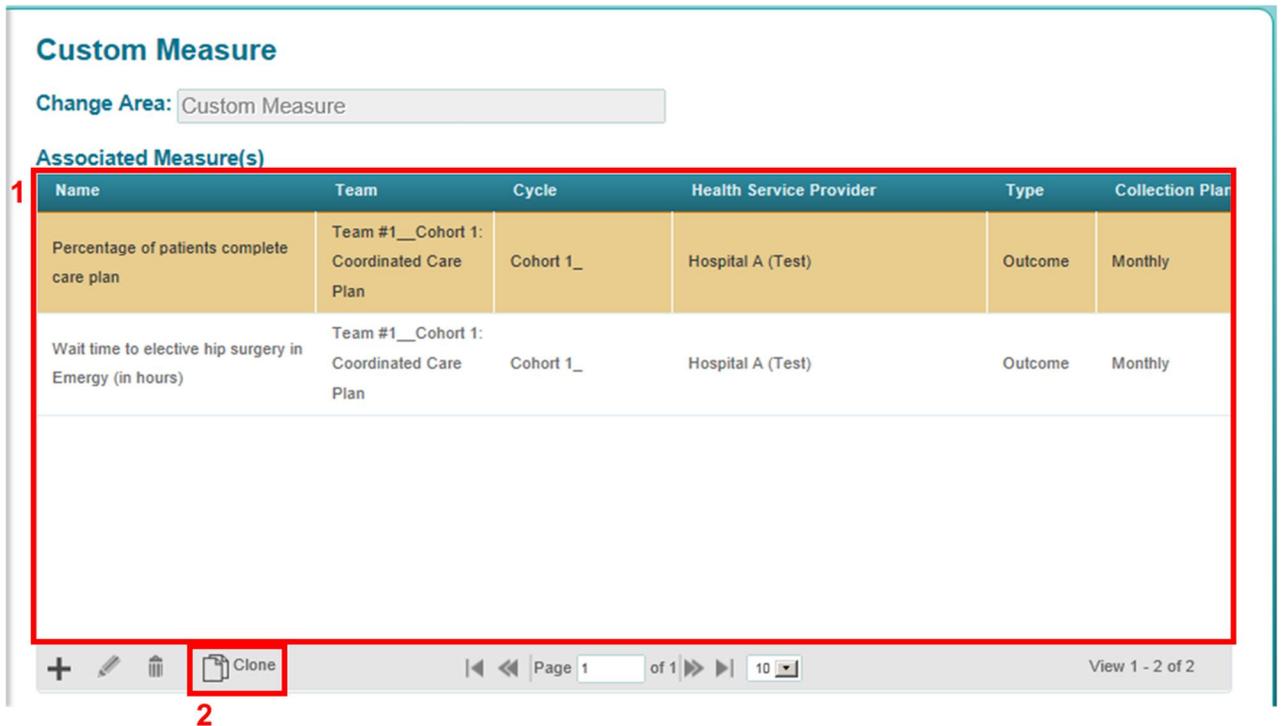
Figure 51 - Custom Measure - Edit Custom Measure

6.3 Clone Custom Measure

Custom Measures can be cloned (i.e., create a copy of an existing Custom Measure) from the Custom Measure Page. The cloned measure can be used as a template for a new Custom Measure and can be edited based on the requirements for the new measure.

To Clone Custom Measure:

1. Select a measure from the **Associated Measure(s)** grid
2. Click on the **Clone**  icon under the grid



The screenshot shows the 'Custom Measure' interface. At the top, there is a 'Change Area' dropdown menu set to 'Custom Measure'. Below it is the 'Associated Measure(s)' section, which contains a table with two rows of data. A red box labeled '1' highlights the table. At the bottom of the page, there is a toolbar with several icons, including a 'Clone' icon (a document with a plus sign) which is highlighted with a red box labeled '2'. The table data is as follows:

Name	Team	Cycle	Health Service Provider	Type	Collection Plan
Percentage of patients complete care plan	Team #1__Cohort 1: Coordinated Care Plan	Cohort 1_	Hospital A (Test)	Outcome	Monthly
Wait time to elective hip surgery in Emergency (in hours)	Team #1__Cohort 1: Coordinated Care Plan	Cohort 1_	Hospital A (Test)	Outcome	Monthly

Figure 52 - Custom Measure - Clone Custom Measure

3. A pop-up window will appear, confirming whether you want to clone the selected measure. Click **Yes** to proceed, or **No** to cancel.



The screenshot shows a 'Confirm' dialog box with a teal header. The text inside the dialog asks, 'Are you sure you want to clone the measure?'. At the bottom right of the dialog, there are two buttons: 'Yes' and 'No'. Both buttons are highlighted with red boxes, and a red number '3' is placed to the left of the 'Yes' button.

Figure 53 - Custom Measure - Clone Custom Measure – Confirmation message

Step 1: Define Baseline Range and Target

4. Define the Baseline period for the measure. Click on the **Calendar Control**  icon next to the **Baseline Start Date** field to select the start date for the baseline.
5. Click on the **Calendar Control**  icon next to the **Baseline End Date** field to select the end date for the baseline
6. Define the target for the measure. Select the type of target (i.e., a number – a specific value for the target, or a percentage – the specified percentage of improvement that would be applied to the baseline average to calculate the target value) from the **Target Type** dropdown menu.
7. Select an operator for the target (i.e., should the measure value be greater than [$>$], greater than or equal to [$>=$], less than [$<$], or less than or equal to [$<=$] the specified target?) from the **Target** dropdown menu.
Note: If the direction of improvement for the measure is up/higher, please select the operator greater than [$>$] or [$>=$]. If the direction of improvement for the measure is down/lower, please select the operator [$<$] or [$<=$].
8. Enter a numeric value in the textbox next to the **Target** dropdown. If the target type selection was number, enter the specific target value. If the target type selection was percentage, enter the percentage of improvement that should be applied to the baseline to calculate the target value (target value will be automatically calculated based on the percentage specified).
Note: This field should only contain numbers. Do not include any special characters. This is an optional step (i.e., if a target for the measure has not been defined, this field can be left blank).
9. Click **Next**

Clone Custom Measure

Step 1: Define Baseline range and Target

* Baseline Start Date: ? 01/01/2014 4 Baseline End Date: ? 02/28/2014 5

6 * Target Type: ?
Percentage

7 * Target:
>= 8 50

9 Next Cancel

Figure 54 - Custom Measure – Clone Custom Measure

Step 2: Verify and Edit

3. a) To edit the cloned Custom Measure, click on **Edit Cloned Measure**, or
b) To proceed with saving the cloned Custom Measure, click **Close**.

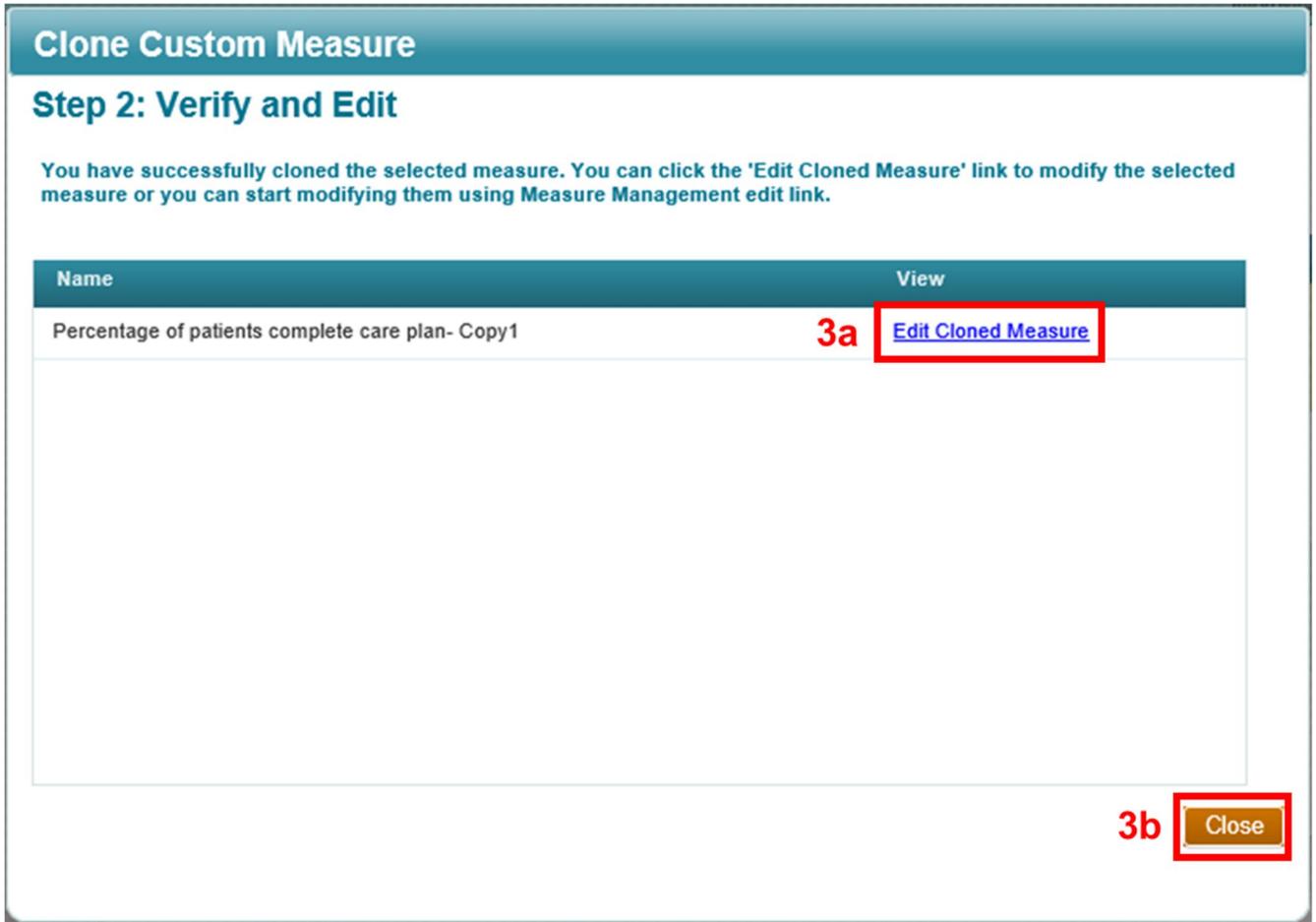


Figure 55 - Custom Measure - Clone Custom Measure

7. Exiting QIRAP

A **Close Window** button is located at the top right corner of the page.

To Exit QIRAP:

1. Click the **Close Window** button at the top right corner of the page.



Figure 56 - Exiting QIRAP

2. Click **Yes** to confirm exiting QIRAP or **No** to remain logged in to QIRAP.

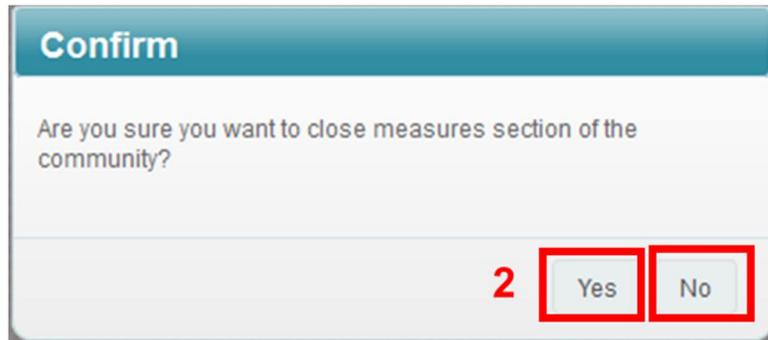


Figure 57 - Exiting QIRAP - Confirmation