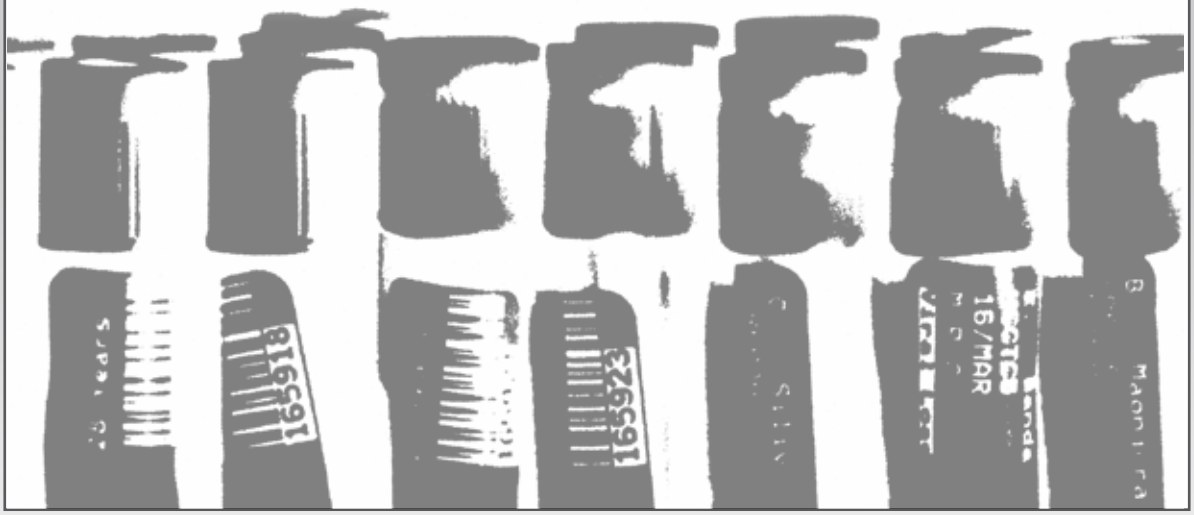
ForLab

Laboratory Product Quantification Tool

User Manual



CLINTON HEALTH ACCESS INITIATIVE

SCMS

SCMS and CHAI would like to acknowledge the following organizations for their contributions and support:

User Manual

Contents

Chapter 1

Overview

This section explains what ForLAB can do, why it should be used, and who can benefit from its use.

The ForLAB Laboratory Quantification Tool (ForLAB), a software tool, was designed to help program managers forecast the needs for their laboratory products. ForLAB provides information needed to create and follow-up actions to ensure the regular and consistent stock of laboratory products at the program or national level. Consistency of stock is the first step in meeting the basic objective of any logistics system, which is to provide—

- the right quantities
- of the right commodities
- in the right condition
- in the right place
- at the right time
- for the right cost.

These are the six rights of logistics management.

What ForLAB Can Do for You

ForLAB helps you achieve the right quantities at the right time.

ForLAB maintains—

1. Regions and facilities ordering tests including the number of working days for the laboratory and instruments at their disposal.
2. The test area, test group and test available for that instrument along with the product usage needed to perform the test.
3. Instruments available for each testing area along with the maximum throughput and number of control tests needed.
4. Products needed for each instrument along with the basic unit, minimum pack size and price for each.
5. Panels containing schedule information of patients that are recommended to receive tests, for each of the five major categories of testing (CD4, Chemistry, Hematology, Viral Load and other) along with other factors that may cause the actual volume of tests performed to differ significantly from the testing protocols like percentage of symptom directed test and test repeated due to clinical request.

With these data and an understanding of the methodologies required to calculate forecast consumption, ForLAB can calculate supply need based on the following methodologies—

1. Consumption methodology uses historic product consumption on the site level.
2. Service statistic methodology uses historic program service data at the site level.
3. Demographic methodology uses behavior of ART and pre-ART patients to forecast for a fixed 12 month period.

You can use this information with program policymakers, product suppliers, and donors to provide a rational basis for planning future product needs.

ForLAB is not the answer to every logistics question. It helps aggregate the quantity of each product needed to perform laboratory testing. ForLAB's utility is enhanced if your program has a standard operating procedure. Even without this underlying system, use ForLAB with whatever data are available. By beginning a rational and systematic forecasting process, you take the first step toward ensuring consistent stock levels.

Why Use ForLAB?

Because of the large number of commodities that need to be forecasted, the process of forecasting the consumption of laboratory commodities requires multiple resources and can be time intensive. As a program manager, you face a complex forecasting environment, characterized by—

1. An extensive list of commodities dependent on the scope of the forecast and the level of standardization in the country doing the forecast.
2. Program targets may not consider the testing capacity at each facility or level of the system to provide services.
3. Lack of communication and coordination between policy makers, service providers, funding sources, and procurement agents on issues related to the selection, quantification, and procurement of laboratory supplies.
4. Multiple purposes of use in testing for most consumables making it challenging for staff to collect, aggregate, and report data that will be useful during quantification.

You need to review the data to determine its validity and usefulness for forecasting. Accuracy of the quantification will depend on the availability, completeness, and reliability of the data collected. To ensure credibility and ownership of the forecasting results, you should obtain consensus through a consultative and participatory process for gathering inputs and fostering discussion making among key stakeholders.

ForLAB can provide this information.

Who Should Use ForLAB?

In a multi-product, multi-supplier environment, it is increasingly necessary that local program managers be empowered to do their own forecasting, pipeline monitoring, and procurement planning; they must also take charge of coordinating the activities of donors and local suppliers, as well as those of their own logistics management staff. Donor staff often has other priorities and little time to devote to the details of logistics management. Commercial suppliers have interests that may or may not correspond to the interests of your organization.

If you are the logistics manager or program manager for your organization, ForLAB can help.

While your managers and decision makers will be the primary users of ForLAB, the system can provide information to—

Purchasers/donors of commodities

Staff who finance the purchase of commodities can use ForLAB reports and graphs to understand the future requirements of a commodity.

Host-country policymakers

ForLAB reports and graphs can be used to help policymakers understand issues with the standard operating procedures and the implications of different decisions on the availability of the tests.

Chapter 2

Getting Started

This section explains how to install ForLAB and presents some of its standard features.

System Requirements

The following resources are recommended for use with ForLAB—

CPU	Pentium III or higher
Operating System	Windows XP, Windows 2003 Server or higher
Memory	256 MB
Hard Drive Space	500 MB
Video Adapter	SVGA with 800x600 resolution
Miscellaneous	SQL Server 2005 or higher .NET framework 3.5 or higher Windows ReportView 2010 or higher

How to Install ForLAB

ForLAB can be installed from a CD-ROM or the Internet.

Before You Begin

Before installing ForLAB, you must install SQL Server 2005, .NET Framework 3.5, and Windows ReportView 2010 or higher. These files are provided with the ForLAB CD or can be downloaded from the following links:

SQL Server 2005: http://www.microsoft.com/en-us/download/detials.aspx?id=1695

.Net Framework 3.5: http://www.microsoft.com/en-us/download/details.aspx?id=22

Windows ReportView 2010: http://www.microsoft.com/en-us/download/details.aspx?id=6442

Installing ForLAB from a CD

1 Start Microsoft Windows.

2 Insert the ForLAB CD.

The ForLAB installation should begin automatically.

3 Follow the on-screen instructions.

If the installation does not begin automatically—

4 Click on Start on the Windows Taskbar.

5 Click on Run from the pop-up menu.

6 In the Command Line box, type x:setup ("x" is the letter of your CD-ROM drive).

7 Click on the OK button, and follow the on-screen instructions.

After ForLAB is successfully installed, the ForLAB shortcut will be displayed on your desktop.

How to Start ForLAB

ForLAB can be started from the Windows desktop or the Windows taskbar.

Starting ForLAB from the Windows desktop

From the Windows desktop—

1 Locate and double-click on the ForLAB icon to start the application.

Starting ForLAB from the Windows taskbar

From the Windows taskbar—

1 Click on Start.

2 Click on Programs.

3 Locate and click on the ForLAB link.

Reinstalling ForLAB

To reinstall ForLAB—

1 Place the ForLAB CD in your CD-ROM drive.

2 Start the install process, and follow the instructions on your screen.

During the process, a message box is displayed instructing you to remove ForLAB from your computer.

3 Click on the Remove button to remove ForLAB from your computer.

4 Click on the Finish button when prompted.

After ForLAB has been removed—

5 Repeat the ForLAB installation procedure.

On-Line Help

ForLAB's On-Line Help is a supplement to the ForLAB User's Guide. On Line Help provides information about basic ForLAB functions.

1 Press the <F1> key to access On-Line Help.

Dashboards

Throughout ForLAB you will find simple Dashboards (Figure 1) that visually display the information in the application. When first opening the applications, you will be taken to the main dashboard which displays six different graphs.

In addition to this dashboard, there are other graphs available when you click on each of the three profiles in the tree view, i.e. Test Profile, Product Profile, and Laboratory Profile. Each of the graphs in the tools has a feature to copy, save as image, print and zoom.

1 Right click on the chart to use these additional features.

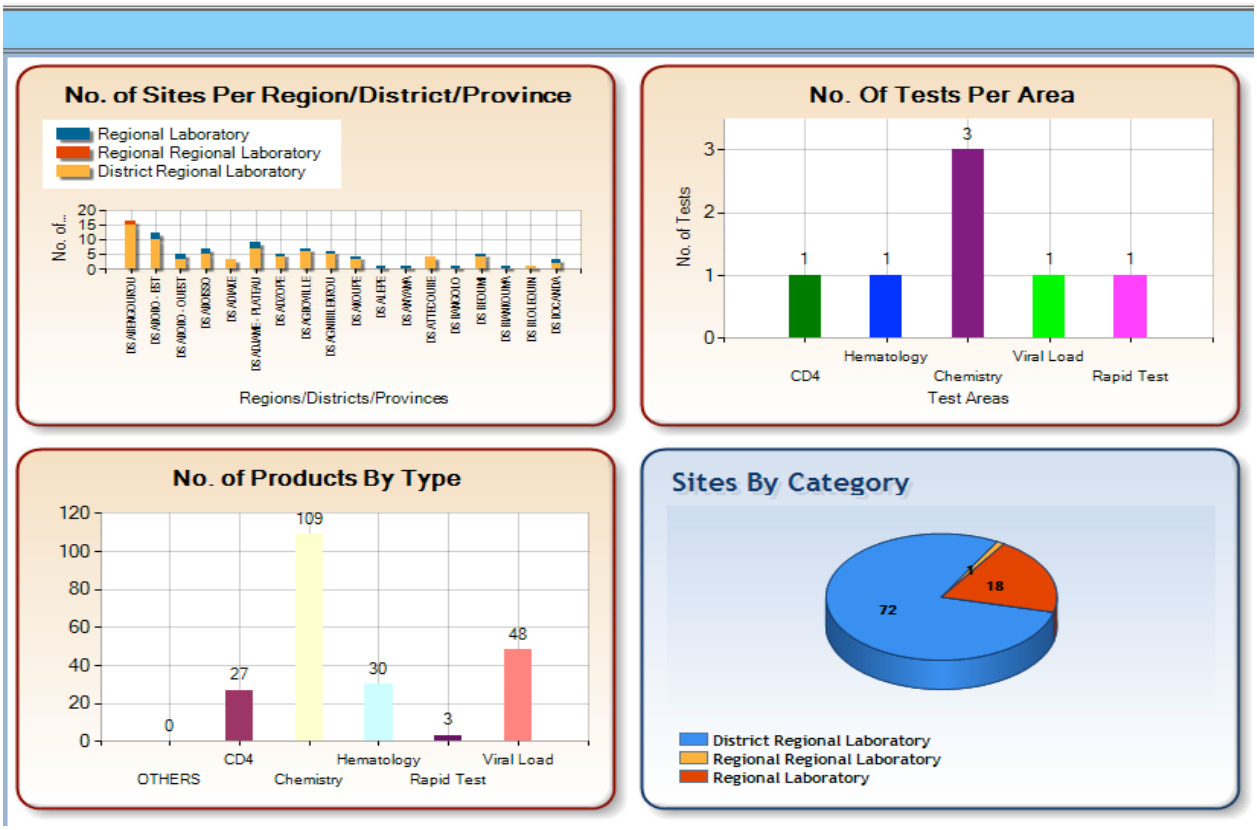


Figure 1. Dashboard

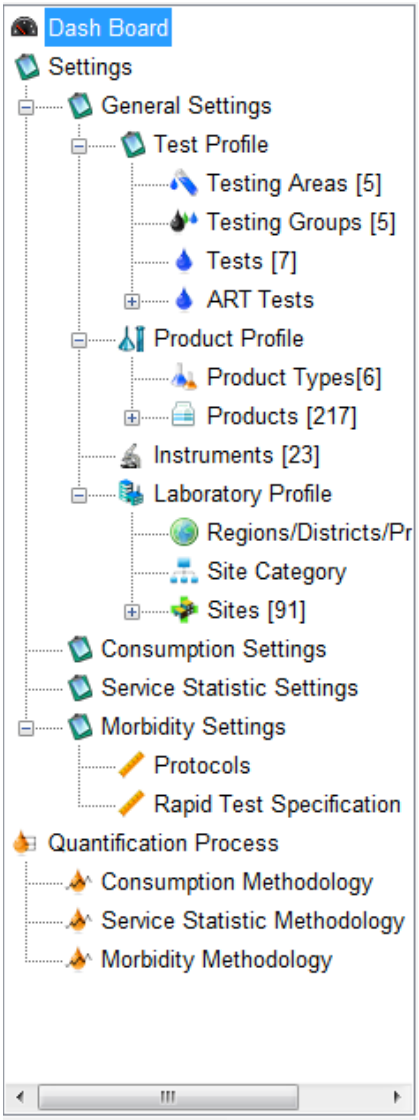


Figure 2. Tree View

Navigation Features

ForLAB has navigation features that help you move easily and quickly from one part of the system to another.

Tree view

This feature offers a quick way to navigate through the system. The tree view is partially expanded when you start ForLAB, and it remains open on the left side of the screen. Figure 2 shows an example of the tree view.

To use the tree view—

1 Click on the option you need, to display its associated screen.

To collapse a group of tree view options—

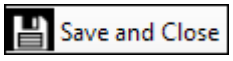
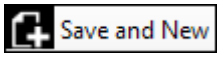
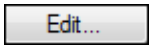
2 Click on a tree view option to collapse the option and hide its sub-options.

To expand a group of tree view options—

3 Click on a tree view option to expand and show its sub-options.

Buttons

The following buttons are most commonly used in ForLAB:

Button	Action
	Saves the record and closes the form.
	Saves the record and opens a blank form.
	Opens a blank form.
	Opens the selected record.
	Deletes the selected record.
	Closes form without saving.
	Moves to first page.

Button	Action
	Moves to previous page.
	Moves to next page.
	Moves to last page.
	Edit record.
	Delete record.
Select	Adds current selection to the list.
OK	Saves the record and closes the form.
Cancel	Cancels changes and closes the form.

Scroll Bars

Vertical and horizontal scroll bars are displayed on some ForLAB screens if there is more data than your screen can display at one time.

1 Click on one of the arrow buttons to move in the indicated direction:

Left	Up
Right	Down

Figure 3 displays an example of vertical and horizontal scroll bars.

Tip: To quickly scroll through a screen, click on the square button on the horizontal or vertical scroll bar, and hold down the left mouse button, while moving your mouse left and right or up and down.

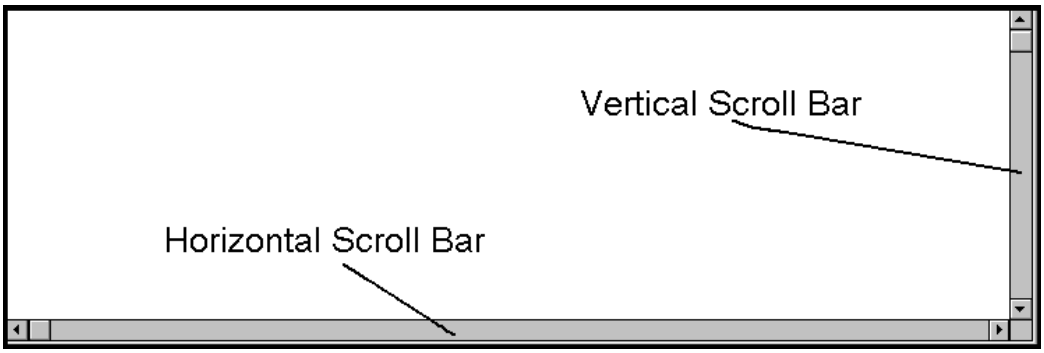


Figure 3. Vertical and horizontal scroll bars

Pull-Down Menus

Tip: You can also select an item from a pull-down menu by clicking on the menu and typing the first letter of the item you need.

Pull-down menus let you choose from a list. To use a pull-down menu—

1. Click on the arrow next to the menu to display its list.
2. Click on the item you want to select.

The selected item is displayed in the associated field.

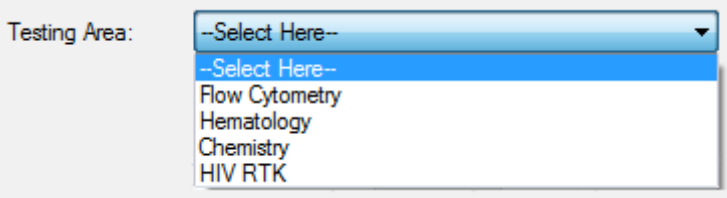


Figure 4. Pull-down menu

Keys for Editing Records

The following table lists keys you can use when editing records in ForLAB.

Keys for Editing Records	
F1	Displays On-Line Help.
Backspace	Deletes selection or character to the left of the cursor.
Delete	Deletes selection or character to the right of the cursor.
Esc	First press: Undoes changes to a field.
Insert	Second press: Undoes all changes to the record.
Tab	Toggles between insert and overwrite modes.
	Moves the cursor from one field to the next, and moves the cursor from one button to another without activating buttons.

Chapter 3

Database Management

This section explains how to connect to and manage SQL Server databases in ForLAB.

Accessing the Database Control Panel

After you install ForLAB and click on the ForLAB icon for the first time, the Database Control Panel is displayed. (Figure 5) You can return to this screen by –

1. Click on the Data Management Menu Bar option.
2. Click on Database Control panel in the dropdown list.

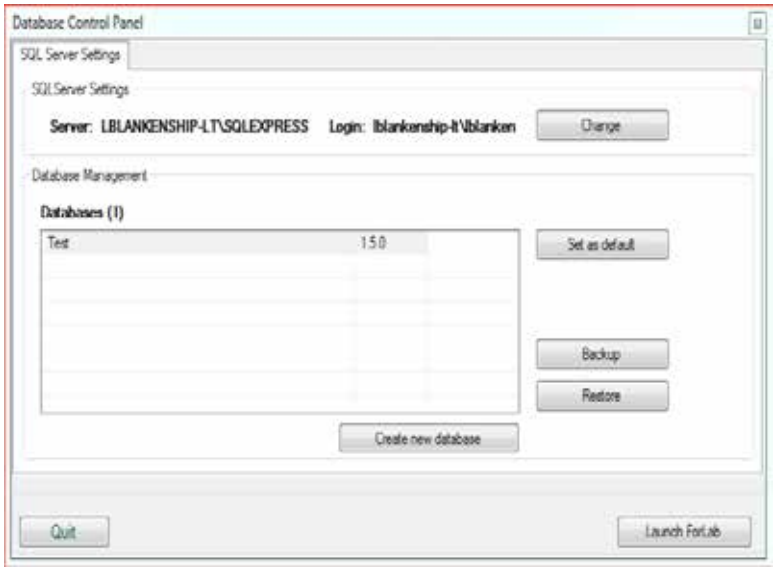


Figure 5. Database Control Panel

SQL Server Settings

After you install ForLAB and click on the ForLAB icon for the first time, the Database Control Panel is displayed. (Figure 5) You can return to this screen by –

1. Open the Database Control panel.
2. Click the Change button.

ForLAB displays the Connect to SQL Server screen similar to Figure 6.

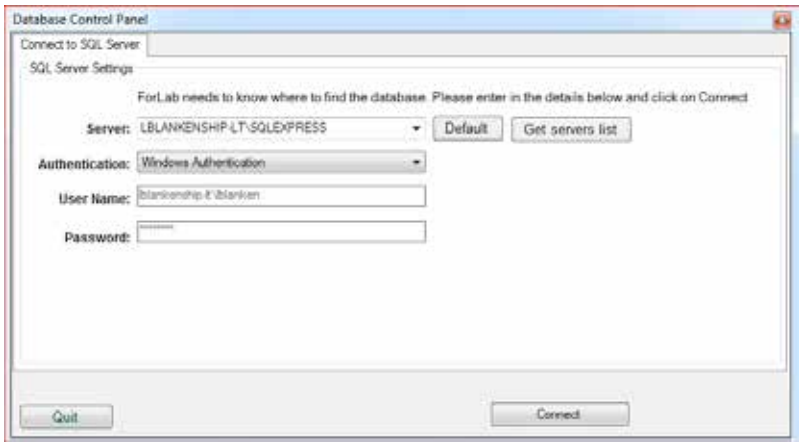


Figure 6. Connect to SQL Server

3 Select the correct server from the Server dropdown list.

4 Select the Authentication method from the dropdown list.

5 Enter the appropriate User Name and Password for the authentication method selected.

6 Click Default to set this information as the default connection.

7 Click Quit to cancel changes and return to the Database Control Panel

Or, click Connect to connect to the selected server.

Creating a New Database

To create a new database—

1 Open the Database Control Panel.

2 Click on the Create New Database button.

3 Type the database name you wish to call your new database.

4 Click OK.

A database with the name provided is created and displayed in the Databases list box.

5 Click Set as Default to make this database the default data file for ForLAB.

6 Click Quit to return to the application without changing databases or click Launch ForLAB to restart the application.

Each time you open ForLAB, the default database will automatically open.

Switching between Databases

To switch to another database from within the ForLAB tool—

1. Open the Database Control panel.
2. Select the database you would like to open in the list box.
3. Click Set as Default to make this database the default data file for ForLAB.
4. Click Launch ForLAB to start the application.

Backing up a Database

The Backup option of the ForLAB Database Control Panel allows you to make a copy of the current database. The copy can only be saved to your hard disk. Use this option to archive the data.

1. Open the Database Control panel.
2. Select the database you would like to open in the list box.
3. Click on the Backup button.

ForLAB displays a window so that you can select where the copy will be stored.

4. Select the location where you want to store the copy.
5. Click on the Open button to save the data to the selected location.

The data is saved.

Restoring a Database

The Restore option of the ForLAB Database Control Panel allows you to make a restore a file not found in the list box. Use this option when sharing file with other users via email.

1. Open the Database Control panel.
2. Click on the Restore button.

ForLAB displays a window so that you can select the file to be restored.

3. Select the file you would like to restore.
4. Click on the Open button to add the database to the list box.
5. Click Set as Default to make this database the default data file for ForLAB.
6. Click Launch ForLAB to start the application.

The data is restored.

Chapter 4

Test Profile

The Test Profile tree view options enable you to maintain the different Testing Areas, Testing Groups, and Tests available.

Testing Area vs. Testing Group vs. Test

A Testing Area is the platform of laboratory services that is to be incorporated in the quantification. For example cytology, serology, hematology, chemistry etc. Testing Group refers to the test profile that is associated with the testing group. For example for hematology, you have full blood count or in flow cytometry, you will have CD4 or in chemistry, you will have liver function tests, enzyme test etc.

Testing Area

The Testing Area tree view option enables you to modify Testing Area names and other information.

1. Click on Settings tree view option.
2. Click on the General Settings tree view option.
3. Click on Test Profile tree view option.
4. Click on the Testing Area tree view option.

ForLAB opens the Testing Area screen (Figure 7).

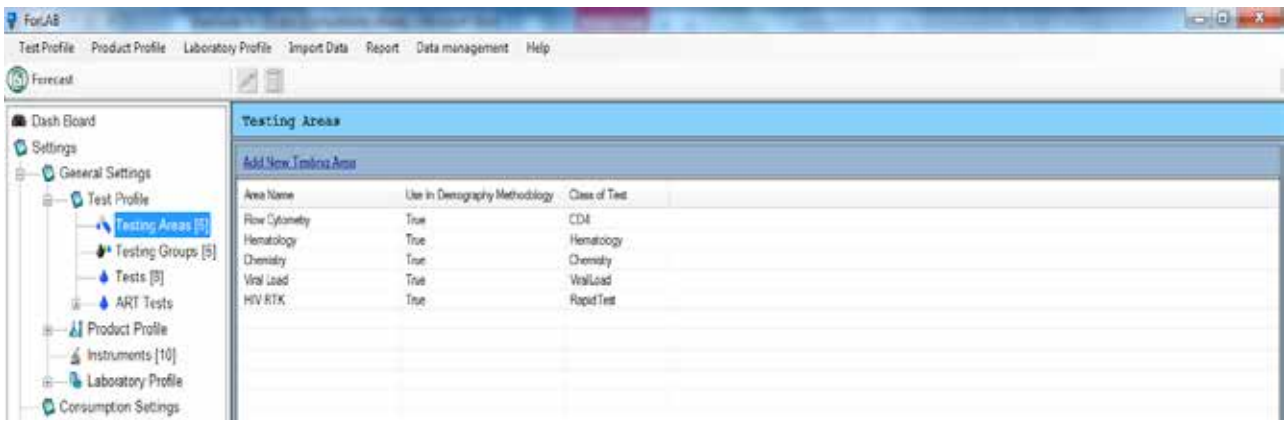


Figure 7. Testing Area screen

Adding Testing Area Data

With the Testing Area screen displayed—

1 Click on the Add New Testing Area link to display a blank Testing Area data entry form (Figure 8).

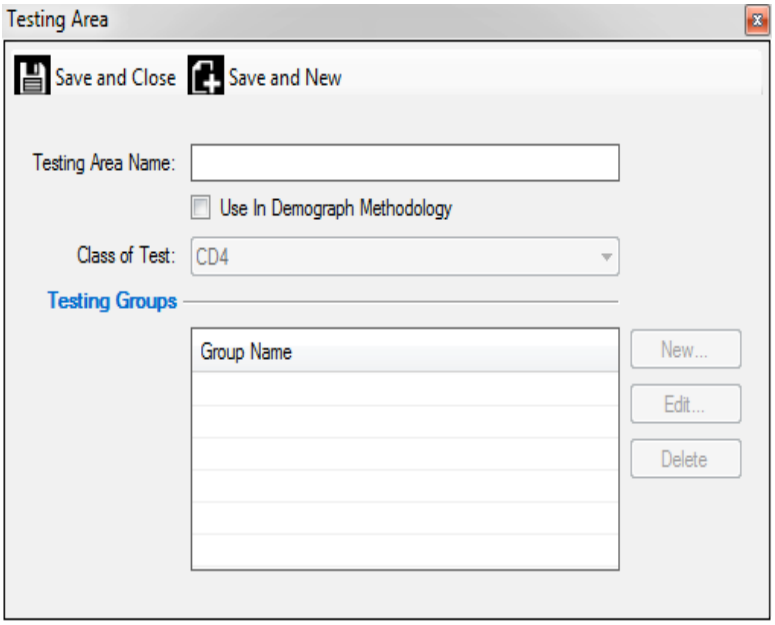


Figure 8. Testing Area data entry form

2 Type the name of the Testing Area.

The Use in Demographic Methodology field specifies if this Testing Area can be included when forecasting based on Demographic Methodology.

3 Place a checkmark in the Use in Demographic Methodology field if Testing Area can be used.

The Class of Test field is only enabled when the Testing Area is included in Demographic Methodology.

4 Select the Class of Test from the dropdown field.

When you finish—

5 Click on the Save and Close button to save the data, and return to the Testing Area screen.

Or, click on the Save and New button to save the data, and display a blank Testing Area data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Testing Area screen.

Editing Testing Group Data

Existing Testing Group data can be edited, as explained below.

With the Testing Group screen displayed—

1 Double click on the Testing Group in the Testing Group window that you want to edit.

Data associated with the selected Testing Area is displayed in the Testing Area data entry form.

2 Click on the field you want to edit, and enter the new data.

Testing Groups

Testing Group Section lists the Testing Groups in the application that are included in the Testing Area. This section is only enabled when editing a Testing Area.

TO ADD TESTING GROUP –

1 Click on the New button to display a blank Testing Group data entry form (Figure 10).

2 See Adding Testing Group Data on page 18 for information on completing the Testing Group data entry form.

TO EDIT AN TESTING GROUP –

1 Select the Testing Group you want to edit from the list of Testing Groups.

2 Click the Edit button to display the Testing Group data entry form for that Testing Group.

3 See Adding Testing Group Data on page 18 for information on completing the Testing Group data entry form.

TO DELETE A TESTING GROUP –

1 Select the Testing Group you want to delete from the list of Testing Groups.

2 Click the Delete button to display the Testing Group data entry form for that Testing Group.

If the Testing Group can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Testing Group because it is associated with other records ForLAB will display a message window.

When you finish—

3 Click on the Save and Close button to save the data, and return to the Testing Area screen.

Or, click on the Save and New button to save the data, and display a blank Testing Area data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Testing Area screen.

Deleting a Testing Area

Use the Delete button to delete a Testing Area.

With Testing Area screen displayed—

1. Select the Testing Area that you want to delete.
2. Click on the Delete button.

If the Testing Area can be deleted, ForLAB will display a confirmation message.

3. Click on Yes to confirm the delete.

If you cannot delete the Testing Area because it is associated with other records ForLAB will display a message window.

Testing Groups

The Testing Groups tree view option enables you to modify Testing Groups names and abbreviations.

1. Click on Settings tree view option.
2. Click on the General Settings tree view option.
3. Click on Test Profile tree view option.
4. Click on the Testing Groups tree view option.

ForLAB opens the Testing Groups screen (Figure 9).

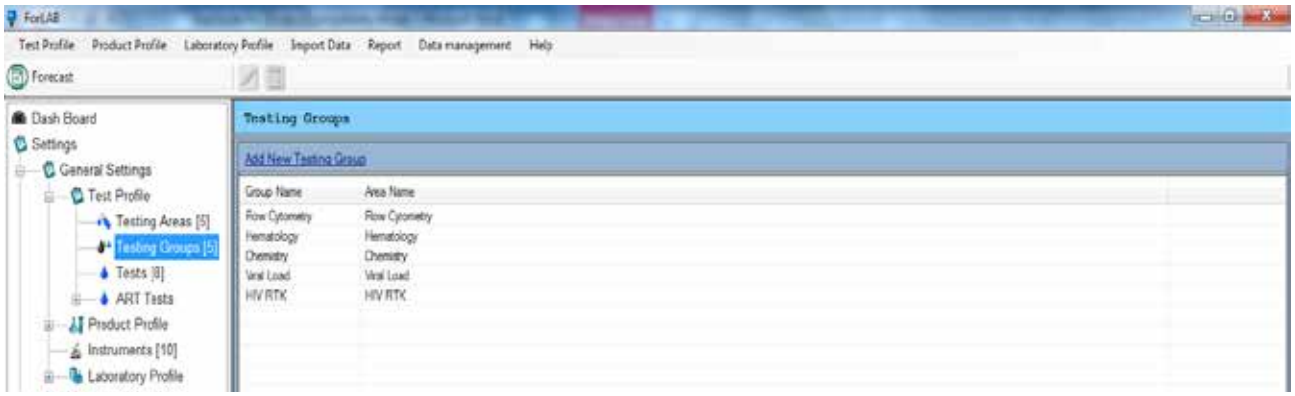


Figure 9. Testing Group screen

Adding Testing Group Data

With the Testing Groups screen displayed—

1 Click on the Add New Testing Group link to display a blank Testing Groups data entry form (Figure 10).

Figure 10. Testing Group data entry form

2 Type the name of the Testing Group.

The Testing Area field identifies the testing area where the Testing Groups belongs.

3 Click on the arrow next to the Testing Area field, and select an appropriate area from the pull-down menu.

The Tests field will list the entire test assigned to this Testing Group. When you finish—

4 Click on the Save and Close button to save the data, and return to the Testing Group screen.

Or, click on the Save and New button to save the data, and display a blank Testing Group data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Testing Group screen.

Editing Testing Group Data

Existing Testing Group data can be edited, as explained below.

With the Testing Group screen displayed—

1 Double click on the Testing Group in the Testing Group window that you want to edit.

Data associated with the selected Testing Group is displayed in the Testing Group data entry form.

2 Click on the field you want to edit, and enter the new data.

When you finish—

3 Click on the Save and Close button to save the data, and return to the Testing Group screen.

Or, click on the Save and New button to save the data, and display a blank Testing Group data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Testing Group screen.

Deleting a Testing Group

Use the Delete button to delete a Testing Group.

With the Testing Group screen displayed—

1 Select the Testing Group that you want to delete.

2 Click on the Delete button.

If the Testing Group can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Testing Group because it is associated with other records ForLAB will display a message window.

Tests

The Tests tree view option enables you to modify Test names and abbreviations.

1 Click on Settings tree view option.

2 Click on the General Settings tree view option.

3 Click on Test Profile tree view option.

4 Click on the Tests tree view option.

ForLAB opens the Tests screen (Figure 11).

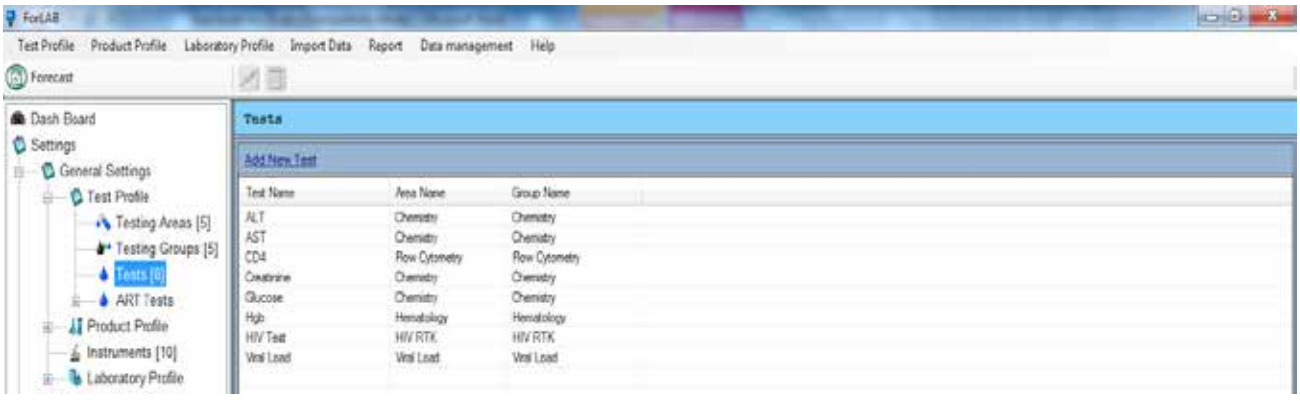


Figure 11. Tests screen

Adding Test Data

With the Tests screen displayed—

1 Click on the Add New Test link to display a blank Test data entry form (Figure 12).

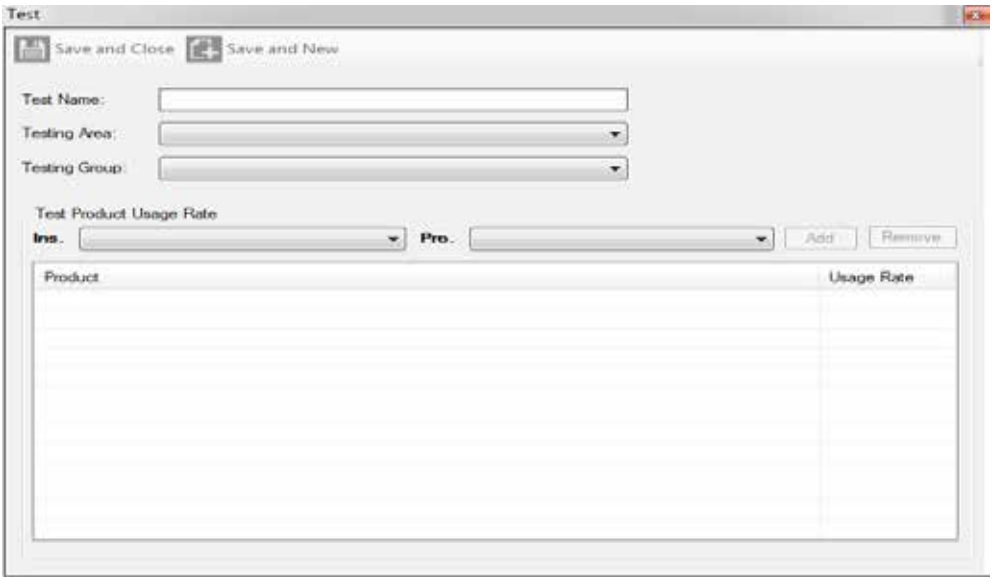


Figure 12. Test data entry form

2 Type the name of the Test.

The Testing Area field identifies the testing area where the Test belongs.

3 Click on the arrow next to the Testing Area field, and select an appropriate area from the pull-down menu.

The Testing Group field identifies the testing group where the Test belongs.

4 Click on the arrow next to the Testing Group field, and select an appropriate group from the pull-down menu.

The Product Usage field allows the user to select the instrument and product used to perform this Test along with the Usage rate for the product.

5 Click on the arrow next to the Ins. field, and select an appropriate instrument from the pull-down menu.

6 Click on the arrow next to the Pro. field, and select an appropriate Product from the pull-down menu.

7 Click on Add button to add the Instrument/Product to the Test.

8 Double Click the Usage Rate field to enter the correct usage rate for the product.

TO REMOVE A PRODUCT FROM A TEST—

1 Select the Product from the Product Usage list.

2 Click on Remove button to remove the Product from the Test.

When you finish—

9 Click on the Save and Close button to save the data, and return to the Test screen.

Or, click on the Save and New button to save the data, and display a blank Test data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Test screen.

Editing Test Data

Existing Test data can be edited, as explained below.

With the Test screen displayed—

1 Double click on the Test in the Test window that you want to edit.

Data associated with the selected Test is displayed in the Test data entry form.

2 Click on the field you want to edit, and enter the new data.

When you finish—

3 Click on the Save and Close button to save the data, and return to the Test screen.

Or, click on the Save and New button to save the data, and display a blank Test data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Test screen.

Deleting a Test

Use the Delete button to delete a Test.

With the Test screen displayed—

1 Select the Test that you want to delete.

2 Click on the Delete button.

If the Test can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Test because it is associated with other records ForLAB will display a message window.

ART Tests

ART Tests are necessary since forecasting with the morbidity methodology models behavior of ART and pre-ART patients.

1 Click on Settings tree view option.

2 Click on the General Settings tree view option.

3 Click on Test Profile tree view option.

4 Click on the ART Tests tree view option to expand the list of ART Test types.

5 Click on the ART test type

ForLAB opens the ART Tests screen for the selected ART test type (Figure 13).

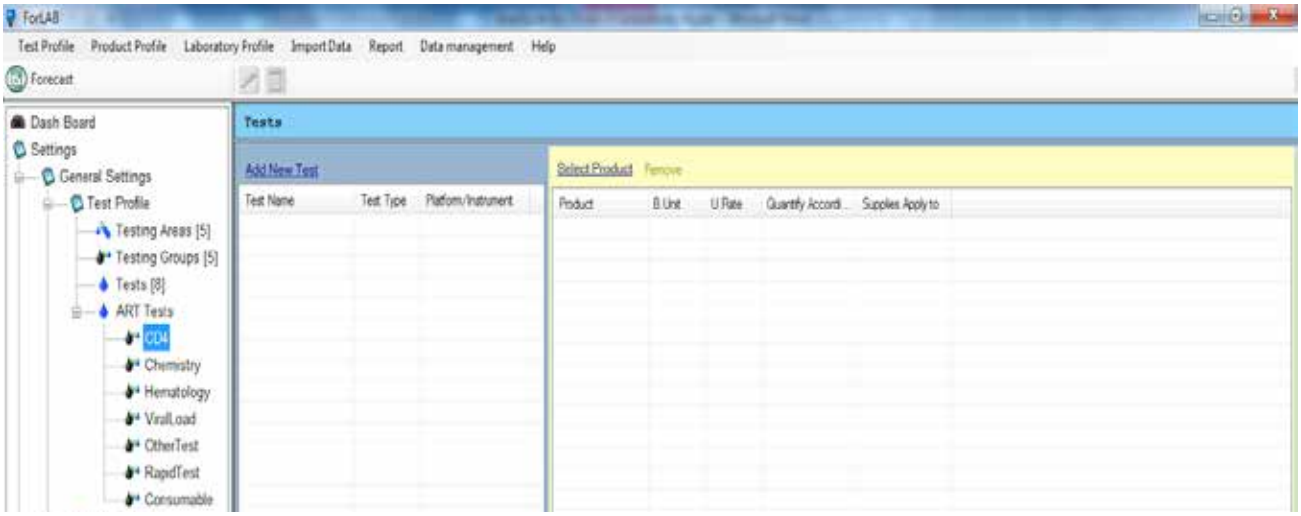


Figure 13. ART Tests screen

Adding Test Data

With the ART Tests screen displayed—

- Click on the Add New Test link to display a blank Morbidity Test data entry form (Figure 14).

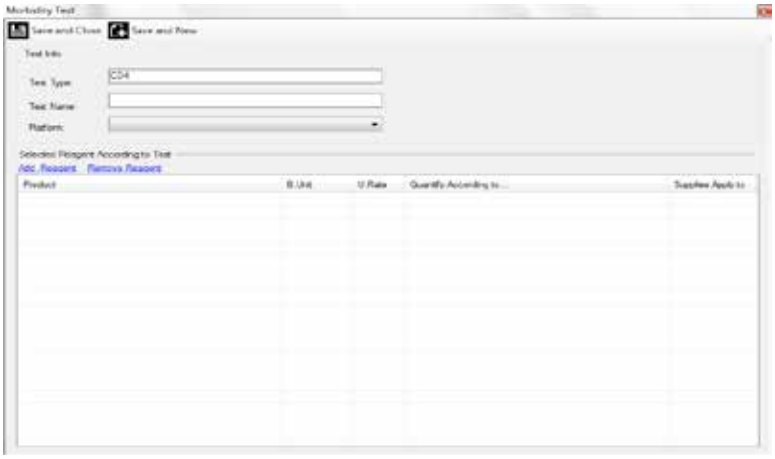


Figure 14. Morbidity Test data entry form

The Test Name field is populated when you save the test.

The Platform field identifies the instrument used in the test.

1 Click on the arrow next to the Platform field, and select an appropriate instrument from the pull-down menu.

2 Click Save and Close.

The Selected Reagent According to Test field allows the user to select the reagents used to perform this Test along with the Usage rate for the product and the process for calculating the quantification (Quantify According to…).

3 Double click on the test you just added.

4 Click Add Reagent to add a new reagent to Selected Reagent According to Test (Figure 15).

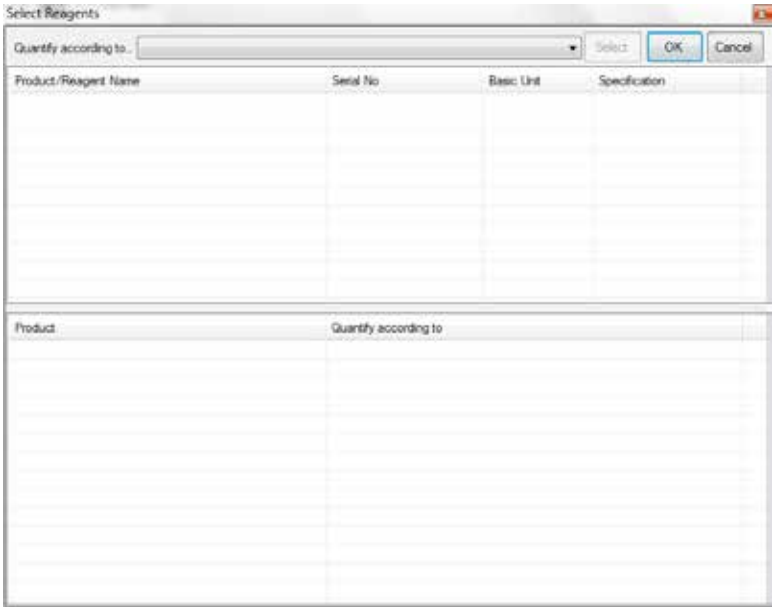


Figure 15. Select Reagents

5 Click on the arrow next to the Quantify According to… field, and select the appropriate process from the pull-down menu.

6 Click on the Product/Reagent Name that is will be quantified in this test

7 Click the Select button.

The selected Product/Reagent Names will be added to the list at the bottom of the form.

8 Repeat steps 6 -8 for each Reagent quantified in this test.

9 When finished, click OK to save the form and return to the Morbidity Test data entry form.

Or, click on the Cancel button to cancel all changes and return to the Morbidity Test data entry form.

TO REMOVE A REAGENT FROM A MORBIDIY TEST—

1 Select the Product from the Selected Reagent According to Test list.

2 Click on Remove Reagent link to remove the Product from the Test.

When you finish—

10 Click on the Save and Close button to save the data, and return to the Test screen.

Or, click on the Save and New button to save the data, and display a blank Morbidity Test data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the ART Test screen.

Adding Reagents for All Tests

In some cases, products can be used in an ART test independent of the specific instrument used. These products can be entered separately. With the ART Tests screen displayed—

1. Click Select Product Link to add a new reagent to the ART Test (Figure 15).
2. Click on the arrow next to the Quantify According to… field, and select the appropriate process from the pull-down menu.
3. Click on the Product/Reagent Name that is will be quantified in this test.
4. Click the Select button.

The selected Product/Reagent Names will be added to the list at the bottom of the form.

5. Repeat steps 2 -4 for additional Reagents.
6. When finished, click OK to save the form and return to the ART Test screen.

Or, click on the Cancel button to cancel all changes and return to the ART Test screen.

TO REMOVE A REAGENT FROM AN ART TEST—

1. Select the Product from the list.
2. Click on Remove link to remove the Product from the ART Test screen.

Editing Test Data

Existing ART Test data can be edited, as explained below.

With the appropriate ART Test screen displayed—

1. Double click on the Test in the Test window that you want to edit.

Data associated with the selected Test is displayed in the Morbidity Test data entry form.

2. Click on the field you want to edit, and enter the new data.

When you finish—

3. Click on the Save and Close button to save the data, and return to the ART Test screen.

Or, click on the Save and New button to save the data, and display a blank Morbidity Test data entry form

Or, click on the red X in the upper right hand corner to disregard all changes and return to the ART Test screen.

Deleting a Test

Use the Delete button to delete a Test.

With the ART Test screen displayed—

1 Select the Test that you want to delete.

2 Click on the Delete button.

If the Test can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Test because it is associated with other records ForLAB will display a message window.

Chapter 5

Product Profile

The Product Profile tree view options enable you to maintain the different Product Types and Products available.

Product Type

The Product Type tree view option enables you to modify Product Type names and other information.

1. Click on Settings tree view option.
2. Click on the General Settings tree view option.
3. Click on Product Profile tree view option.
4. Click on the Product Type tree view option.

ForLAB opens the Product Type screen (Figure 16).

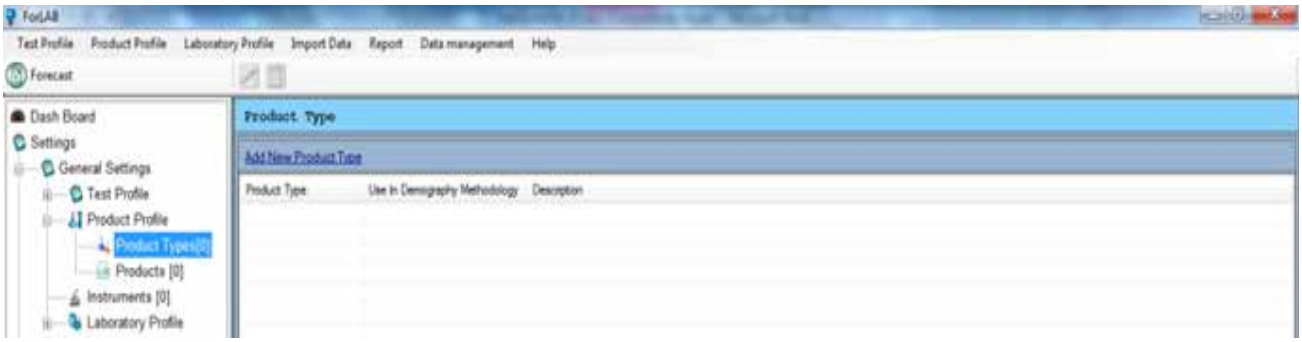


Figure 16. Product Type screen

Adding Product Type Data

With the Product Type screen displayed—

1. Click on the Add New Product Type link to display a blank Product Type data entry form (Figure 17).

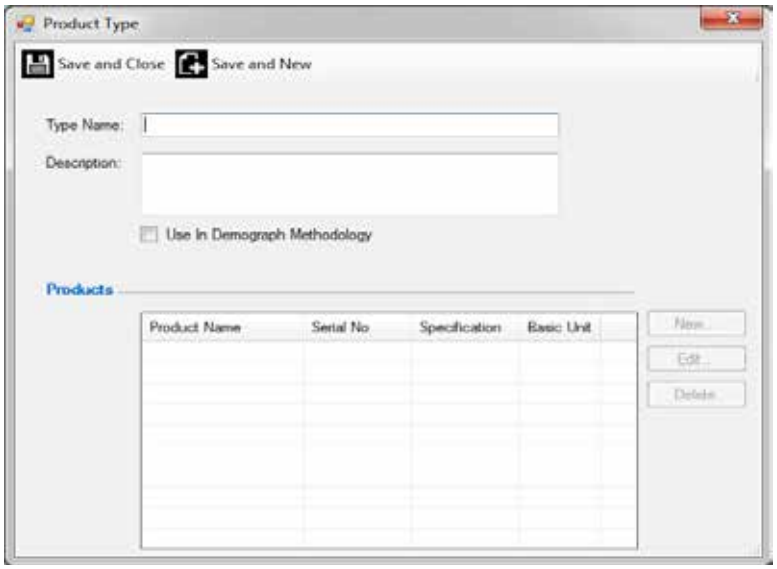


Figure 17. Product Type data entry screen

2 Type the name of the Product Type.

3 Type a description of the Product Type.

The Use in Demographic Methodology field specifies if this Product Type can be included when forecasting based on Demographic Methodology.

4 Place a checkmark in the Use in Demographic Methodology field if Product Type can be used.

The Class of Test field is only enabled when the Product Type is included in Demographic Methodology.

5 Select the Class of Test from the dropdown field.

When you finish—

6 Click on the Save and Close button to save the data, and return to the Product Type screen (Figure 16).

Or, click on the Save and New button to save the data, and display a blank Product Type screen.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Product Type screen.

Editing Product Type Data

Existing Product Type data can be edited, as explained below.

With the Product Type screen displayed—

1 Double click on the Product Type in the Product Type window that you want to edit.

Data associated with the selected Product Type is displayed in the Product Type data entry form.

2 Click on the field you want to edit, and enter the new data.

Products

Product Section lists the Products in the application that are included in the Product Type. This section is only enabled when editing a Product Type.

TO ADD PRODUCT –

1. Click on the New button to display a blank Product data entry form (Figure 19).
2. See Adding Product Data on page 18 for information on completing the Product data entry form.

TO EDIT AN PRODUCT –

1. Select the Product you want to edit from the list of Product.
2. Click the Edit button to display the Product data entry form for that Testing Group.
3. See Adding Product Data on page 18 for information on completing the Product data entry form.

TO DELETE A PRODUCT –

1. Select the Product you want to delete from the list of Product.
2. Click the Delete button to display the Product data entry form for that Product.

If the Product can be deleted, ForLAB will display a confirmation message.

3. Click on Yes to confirm the delete.

If you cannot delete the Product because it is associated with other records ForLAB will display a message window.

When you finish—

3. Click on the Save and Close button to save the data, and return to the Product Type screen.

Or, click on the Save and New button to save the data, and display a blank Product Type data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Product Type screen.

Deleting a Product Type

Use the Delete button to delete a Product Type.

With Product Type screen displayed—

1. Select the Product Type that you want to delete.
2. Click on the Delete button.

If the Product Type can be deleted, ForLAB will display a confirmation message.

3. Click on Yes to confirm the delete.

If you cannot delete the Product Type because it is associated with other records ForLAB will display a message window.

Products

The Products tree view option enables you to modify Products names and abbreviations.

1. Click on Settings tree view option.
2. Click on the General Settings tree view option.
3. Click on Product Profile tree view option.
4. Click on the Products tree view option.

ForLAB opens the Testing Groups screen (Figure 18).

Figure 18. Product Screen

Adding Products Data

With the Products screen displayed—

1. Click on the Add New Product link to display a blank Product data entry form (Figure 19).

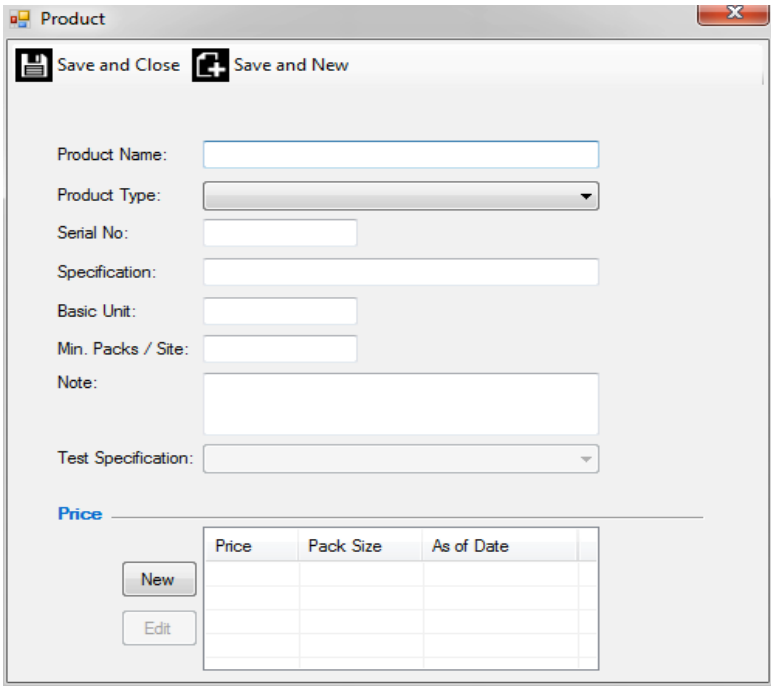


Figure 19. Product data entry form

2 Type the name of the Products.

The Product Type field identifies the product type where the Products belong.

3 Click on the arrow next to the Product Type field, and select an appropriate area from the pull-down menu.

The Serial Number field identifies the serial number of the product used in procurement.

4 Type the serial number of the Product.

The Specification field identifies the manufacturer's specification or the national specification of the instrument (i.e. Blood Collection Tube, 4 ml, plastic with screw cap, red top, and 100/pack). Note that this specification is important in identifying the products during procurement. If this specification is wrong, you may have the wrong product procured for you. It is therefore in the interest of the country that the specification is complete. If you know the manufacturers specification, you can use it.

5 Type the specifications of the Product.

The Basic Unit is the unit of measure used to count the product at the usage level.

6 Type the basic unit of the Product.

The Minimum Packs/Site is the minimum pack size available at the central store that is used for procurement or issued to the lower level, if the same.

7 Type the minimum packs per site for the Product.

The Notes field identifies optional notes on the product.

8 Type optional notes for the Product.

The Test Specification field indicates which category the test belongs if it is part of broader tests. For example ALT is part of enzyme tests. But this can be left blank for tests that are not part of broader specification. For example CD4 is a known test.

9 Type the test specification for the Product.

Price

The Price group identifies the price, pack size and effective date for the product.

TO ADD A PRICE–

1 Click on New button to open the Price Input dialog box (Figure 20).

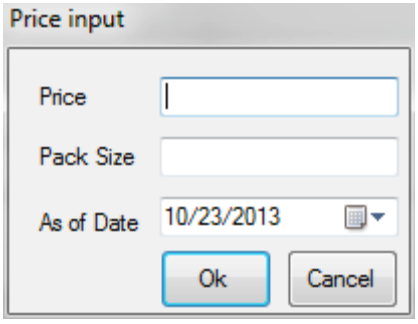


Figure 20. Price Input dialog box

2 Type in the Price of the Product.

3 Type in the Pack size of the Product.

4 Type in the As Of Date of the Price.

5 Click on the OK button to save the data, and return to the Product data entry screen.

Or, click on the Cancel button to return to the Product data entry screen without saving.

TO EDIT AN PRICE–

1 Select the price that is no longer available at the site

2 Click on the Edit Button to open the Price Input dialog box (Figure 20).

3 Click on the field you want to edit, and enter the new data.

4 Click on the OK button to save the data, and return to the Product data entry screen.

Or, click on the Cancel button to return to the Product data entry screen without saving.

When you finish—

10 Click on the Save and Close button to save the data, and return to the Products screen.

Or, click on the Save and New button to save the data, and display a blank Product data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Product screen.

Editing Products Data

Existing Products data can be edited, as explained below.

With the Products screen displayed—

1 Double click on the Product in the Products window that you want to edit.

Data associated with the selected Product is displayed in the Product data entry form.

2 Click on the field you want to edit, and enter the new data.

When you finish—

3 Click on the Save and Close button to save the data, and return to the Products screen.

Or, click on the Save and New button to save the data, and display a blank Product data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Product screen.

Deleting a Products

Use the Delete button to delete a Product.

With the Products screen displayed—

1. Select the Product that you want to delete.
2. Click on the Delete button.

If the Product can be deleted, ForLAB will display a confirmation message.

3. Click on Yes to confirm the delete.

If you cannot delete the Product because it is associated with other records ForLAB will display a message window.

Chapter 6

Instruments

The Instruments tree view options enable you to maintain the different Instruments available.

Instruments

The Instruments tree view option enables you to modify Instrument names and other information.

1 Click on Settings tree view option.

2 Click on the General Settings tree view option.

3 Click on the Instruments tree view option.

ForLAB opens the Instruments screen (Figure 21).

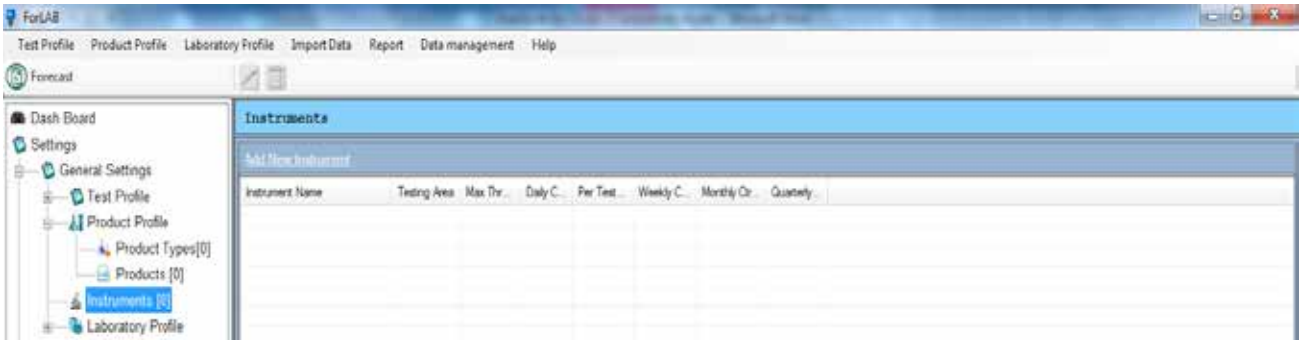


Figure 21. Instrument screen

Adding Instrument Data

With the Instruments screen displayed—

1 Click on the Add New Instrument link to display a blank Instrument data entry form (Figure 22).

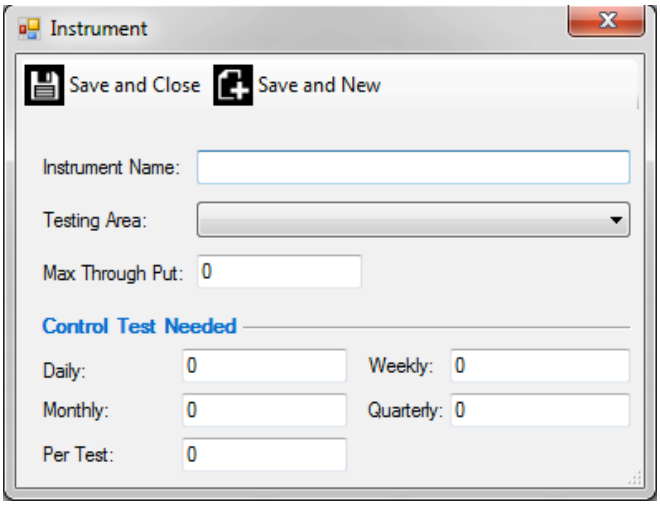


Figure 22. Instrument data entry form

2 Type the name of the Instrument.

The Testing Area field identifies the testing area where the Instrument belongs.

3 Click on the arrow next to the Testing Area field, and select an appropriate area from the pull-down menu.

The Max Throughput field identifies the maximum number of test an instrument can process per hour, day, or month. It is important to note that the max throughput is correctly identify if you are using test per hour or test per month to determine days or hours work to calculate utilization. This is not the same as the number of specimens, as many tests can be done on a single specimen.

4 Type in the maximum throughput for the instrument.

The Control Test Needed field identifies the number of control tests needed to be run and how often.

5 Type in the number of control test to be run for each applicable time period.

When you finish—

6 Click on the Save and Close button to save the data, and return to the Instruments screen.

Or, click on the Save and New button to save the data, and display a blank Instrument data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Instrument screen.

Editing Instrument Data

Existing Instrument data can be edited, as explained below.

With the Instrument screen displayed—

1 Double click on the Instrument in the Instrument window that you want to edit.

Data associated with the selected Instrument is displayed in the Instrument data entry form.

2 Click on the field you want to edit, and enter the new data.

Deleting an Instrument

Use the Delete button to delete an Instrument.

With Instrument screen displayed—

1 Select the Instrument that you want to delete.

2 Click on the Delete button.

If the Instrument can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Instrument because it is associated with other records ForLAB will display a message window.

Chapter 7

Laboratory Profile

The Laboratory Profile tree view options enable you to maintain the different Regions/Districts/Provinces within the country along with the sites within those regions.

Regions/Districts/Provinces vs. Sites

A Region/District/Province is an administrative division or unit of a country. Within each Region/District/Province there are multiple facilities providing laboratory services. Sites refer to the individual facility providing and referring patients for laboratory services.

Regions/Districts/Provinces

The Regions/Districts/Provinces tree view option enables you to modify Region/District/Province names and abbreviations along with assigning sites within the region.

1 Click on the Regions/Districts/Provinces tree view option.

ForLAB opens the Regions/Districts/Provinces screen (Figure 23).

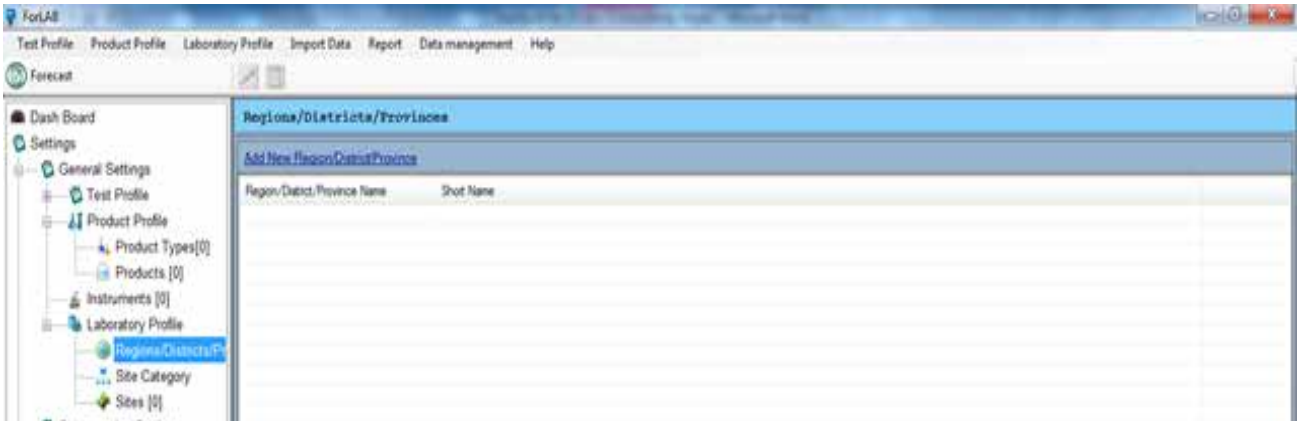


Figure 23. Regions/Districts/Provinces screen

Adding Region/District/Province Data

With the Region/District/Province screen displayed—

1 Click on the Add New Region/District/Province link to display a blank Region/District/Province data entry form (Figure 24).

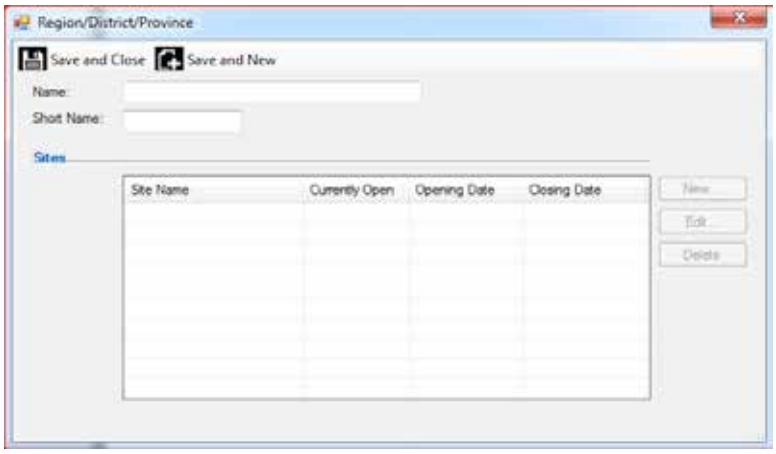


Figure 24. Region / District / Province data entry form

2 Type the name of the Region/District Province.

The Short Name field holds the Region/District/Provinces short name, which is used to help identify the Region/District/Province.

3 Type the short name of the Region/District/Province.

When you finish—

4 Click on the Save and Close button to save the data, and return to the Region/District/Province screen.

Or, click on the Save and New button to save the data, and display a blank Region/District/Province data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Region/District/Province screen.

Editing Region/District/Province Data

Existing Region/District/Province data can be edited, as explained below.

With the Region/District/Province screen displayed—

1 Double click on the Region/District/Province in the Region/District/Province window that you want to edit.

Data associated with the selected Region/District/Province is displayed in the Region/District/Province data entry form.

2 Click on the field you want to edit, and enter the new data.

Sites

Site Section lists the sites in the application that reside in the Region/District/Province. This section is only enabled when editing a Region/District/Province.

TO ADD SITE –

1 Click on the New button to display a blank Site data entry form (Figure 28).

2 See Adding Site Data on page 18 for information on completing the Site data entry form.

TO EDIT AN SITE –

1. Select the Site you want to edit from the list of sites.
2. Click the Edit button to display the Site data entry form for that site.
3. See Adding Site Data on page 18 for information on completing the Site data entry form.

TO DELETE A SITE –

1. Select the Site you want to delete from the list of sites.
2. Click the Delete button to display the Site data entry form for that site.
3. If the Site can be deleted, ForLAB will display a confirmation message.
4. Click on Yes to confirm the delete.

If you cannot delete the Site because it is associated with other records ForLAB will display a message window.

When you finish—

3. Click on the Save and Close button to save the data, and return to the Region/District/Province screen.

Or, click on the Save and New button to save the data, and display a blank Region/District/Province data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Region/District/Province screen.

Deleting a Region/District/Province

Use the Delete button to delete a Region/District/Province.

With the Region/District/Province screen displayed—

1. Select the Region/District/Province that you want to delete.
2. Click on the Delete button.

If the Region/District/Province can be deleted, ForLAB will display a confirmation message.

3. Click on Yes to confirm the delete.

If you cannot delete the Region/District/Province because it is associated with other records ForLAB will display a message window.

Site Category

The Site Categories tree view option enables you to modify Site Category names and abbreviations.

1. Click on the Site Categories tree view option.

ForLAB opens the Site Categories screen (Figure 25).

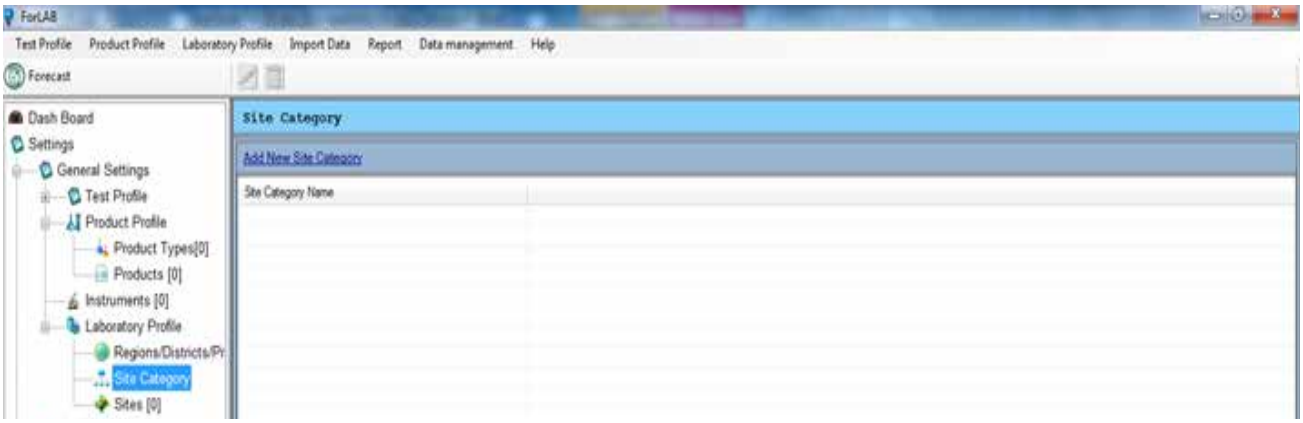


Figure 25. Site Category screen

Adding Site Category Data

With the Site Category screen displayed—

1 Click on the Add New Site Category link to display a blank Site Category data entry form (Figure 26).

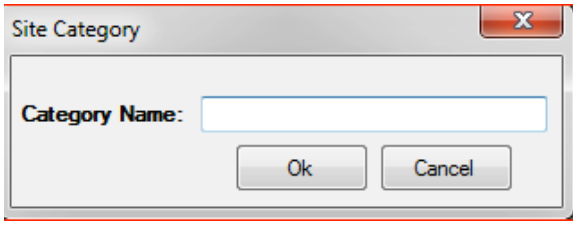


Figure 26. Site Category data entry form

2 Type the name of the Site Category.

When you finish—

3 Click on the OK button to save the data, and return to the Site Category screen.

Or, click on the Cancel button to return to the Site Category screen without saving.

Editing Site Category Data

Existing Site Category data can be edited, as explained below.

With the Site Category screen displayed—

1 Double click on the Site Category in the Site Category window that you want to edit.

Data associated with the selected Site Category is displayed in the Site Category data entry form.

2 Enter the new data.

When you finish—

3 Click on the Save button to save the data, and return to the Site Category screen.

Deleting a Site Category

Use the Delete button to delete a Site Category.

With the Site Category screen displayed—

1 Select the Site Category that you want to delete.

2 Click on the Delete button.

If the Site Category can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Site Category because it is associated with other records ForLAB will display a message window.

Sites

The Sites tree view option enables you to modify Site names and abbreviations.

1 Click on the Sites tree view option.

ForLAB opens the Sites screen (Figure 27).

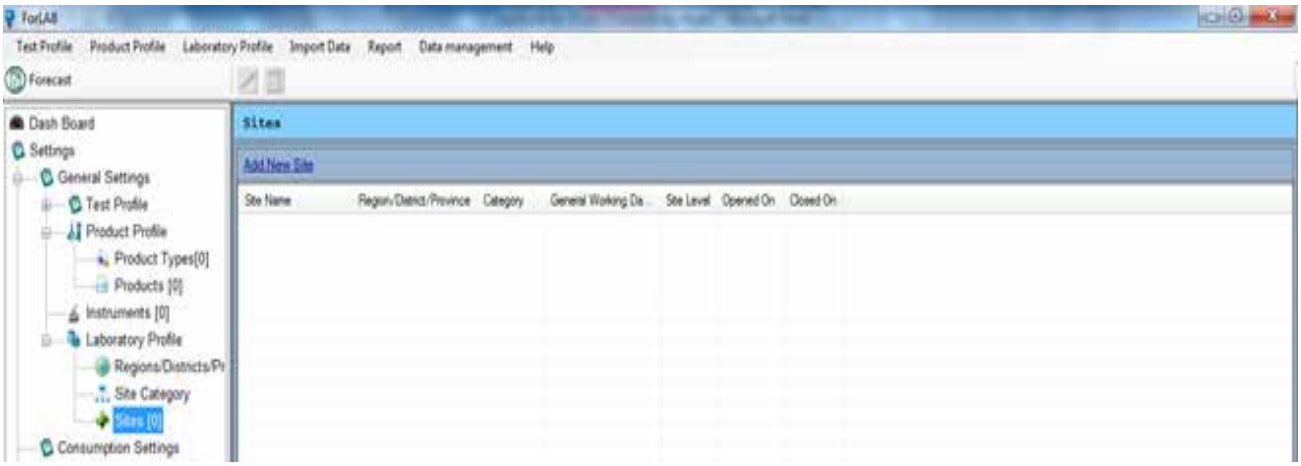


Figure 27. Sites screen

Adding Site Data

With the Site screen displayed—

1 Click on the Add New Site link to display a blank Site data entry form (Figure 28).

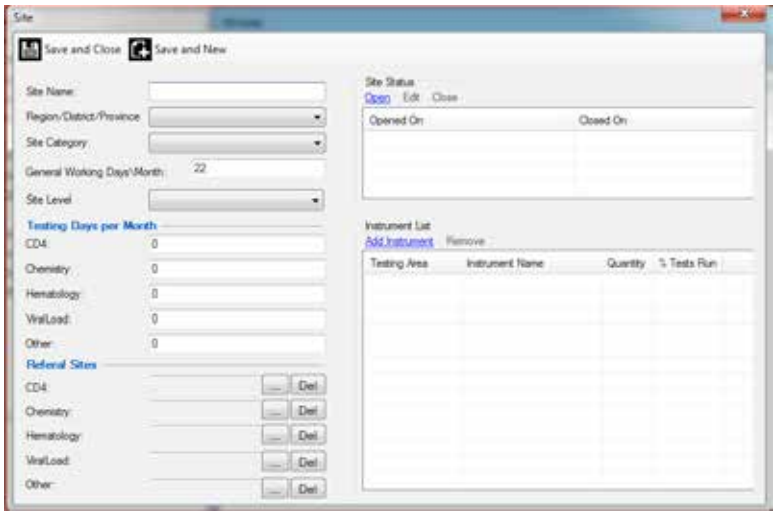


Figure 28. Site Data entry form

2 Type the name of the Site.

The Region/District/Province field identifies the region, district or province where the site resides.

3 Click on the arrow next to the Region/District/Province field, and select an appropriate area from the pull-down menu.

The Site Category field identifies the primary group to which the new site belongs.

4 Click on the arrow next to the Site Category field, and select an appropriate category from the pull-down menu.

The General Working Days\Month field identifies the number of days per month that the site is operating. The default value for this field is 22 days.

5 Type in the number of workings days per month.

The Site Level field identifies the facility level to which the new site belongs.

6 Click on the arrow next to the Site Level field, and select an appropriate level from the pull-down menu.

The Test Days per Month section identifies the number of testing days in each of the five diagnostic areas (CD4, Chemistry, Hematology, Viral Load, and Other). Note that the value entered for any one of these diagnostic areas cannot be greater that then number of working days per month entered previously.

7 Type the number of testing days for diagnostic area at the new site.

Referral Sites

The Referral Sites section identifies the site tests are referred to for the diagnostic area if the new site is not providing the service.

TO ADD A REFERRAL SITE –

1 Click the ellipse button for the diagnostic area whose service is not provided by the site. (Figure 29).

2 Click on the arrow next to the Region/District/Province field, and select an appropriate area from the pull-down menu.

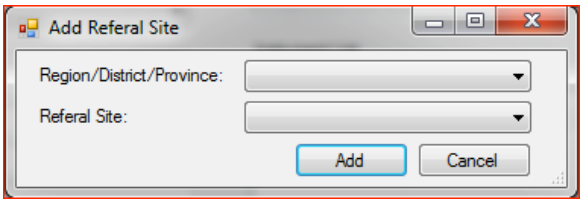


Figure 29. Add Referral Site

3 Click on the arrow next to the Referral Site field, and select an appropriate Site from the pull-down menu.

Tip: Only sites that have instruments for the diagnostic area will be included in the pull-down menu

When you finish—

4 Click Add button to add the Referral Site and return to the Site data entry form.

Or, click Cancel to cancel these entries and return to the Site data entry form.

TO DELETE A REFERRAL SITE –

1 Click on Del button for the appropriate diagnostic area.

Site Status

Site Status indicates if the new site is currently operational.

TO ADD AN OPENING DATE –

1 Click on Open link to display the Opening Date dialog box (Figure 30).

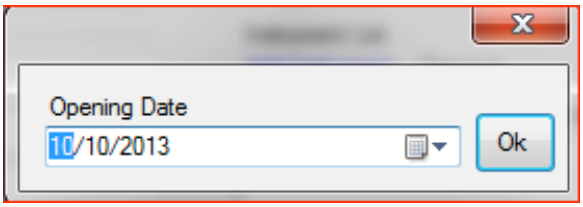


Figure 30. Opening Date dialog box

2 Click on the arrow next to the Opening Date field, and select an appropriate date from the calendar.

When you finish—

3 Click on the OK button to save the data, and return to the Site screen

Or, click Red X to cancel these entries and return to the Site data entry form.

TO EDIT AN OPENING DATE –

1 Click on Edit link to display the Opening Date dialog box.

Data associated with the selected Site Status is displayed in the Opening Data dialog box.

2 Click on the arrow next to the Opening Date field, and select an appropriate date from the calendar.

When you finish—

3 Click on the OK button to save the data, and return to the Site screen

Or, click Red X to cancel these entries and return to the Site data entry form.

TO ADD A CLOSING DATE –

1 Click on Close link to display the Closing Date dialog box (Figure 31).

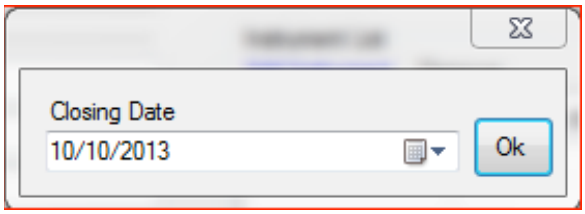


Figure 31. Closing Date dialog box

2 Click on the arrow next to the Closing Date field, and select an appropriate date from the calendar.

When you finish—

3 Click on the OK button to save the data, and return to the Site screen

Or, click Red X to cancel these entries and return to the Site data entry form.

Instrument List

The Instrument List shows the complete list of diagnostic instruments available at the new site.

TO ADD AN INSTRUMENT–

1 Click on Add Instrument link to open the Select Instrument dialog box (Figure 32).

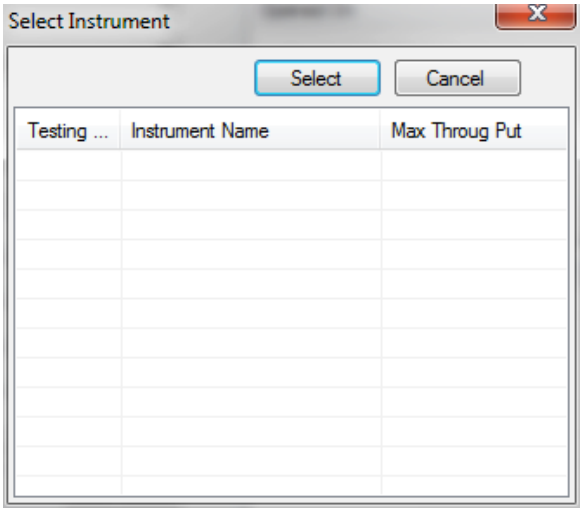


Figure 32. Select Instrument dialog box

2 Select each instrument available at the site. (To select more than one instrument, hold the Ctrl key while selecting instruments.)

3 Click Select to add the instrument(s) to the site and return to the Site data entry screen.

To enter the Quantity of the instrument at the site –

4 Click in the Quantify column for the instrument you want to change.

5 Type in the Quantity of that instrument at the site

6 Hit Enter

% Test Run is the percentage of times that instrument is used in the testing area. The sum of % Test Run for instruments under the same testing area should be 100%. To enter the % Test Run–

7 Click in the % Test Run column for the instrument you want to change.

8 Type in the percentage of Tests Run on that instrument at the site

9 Hit Enter

TO DELETE AN INSTRUMENT–

1 Select the instrument that is no longer available at the site

2 Click on the Remove link.

When you finish—

3 Click on the Save and Close button to save the data, and return to the Site screen.

Or, click on the Save and New button to save the data, and display a blank Site data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Site screen.

Editing Site Data

Existing Site data can be edited, as explained below.

With the Site screen displayed—

1 Double click on the Site in the Site window that you want to edit.

Data associated with the selected Site is displayed in the Site data entry form.

2 Click on the field you want to edit, and enter the new data.

When you finish—

3 Click on the Save and Close button to save the data, and return to the Site screen.

Or, click on the Save and New button to save the data, and display a blank Site data entry form.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Site screen.

Deleting a Site

Use the Delete button to delete a Site.

With the Site screen displayed—

1. Select the Site that you want to delete.
2. Click on the Delete button.

If the Site can be deleted, ForLAB will display a confirmation message.

3. Click on Yes to confirm the delete.

If you cannot delete the Site because it is associated with other records ForLAB will display a message window.

Chapter 8

Morbidity Settings

The Morbidity Setting tree view options enable you to easily prepare for forecasting using the Demographic/Morbidity methodology.

Protocols

The Protocols tree view options enable you to maintain the different schedules that patients are recommended to receive tests. Understanding the testing protocol is critical in estimating how many tests a patient population will receive, and therefore how many testing supplies will be required.

The Protocol tree view option enables you to modify Protocols.

1 Click on Settings tree view option.

2 Click on Morbidity Settings tree view option.

3 Click on the Protocols tree view option.

ForLAB opens the Protocols screen (Figure 33). The four major categories of testing protocols as well as a fifth category for other protocols are displayed.

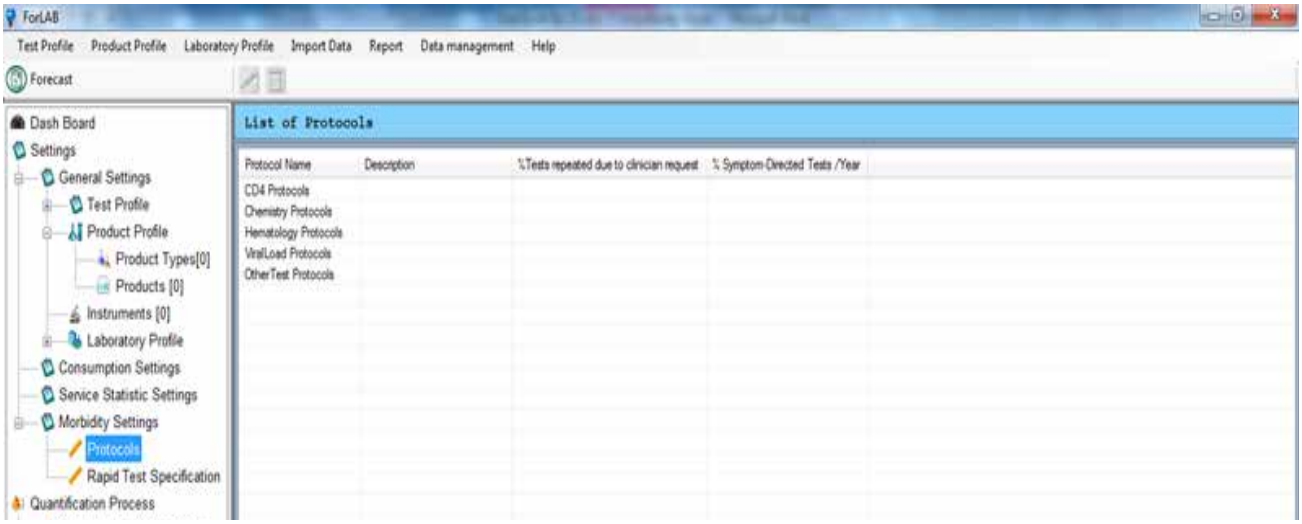


Figure 33. Protocols screen

Editing CD 4 Protocol Data

With the Protocols screen displayed—

1 Double click on the CD4 Protocol to display the CD4 Protocol Settings form (Figure 34).

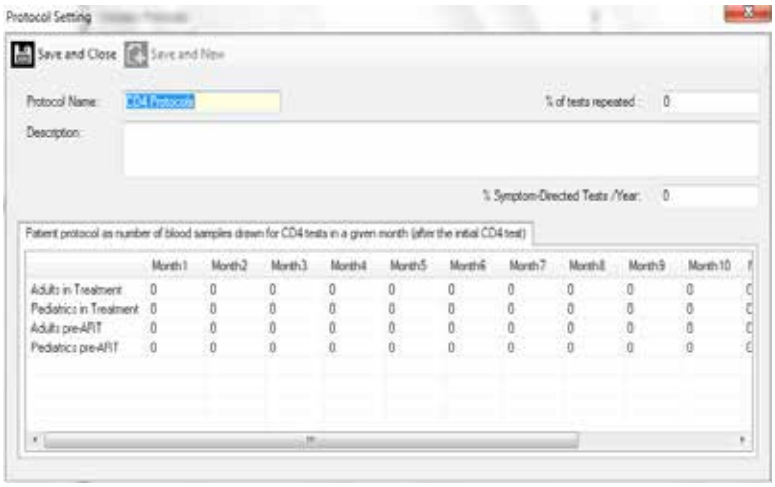


Figure 34. CD4 Protocol Setting

2 Type the Description of the protocol.

The % of test repeated field indicates the percentage of tests that are repeated.

3 Type in the % of test repeated for the protocol.

The % symptom directed test/year field indicates the percentage of patients each year who receive a symptom directed test, in addition to the testing schedule entered below.

4 Type in the % symptom-directed test/year for the protocol.

The Patient protocol as number of blood samples drawn for tests in a given month (after the initial test) fields indicate the number of times that each patient group should receive this panel each month during the first year of initiating treatment.

5 Type in the number of blood samples drawn for each patient group for each month (1 -12.)

The Tests/year after month 12 indicates the number of times that each patient group should receive this panel each year after the first year of treatment.

6 Type in the number of blood samples drawn for each patient group for each year after the first year of treatment.

When you finish—

7 Click on the Save and Close button to save the data, and return to the Protocols screen.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Protocols screen.

Editing Chemistry Protocol Data

With the Protocols screen displayed—

1 Double click on the Chemistry Protocol to display the Chemistry Protocol Settings form (Figure 35).

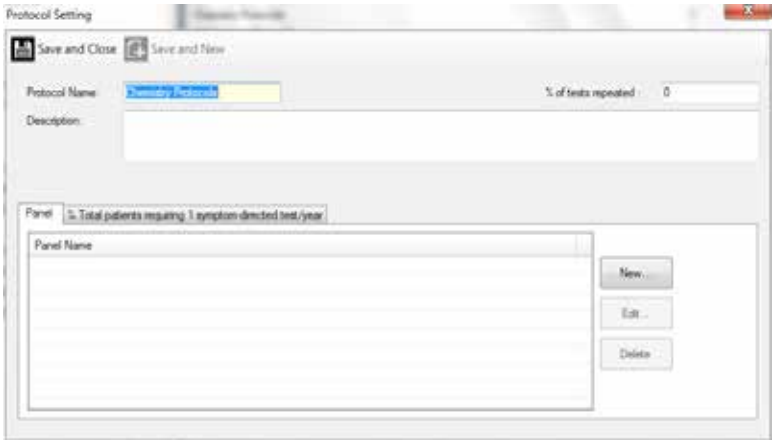


Figure 35. Chemistry Protocol Setting

2 Type the Description of the protocol.

The % of test repeated field indicates the percentage of tests that are repeated.

3 Type in the % of test repeated for the protocol.

Panels

The Panel tab lists the different panels applied.

TO ADD A PANEL –

1 Click on the New button to display a blank Protocol Panel data entry form (Figure 36).

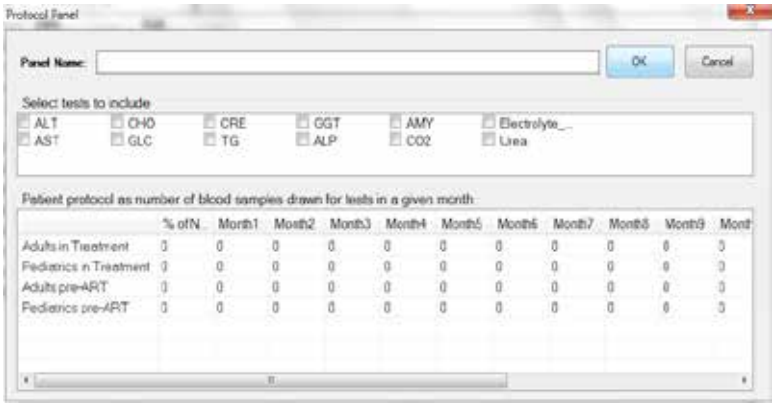


Figure 36. Chemistry Protocol Panel

The Panel Name field describes what circumstances this panel will apply.

2 Type in the Panel Name.

The Test to Include field indicates which tests are included in the panel.

3 Place a check mark in the box for each test included in the panel.

The Patient protocol as number of blood samples drawn for tests in a given month fields indicate the number of times that each patient group should receive this panel each month.

4 Type in the % of New Patients on the Panel for each patient group.

5 Type in the number of blood samples drawn for each patient group for each month (1 -12.)

6 Type in the % of Pre-Existing Patient on the Panel for each patient group.

7 Type in the number of blood samples drawn for each patient group for each year after the first year of treatment.

TO EDIT A PANEL –

1 Select the Panel you want to edit from the list of Panels.

2 Click the Edit button to display the Protocol Panel data entry form for that Panel.

3 Click on the field you want to edit, and enter the new data.

4 Click on the OK button to save the data, and return to the Protocol Settings screen.

Or, click on the Cancel button to return to the Protocol Settings screen without saving.

TO DELETE A PANEL –

1 Select the Panel you want to delete from the list of Panels.

2 Click the Delete button to display the Protocol Panel data entry form for that Panel.

If the Panel can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Panel because it is associated with other records ForLAB will display a message window.

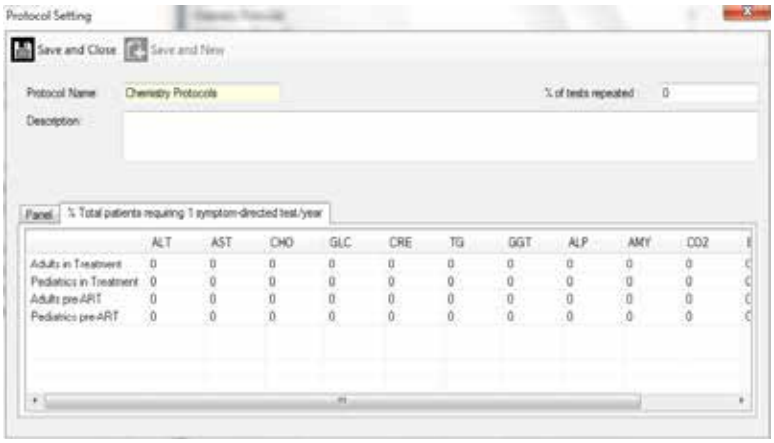


Figure 37. Chemistry Protocol Setting

The % symptom directed test/year tab (Figure 37) indicates the percentage of patients each year who receive a symptom directed test, in addition to the testing schedule entered for each patient group.

4 Type in the % symptom-directed test/year for each patient group and test in the panel.

When you finish—

5 Click on the Save and Close button to save the data, and return to the Protocols screen.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Protocols screen.

Editing Hematology and Viral Load Protocol Data

With the Protocols screen displayed—

1 Double click on the Hematology or Viral Load Protocol to display the Hematology or Viral Load Protocol Settings form (Figure 38).

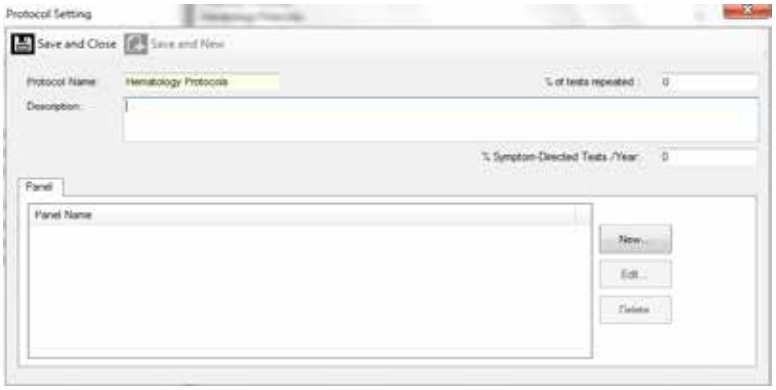


Figure 38. Hematology/Viral Load Protocol Setting

2 Type the Description of the protocol.

The % of test repeated field indicates the percentage of tests that are repeated.

3 Type in the % of test repeated for the protocol.

The % symptom directed test/year field indicates the percentage of patients each year who receive a symptom directed test, in addition to the testing schedule entered below.

4 Type in the % symptom-directed test/year for the protocol.

Panels

The Panel tab lists the different panels applied.

TO ADD A PANEL –

1 Click on the New button to display a blank Protocol Panel data entry form (Figure 39).

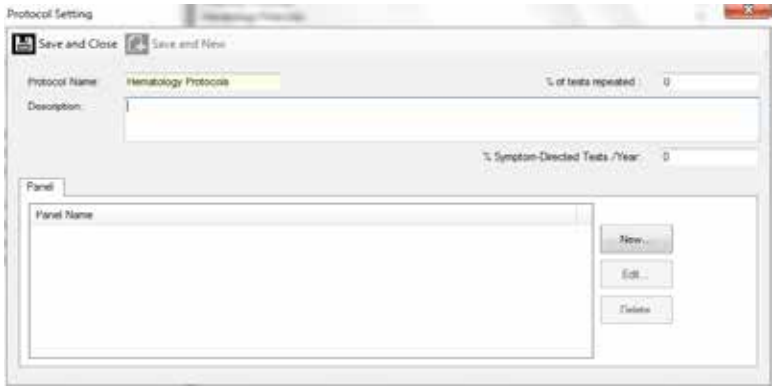


Figure 39. Hematology/Viral Load Protocol Panel

The Panel Name field describes what circumstances this panel will apply.

2 Type in the Panel Name.

The Patient protocol as number of blood samples drawn for tests in a given

month fields indicate the number of times that each patient group should receive this panel each month.

3 Type in the % of New Patients on the Panel for each patient group.

4 Type in the number of blood samples drawn for each patient group for each month (1 -12.)

5 Type in the % of Pre-Existing Patient on the Panel for each patient group.

6 Type in the number of blood samples drawn for each patient group for each year after the first year of treatment.

TO EDIT A PANEL –

1 Select the Panel you want to edit from the list of Panels.

2 Click the Edit button to display the Protocol Panel data entry form for that Panel.

3 Click on the field you want to edit, and enter the new data.

4 Click on the OK button to save the data, and return to the Protocol Settings screen.

Or, click on the Cancel button to return to the Protocol Settings screen without saving.

TO DELETE A PANEL –

1 Select the Panel you want to delete from the list of Panels.

2 Click the Delete button to display the Protocol Panel data entry form for that Panel.

If the Panel can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Panel because it is associated with other records ForLAB will display a message window.

When you finish—

4 Click on the Save and Close button to save the data, and return to the Protocols screen.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Protocols screen.

Editing Other Tests Protocol Data

With the Protocols screen displayed—

1 Double click on the Other Tests Protocol to display the Other Tests Protocol Settings form (Figure 40).

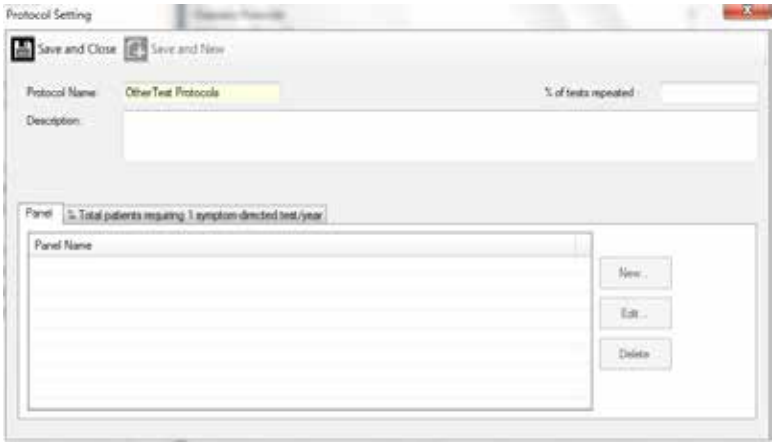


Figure 40. Other Tests Protocol Settings

2 Type the Description of the protocol.

3 The % of test repeated field indicates the percentage of tests that are repeated.

4 Type in the % of test repeated for the protocol.

Panels

The Panel tab lists the different panels applied.

TO ADD A PANEL –

1 Click on the New button to display a blank Protocol Panel data entry form **(Error! Reference source not found.)**.

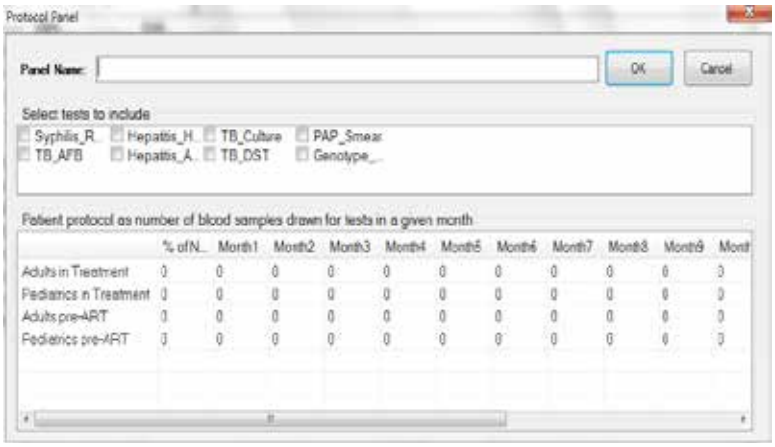


Figure 41. Other Tests Protocol Panel

The Panel Name field describes what circumstances this panel will apply.

2 Type in the Panel Name.

The Test to Include field indicates which tests are included in the panel.

3 Place a check mark in the box for each test included in the panel.

The Patient protocol as number of blood samples drawn for tests in a given month fields indicate the number of times that each patient group should receive this panel each month.

4 Type in the % of New Patients on the Panel for each patient group.

5 Type in the number of blood samples drawn for each patient group for

each month (1 -12.)

6 Type in the % of Pre-Existing Patient on the Panel for each patient group.

7 Type in the number of blood samples drawn for each patient group for each year after the first year of treatment.

TO EDIT A PANEL –

1 Select the Panel you want to edit from the list of Panels.

2 Click the Edit button to display the Protocol Panel data entry form for that Panel.

3 Click on the field you want to edit, and enter the new data.

4 Click on the OK button to save the data, and return to the Protocol Settings screen.

Or, click on the Cancel button to return to the Protocol Settings screen without saving.

TO DELETE A PANEL –

1 Select the Panel you want to delete from the list of Panels.

2 Click the Delete button to display the Protocol Panel data entry form for that Panel.

If the Panel can be deleted, ForLAB will display a confirmation message.

3 Click on Yes to confirm the delete.

If you cannot delete the Panel because it is associated with other records ForLAB will display a message window.

The % symptom directed test/year tab indicates the percentage of patients each year who receive a symptom directed test, in addition to the testing schedule entered for each patient group.

5 Type in the % symptom-directed test/year for each patient group and test in the panel.

When you finish—

6 Click on the Save and Close button to save the data, and return to the Protocols screen.

Or, click on the red X in the upper right hand corner to disregard all changes and return to the Protocols screen.

Rapid Test Specification

Before specifying the rapid test settings for each site in the quantification the rapid test specifications should be defined for each rapid test in the system.

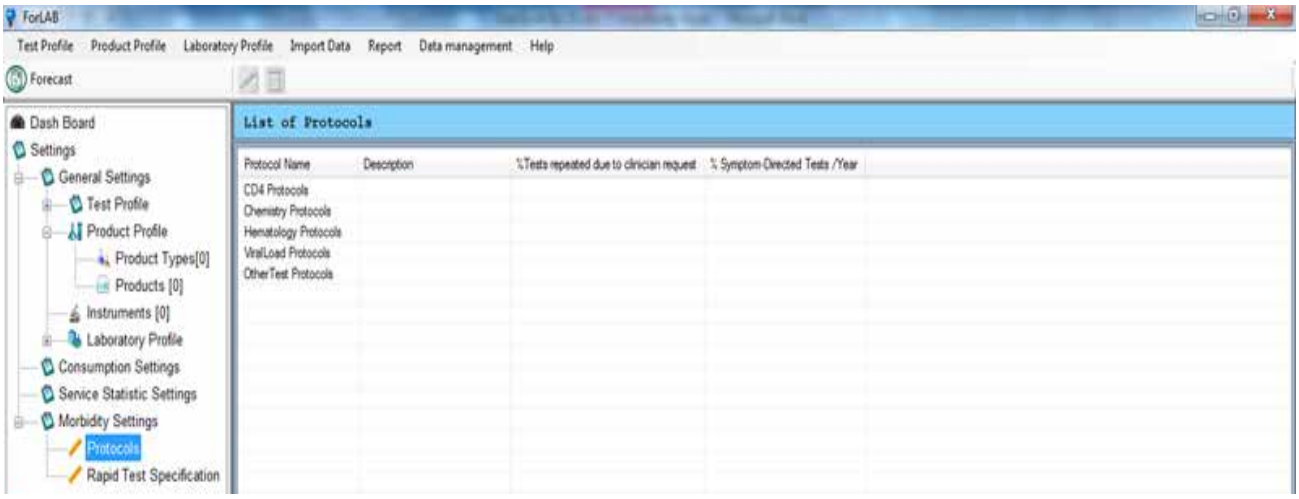


Figure 42. Protocols screen

Rapid test specification includes sensitivity and specificity. Sensitivity refers to the percentage of actual HIV that the test detects, and specificity refers to the percentage of positive detections that are actually HIV. In other words, sensitivity measures the likelihood that a negative result is a true negative, and specificity measures the likelihood that a positive result is a true positive.

1 Click on Settings tree view option.

2 Click on Morbidity Settings tree view option.

3 Click on Rapid Test Specification.

The Rapid Test Specifications form will be displayed.(Figure 43)

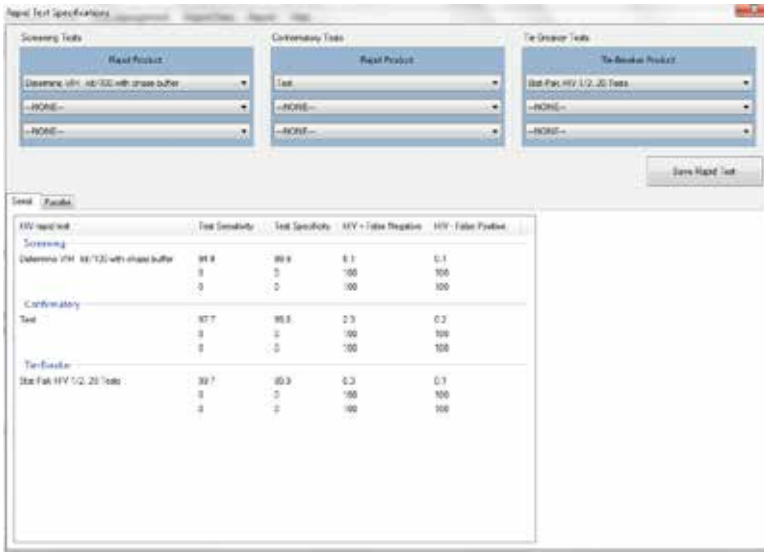


Figure 43. Rapid Test Specification screen

4 Using the drop down list, select up to three Screening Tests.

Similarly, select up to three Confirmatory Tests.

And, select up to three Tie-Breaker Tests.

5 Click Save Rapid Test button to populate the Serial and Parallel Tabs with the tests selected.

TO DEFINE THE SERIAL ALGORITHM—

1 Click on Serial tab.

2 Double click in the Test Sensitivity cell.

3 Type in the value for the Test Sensitivity

4 Double click in the Test Specificity cell.

5 Type in the value for the Test Specificity.

6 Repeat steps 2 to 5 for each test.

TO DEFINE THE PARALLEL ALGORITHM—

1 Click on the Parallel tab.

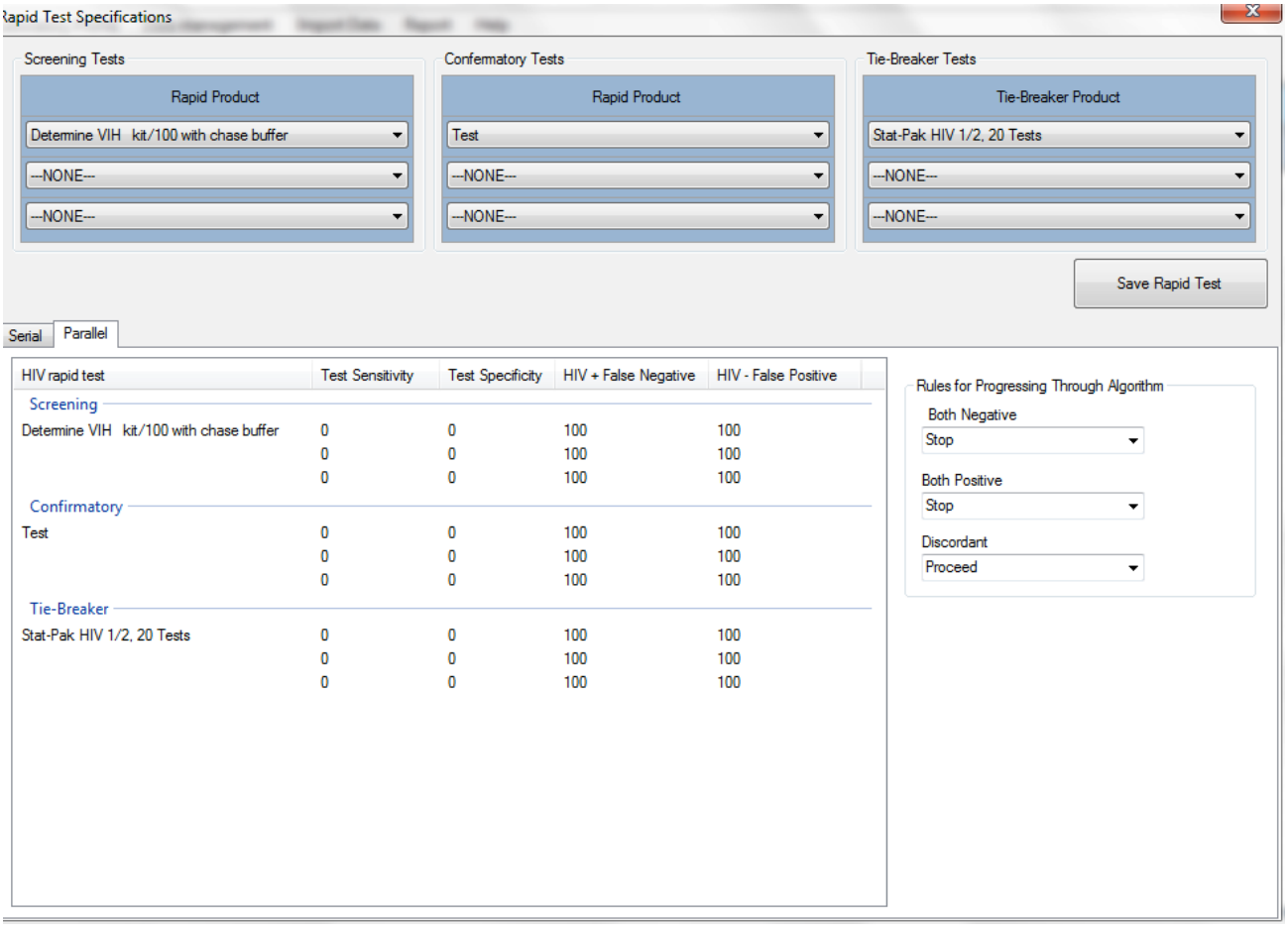


Figure 44. Rapid Test Specification, parallel tab

2 Double click in the Test Sensitivity cell.

3 Type in the value for the Test Sensitivity

4 Double click in the Test Specificity cell.

5 Type in the value for the Test Specificity.

6 Repeat steps 2 to 5 for each test.

The Rules for Progressing through Algorithm define the action to take for each of the possible results of the first two parallel tests, i.e. both positive, both negative, and discordant. For each result, there are only two possible actions, to stop or to proceed with another test.

7 Select the appropriate action for Both Positive.

8 Select the appropriate action for Both Negative.

9 Select the appropriate action for Discordant.

5 Click on the Save Rapid Test button.

Chapter 9

Forecasting: Consumption Methodology

The Consumption method uses historical data on the use of laboratory commodities to calculate the quantities that will be demanded in the future.

Sources of Data

Consumption data are historical data on the actual quantities of a product that have been dispensed to patients or used at a service delivery point within a given time period, and are typically reported per month or per quarter. Daily consumption data can be found in pharmacy dispensing registers, laboratory registers, or other point of service registers. Where a well-functioning LMIS captures and aggregates these data from service delivery points, aggregated consumption data can be found in monthly and annual facility-level and program-level reports. For antiretroviral drugs (ARVs), consumption data would be the actual quantity of each ARV dispensed to ART patients. For HIV tests, consumption data or "usage data" are the actual number of HIV tests used over a given period. For laboratory supplies, consumption data are the actual number of laboratory commodities used.

Consumption Methodology

The Consumption Methodology tree view option enables you to modify forecast information.

1 Click on Quantification Process tree view option.

2 Click on the Consumption Methodology tree view option.

ForLAB opens the Consumption Forecast Methodology screen (Figure 45) that will show the list of forecasts that have been entered into the database.

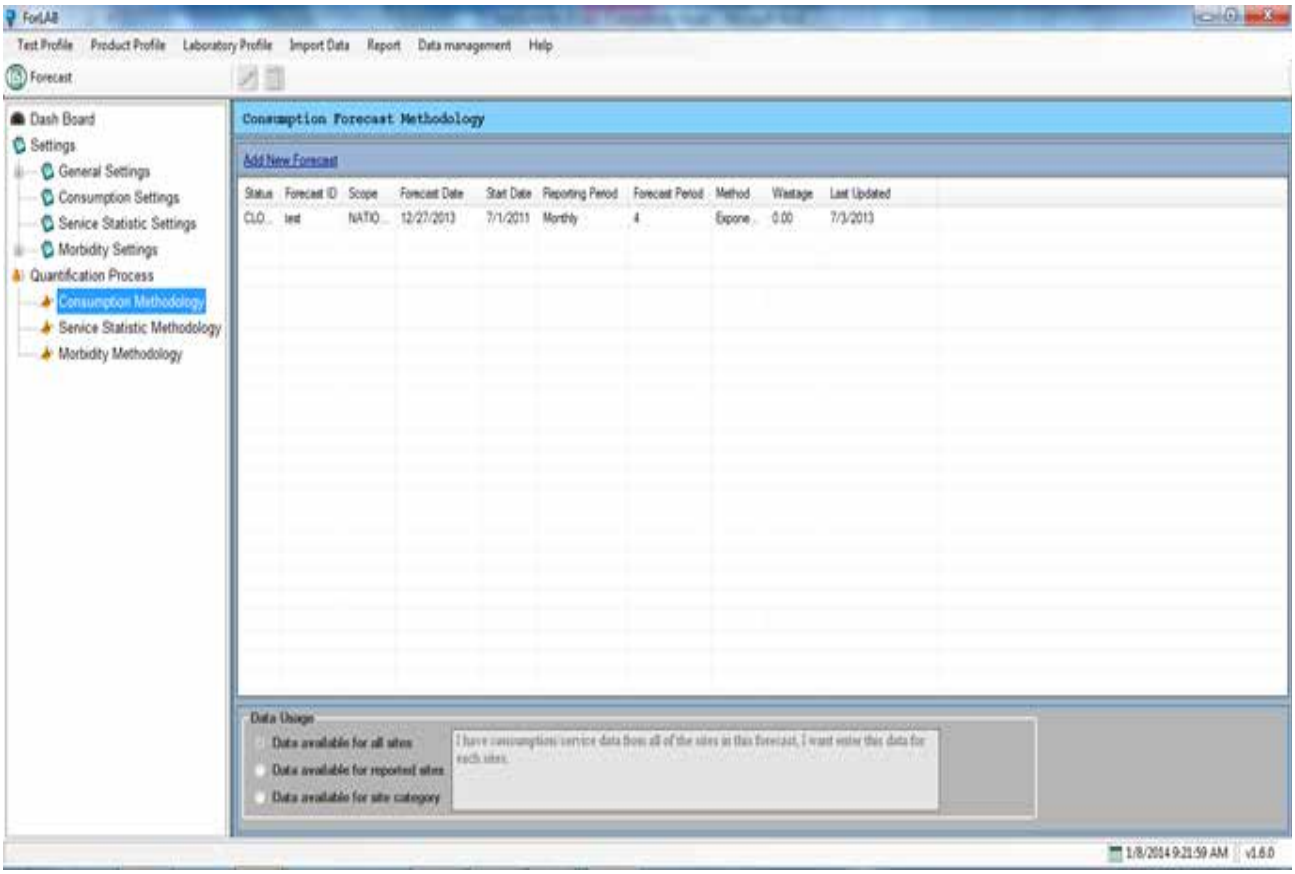


Figure 45. Consumption Forecast Methodology screen

Adding New Forecast

With the Consumption Forecast Methodology screen displayed—

1 Click on the Add New Forecast link to display a blank Quantification Process data entry form (Figure 46).

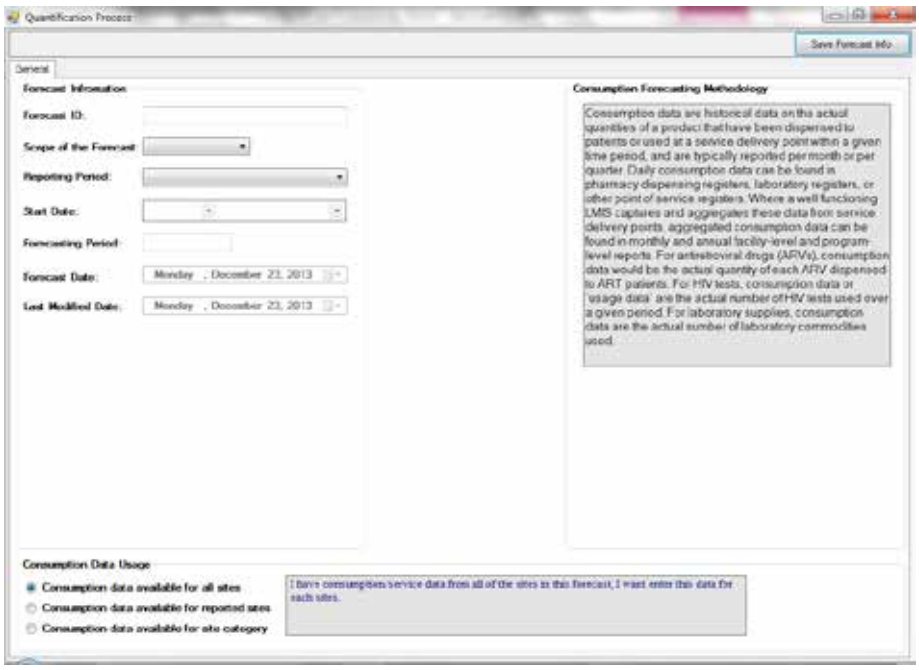


Figure 46. Quantification Process data entry form

The Forecast ID field specifies the unique id and short text describing the forecast.

2 Type the Forecast ID.

The Scope of the Forecast field categorizes the forecasts to help the user to have different categories of forecasts. This field can be Custom, National, or Global.

3 Select the Scope of the Forecast from the drop down list.

The Reporting Period field is independent on the type of historical data collected for the forecast. It can be bimonthly, monthly, quarterly, or yearly.

4 Select the Reporting Period from the dropdown field.

The Start Date field is the date the forecast period will start.

5 Type in the Start Date for the forecast.

The Forecasting Period field is the number of periods we wanted to include in the forecast.

6 Type in the Forecasting Period.

The Forecast Date field and Last Modified Date field are system dates on which the forecast was defined and modified. Neither of these fields is editable.

The Consumption Data Usage field indicates the way service data is to be entered and used in the system. Options include:

- Consumption Data available for all sites – use this option if you have data reported from each site in the forecast
- Consumption Data available for reported sites – use this option if you only have a portion of sites reported and you want to then use this data for non-reported sites.
- Consumption Data available for site category – use this option if you want to categorize sites in groups based on level and testing behaviors and enter service data for the group.

3 Click in the radial button for the appropriate data usage.

When you finish—

4 Click on the Save Forecast Info button to save the data.

5 Enter Consumption Data

With the Quantification Process screen displayed—

6 Click on the Consumption tab in the Quantification Process window that you want to edit (Figure 47).

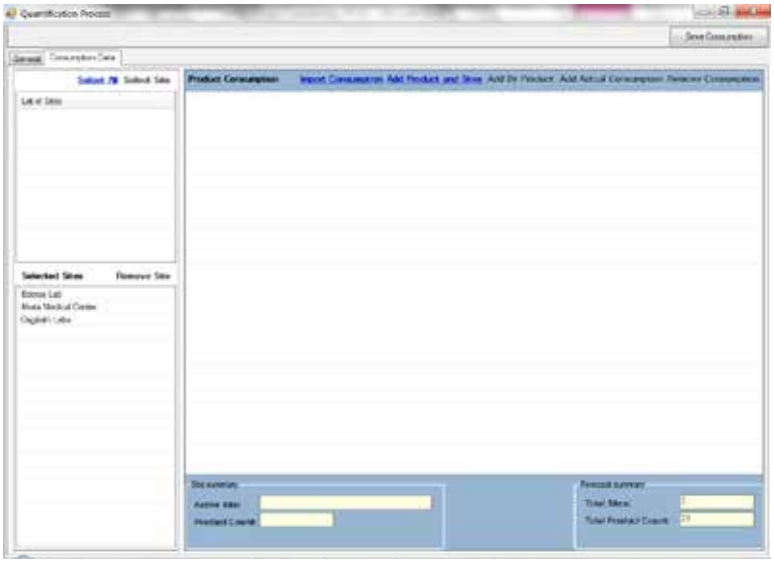


Figure 47. Quantification Process data entry form

There are three ways to add Service Statistic Data.

ADD BY PRODUCT

The List of Sites field lists all the sites in the system. The Selected Sites field lists all the sites included in the forecast defined.

1. Select the sites in the List of Sites field to be included in the forecast.
2. Click on Select Site link to add to add selected sites to the Selected Sites list.

Or click Select All link to add all sites to the Selected Sites list.

To remove a Selected Site from the Selected Sites list—

1. Select the sites in the Selected Sites field to be removed from the forecast.
2. Click on Remove Site link to add to remove the sites from the Selected Sites list.

The Add by Product link allows users to add a product for the selected site with the number of reporting periods provided. To add the products—

3. Select the Site in the Selected Sites list.
4. Click on the Add By Product link.

The Select Product form is opened (Figure 48). This form is used to add a product for the selected site with the number of reporting periods provided.

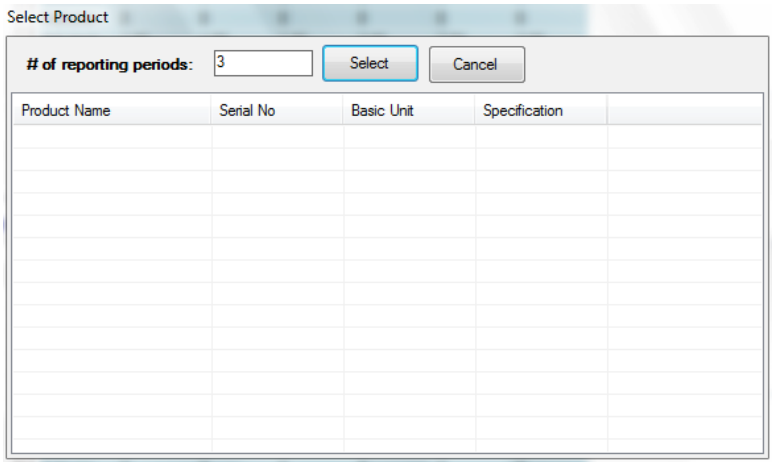


Figure 48. Select Product

5 Select the products to add to the forecast. (Select more than one product by holding down the ctrl button while clicking on the product.)

6 Type in the number of Reporting Periods for the products.

7 Click Select button to add the selected products to the selected sites.

Or, click cancel to return to the Quantification Process screen.

ADD BY PRODUCTS AND SITES

The Add Test and Sites link allows the user to add Product and sites simultaneously with the number of reporting periods provided. To add the Products and sites—

1 Click on the Add by Products and Sites link.

The Select Product form is opened (Figure 49). This form is used to add a product for the selected sites with the number of reporting periods provided.

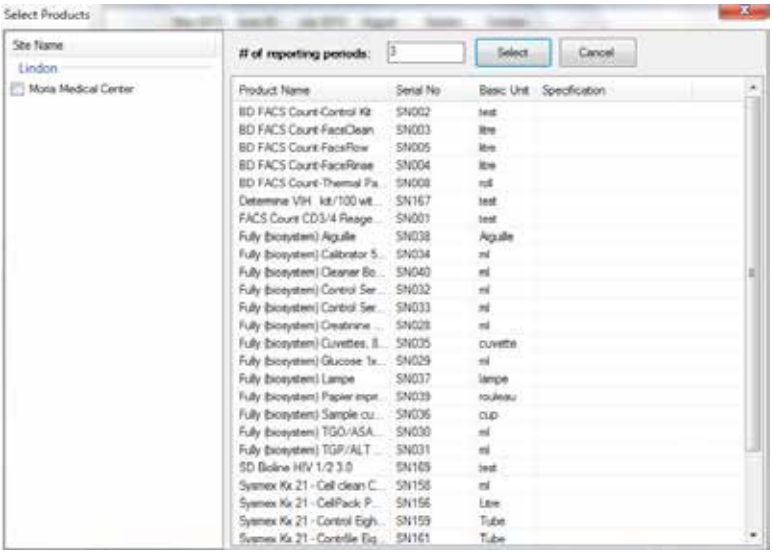


Figure 49. Select Products form

2 Select the sites to add to the forecast by placing a check in the box next to each site.

3 Select the products to add to the forecast. (Select more than one product by holding down the ctrl button while clicking on the product.)

4 Type in the number of Reporting Periods for the products.

5 Click Select button to add the selected products to the selected sites.

Or, click cancel to return to the Quantification Process screen.

IMPORT CONSUMPTION

The Import Consumption link allows users to import bulk consumption from the excel template. To import the tests and sites—

1 Click on the Import Consumption link.

The Import form is opened (Figure 50).

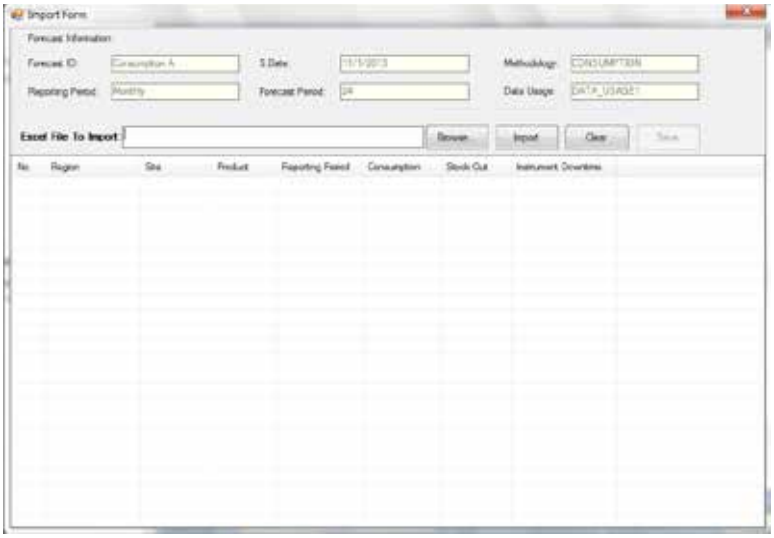


Figure 50. Import form

2 Click the Browse button to show the Open File dialog box.

3 Find the excel template file and click open.

The file path is populated on the import form.

4 Click Import.

5 Double click Consumption sheet in the list.

6 Click Save to save the data to the Quantification form

Or click clear to clear out the data and select another file to import.

Editing Consumption Data

Once a test is added to the site using one of the methods above, the Product Consumption will populate and can be updated directly (Figure 51).

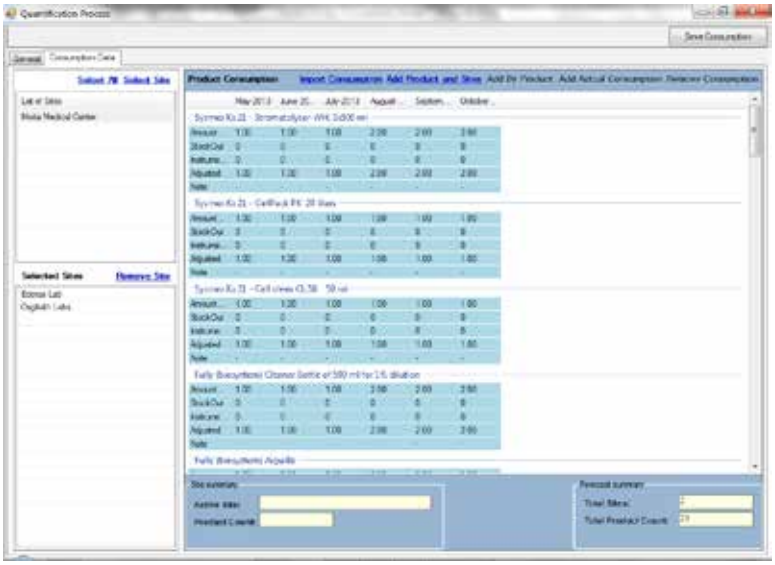


Figure 51. Product Consumption data entry form

1 Select a site in the Selected Site list.

2 Click on the cell you want to update and enter the correct value.

TO ADD A REPORTING PERIOD TO THE BEGINNING OR END OF THE PERIODS LISTED–

1 Click Add Actual Consumption link.

The popup window displays the start date of the forecast.

2 Enter the number of reporting periods to add.

3 Click OK.

TO REMOVE A REPORTING PERIOD FROM THE PERIODS LISTED –

1 Click on the reporting period to be deleted.

ForLAB will only allow period at the beginning or end of the forecast to be delete.

2 Click Remove Consumption link.

When you finish—

3 Click on the Save Consumption button to save the data.

4 Click on the red X to close the form and return to the Consumption Forecast Methodology screen.

Note: ForLAB will not allow the user to delete service if only 3 records

Calculating Forecast

With the Consumption Forecast Methodology screen displayed—

1 Click on Forecast Button at the top left corner of the application.

The Forecasting Tools form will display. (Figure 52) The Filter Group allows user to filter forecasts in the system using methodology and data usage.

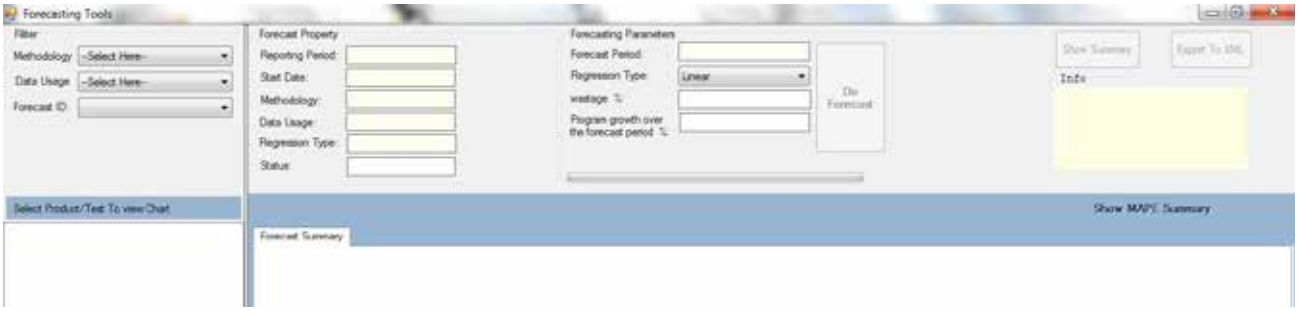


Figure 52. Forecasting Tools

2 Select Consumption Methodology from dropdown list.

3 Select Data Usage from the dropdown list.

Once the ID of the Forecast is selected "Do Forecast" button will be enabled. Under Forecasting Parameters users can change the regression of the forecast and the Wastage and Add by % to be added on the forecast result.

4 Select the Regression Type from the dropdown list.

5 Type in the Wastage %.

6 Type in the Program Growth % over the forecast period.

7 Click on Do Forecast button to start the Forecast.

The Forecasting process takes time to finalize; when complete the Forecast Result Form is shown. (Figure 53)

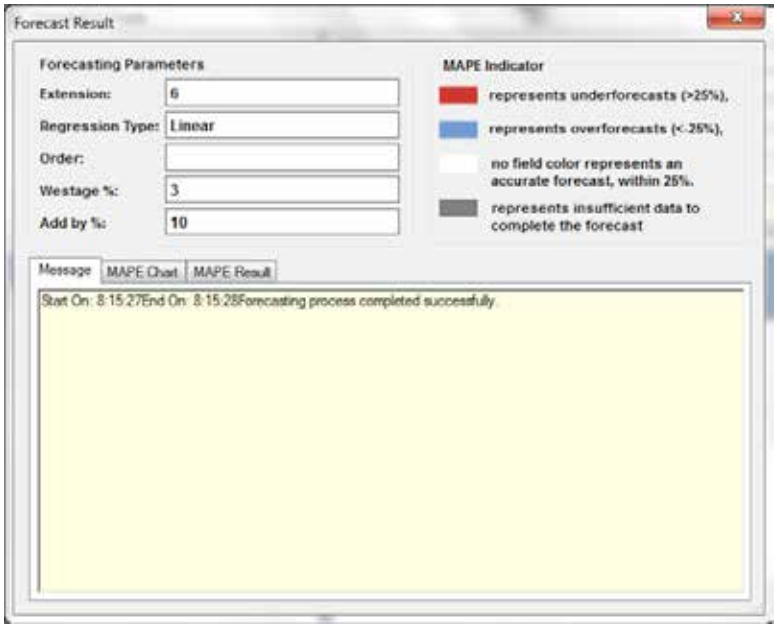


Figure 53. Forecast Result

This form displays the forecasting parameters entered on the previous form along with any messages. Forecast accuracy is measured using the Mean Absolute Percent Error (MAPE) and is defined as the average of percentage errors. The MAPE Chart tab (Figure 55) will display this indicator as a chart and the MAPE Result tab (Figure 54) will display the calculated percentage errors. The results are also color coded to quickly determine under forecasts, over forecasts and insufficient data in the forecast.

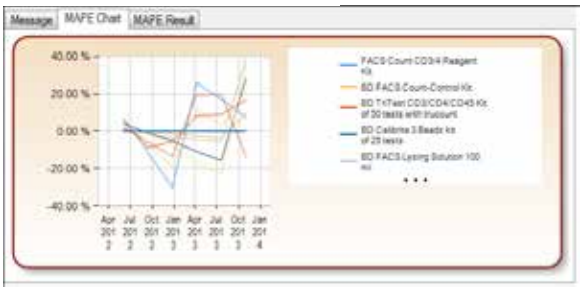


Figure 55. MAPE Chart tab

Figure 56. MAPE Result Tab

Managing Forecast Result

Once a forecast is done, different summary information of the result can be seen on the forecast form. (Figure 56) From this form, results can be viewed for each site included in the forecast or as all sites combined.

Forecast Summary

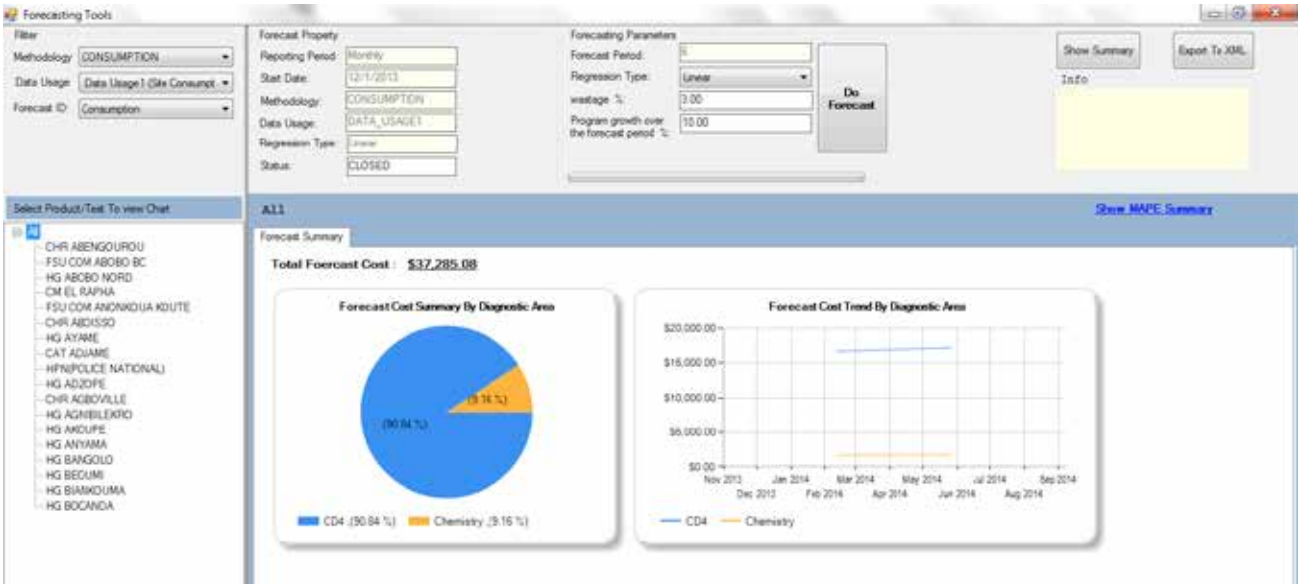


Figure 56. Forecast Summary

This report shows the forecasted cost summary and cost trend for the overall forecast or for a specific selected site.

1 Select all or an individual Site in the Select Site to view Chart field.

The Forecast Summary will refresh based on the selection.

Printable Summary

To view detailed printable version of a forecast result –

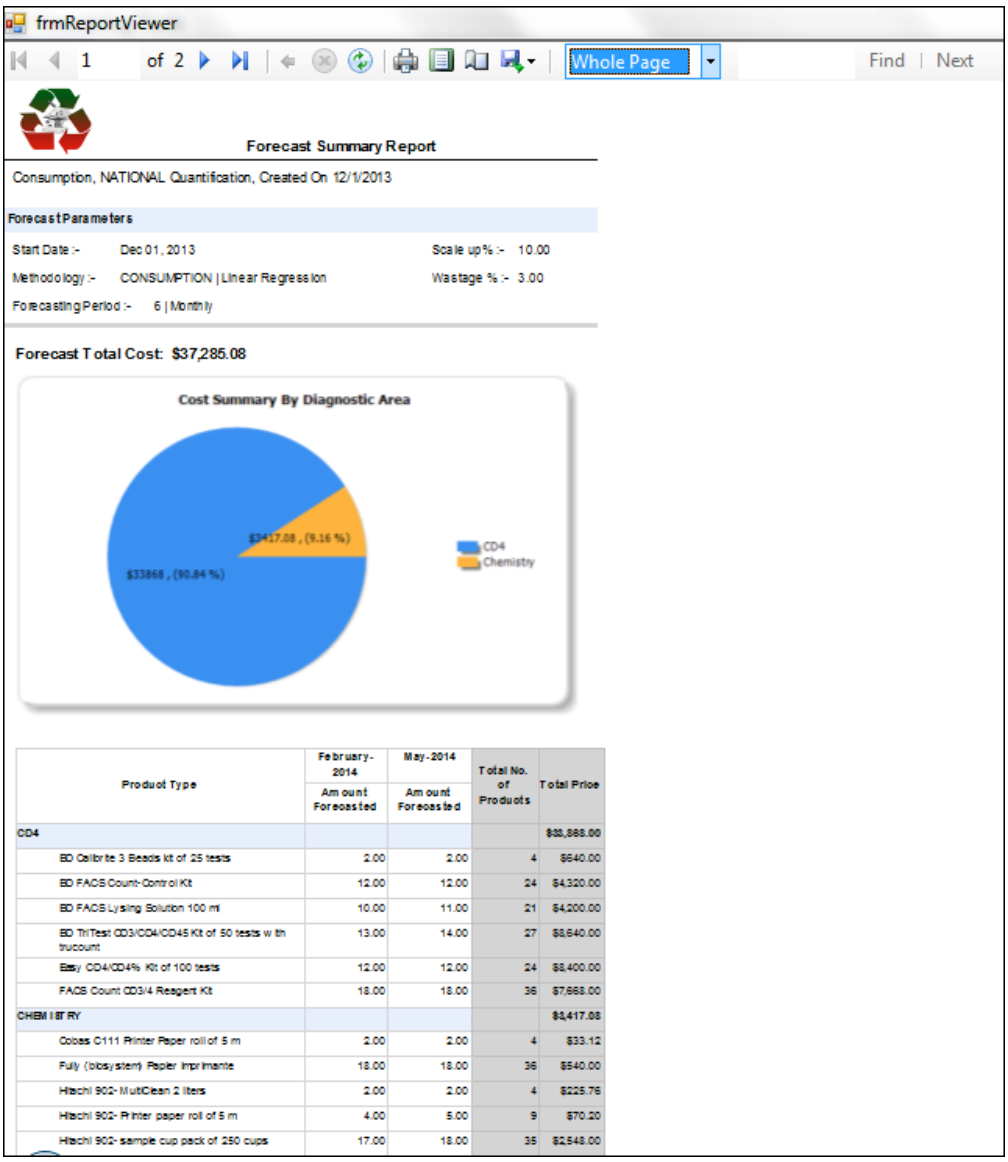


Figure 57. frmReportViewer

1 Click on Show Summary button.

The frmReportViewer form will display. (Figure 57)

2 Click on printer button to send report to printer

Or, Click on disk button to send report to PDF, Word, or Excel.

Chapter 10

Forecasting: Service Statistics Methodology

The Service Statistics method uses historical numbers of tests performed over a given period of time to estimate future testing demands.

Sources of Data

Service statistics data are historical, program-level or facility-level data on the number of patient visits to facilities, the number of services provided, or the number of people who received a specific service or treatment within a given time period. Service statistics data can be found in program monitoring reports, HMIS data, facility-level data on service utilization and attendance rates, or in patient records. In some programs, the LMIS captures a limited number of service statistics. For ARVs, service statistics data would be the total number of ART patients on treatment at a facility, or perhaps the total number of patient visits to a facility at a point in time. For HIV tests, service statistics would be the total number of clients tested during a certain period. For laboratory supplies, service statistics are the total number of tests performed in a certain period (e.g., CD4 count tests performed in a given quarter).

Service Statistics Methodology

The Service Statistics Methodology tree view option enables you to modify forecast information.

1. Click on Quantification Process tree view option.
2. Click on the Service Statistics Methodology tree view option.

ForLAB opens the Service Statistics Forecast Methodology screen (Figure 58) that will show the list of forecasts that have been entered into the database.

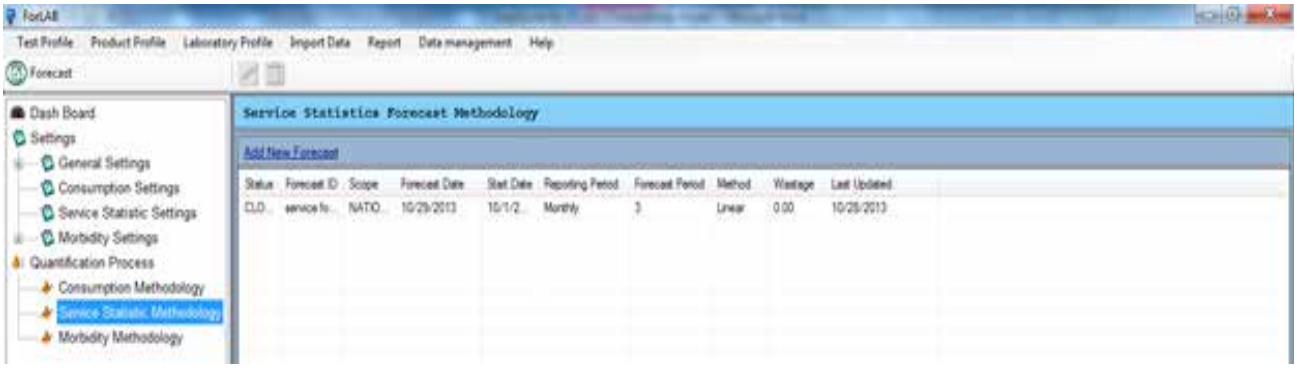


Figure 58. Service Statistics Forecast Methodology screen

Adding New Forecast

With the Service Statistics Forecast Methodology screen displayed—

1 Click on the Add New Forecast link to display a blank Quantification Process data entry form (Figure 59).

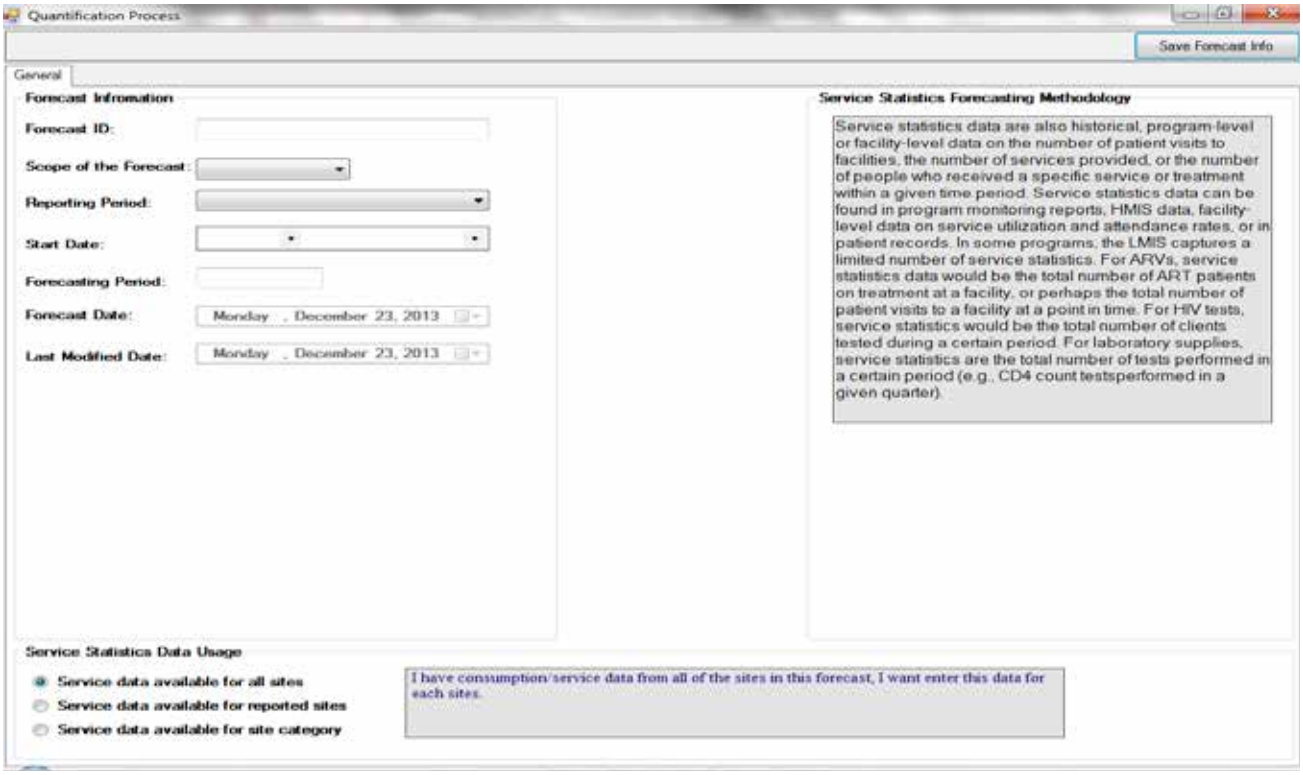


Figure 59. Quantification Process data entry form

The Forecast ID field specifies the unique id and short text describing the forecast.

2 Type the Forecast ID.

The Scope of the Forecast field categorizes the forecasts to help the user to have different categories of forecasts. This field can be Custom, National, or Global.

3 Select the Scope of the Forecast from the drop down list.

The Reporting Period field is independent on the type of historical data collected for the forecast. It can be bimonthly, monthly, quarterly, or yearly.

4 Select the Reporting Period from the dropdown field.

The Start Date field is the date the forecast period will start.

5 Type in the Start Date for the forecast.

The Forecasting Period field is the number of periods we wanted to include in the forecast.

6 Type in the Forecasting Period.

The Forecast Date field and Last Modified Date field are system dates on which the forecast was defined and modified. Neither of these fields is editable.

The Service Statistics Data Usage field indicates the way service data is to be entered and used in the system. Options include:

- Service Data available for all sites – use this option if you have data reported from each site in the forecast
- Service Data available for reported sites – use this option if you only have a portion of sites reported and you want to then use this data for non-reported sites.
- Service Data available for site category – use this option if you want to categorize sites in groups based on level and testing behaviors and enter service data for the group.

7 Click in the radial button for the appropriate data usage.

When you finish—

8 Click on the Save Forecast Info button to save the data.

Enter Service Statistics Data

With the Quantification Process screen displayed—

9 Click on the Service Statistics tab in the Quantification Process window that you want to edit (Figure 60).

There are three ways to add Service Statistic Data.

ADD BY TEST

The List of Sites field lists all the sites in the system. The Selected Sites field lists all the sites included in the forecast defined.

1 Select the sites in the List of Sites field to be included in the forecast.

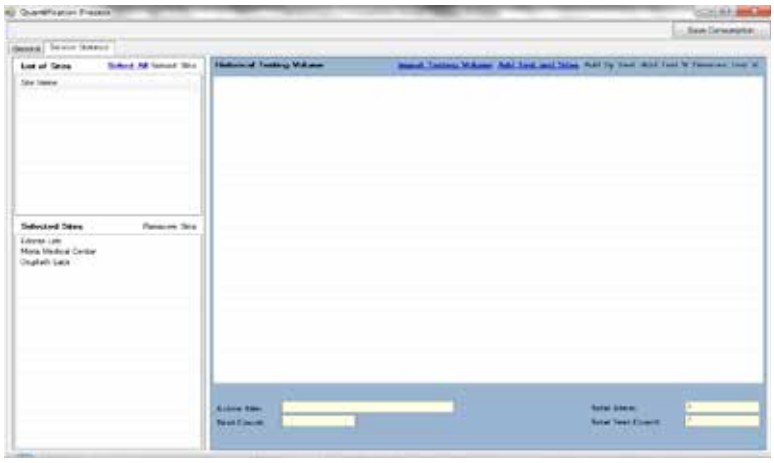


Figure 60. Quantification Process data entry form

2 Click on Select Site link to add to add selected sites to the Selected Sites list.

Or click Select All link to add all sites to the Selected Sites list.

To remove a Selected Site from the Selected Sites list—

1 Select the sites in the Selected Sites field to be removed from the forecast.

2 Click on Remove Site link to add to remove the sites from the Selected Sites list.

The Add by Test link allows users to add a test for the selected site with the number of reporting periods provided. To add the tests—

3 Select the Site in the Selected Sites list.

4 Click on the Add by Test link.

The Select Test form is opened (Figure 61). This form is used to add a test for the selected site with the number of reporting periods provided.

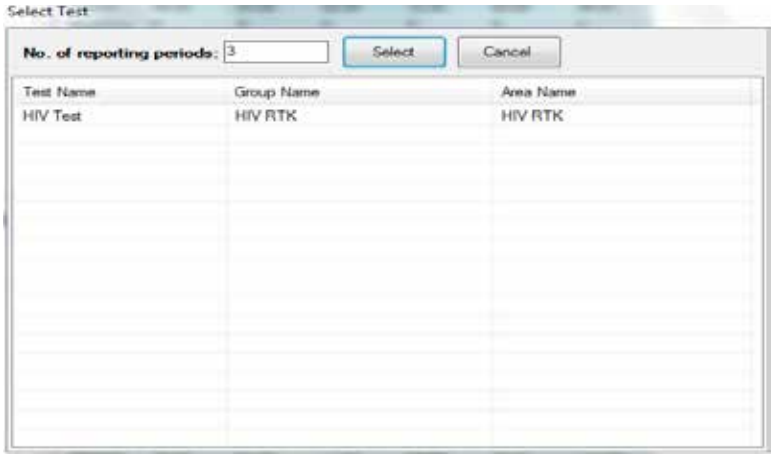


Figure 61. Select Test Form

5 Select the tests to add to the forecast. (Select more than one test by holding down the ctrl button while clicking on the test.)

6 Type in the number of Reporting Periods for the tests.

7 Click Select button to add the selected tests to the selected sites.

Or, click cancel to return to the Quantification Process screen.

ADD BY TESTS AND SITES

The Add Test and Sites link allows the user to add test and sites simultaneously with the number of reporting periods provided. To add the tests and sites—

1 Click on the Add by Tests and Sites link.

The Select Test form is opened (Figure 62). This form is used to add a test for the selected sites with the number of reporting periods provided.

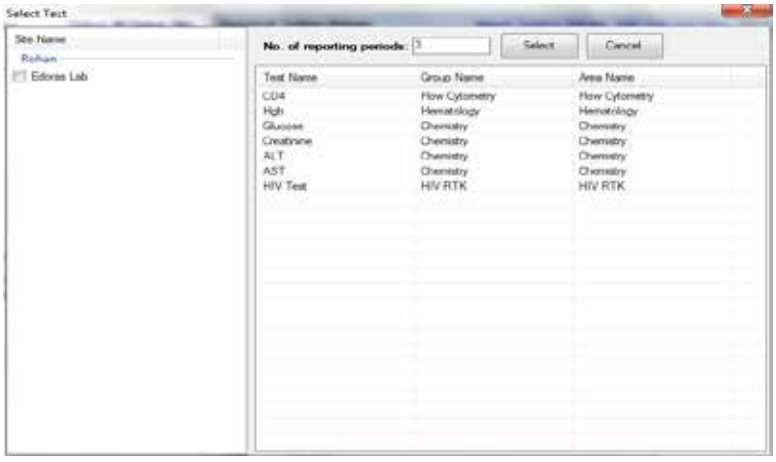


Figure 62. Select Test Form

2 Select the sites to add to the forecast by placing a check in the box next to each site.

3 Select the tests to add to the forecast. (Select more than one test by holding down the ctrl button while clicking on the test.)

4 Type in the number of Reporting Periods for the tests.

5 Click Select button to add the selected tests to the selected sites.

Or, click cancel to return to the Quantification Process screen.

IMPORT TESTING VOLUME

The Import Testing Volume link allows users to import bulk service data from the excel template. To import the tests and sites—

1 Click on the Import Testing Volume link.

The Import form is opened (Figure 63).

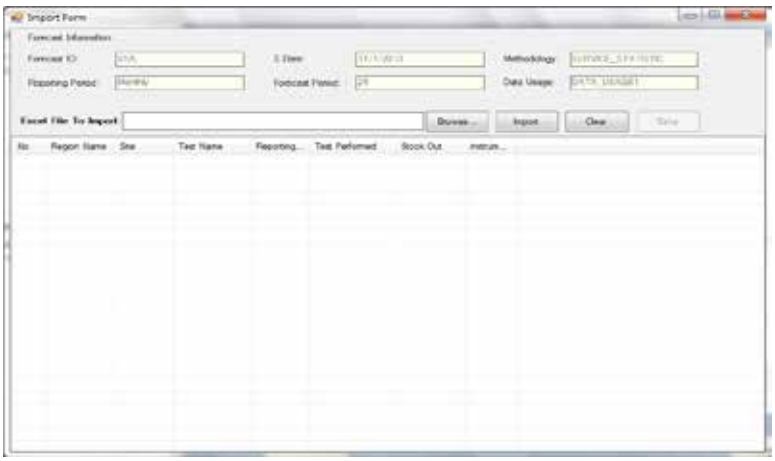


Figure 63. Import form

2 Click the Browse button to show the Open File dialog box.

3 Find the excel template file and click open.

The file path is populated on the import form.

4 Click Import.

5 Double click Service Statistics sheet in the list.

6 Click Save to save the data to the Quantification form

Or click clear to clear out the data and select another file to import.

Editing Service Statistics Data

Once a test is added to the site using one of the methods above, the Historical Testing Volume will populate and can be updated directly (Figure 64).

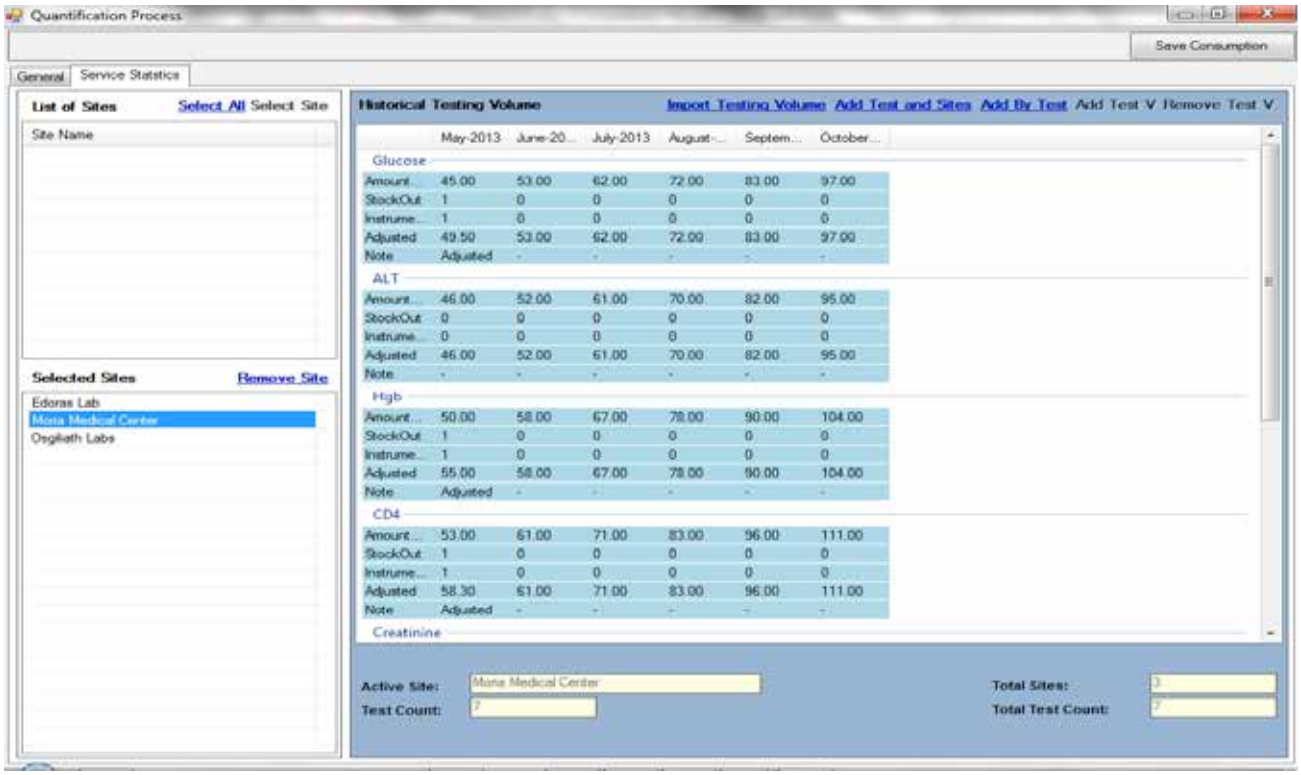


Figure 64. Historical Testing Volume data entry form

TO EDIT THE HISTORICAL TESTING VOLUME–

1 Select a site in the Selected Site list.

2 Click on the cell you want to update and enter the correct value.

TO ADD A REPORTING PERIOD TO THE BEGINNING OR END OF THE PERIODS LISTED–

1 Click Add Test V link.

The popup window displays the start date of the forecast.

2 Enter the number of reporting periods to add.

3 Click OK.

TO REMOVE A REPORTING PERIOD FROM THE PERIODS LISTED –

Note: ForLAB will not allow the user to delete service if only 3 records

1 Click on the reporting period to be deleted.

ForLAB will only allow period at the beginning or end of the forecast to be delete.

2 Click Remove Test V link.

When you finish—

3 Click on the Save Consumption button to save the data.

4 Click on the red X to close the form and return to the Service Statistics Forecast Methodology screen.

Calculating Forecast

With the Service Statistics Forecast Methodology screen displayed—

1 Click on Forecast Button at the top left corner of the application.

The Forecasting Tools form will display. (Figure 65) The Filter Group allows user to filter forecasts in the system using methodology and data usage.

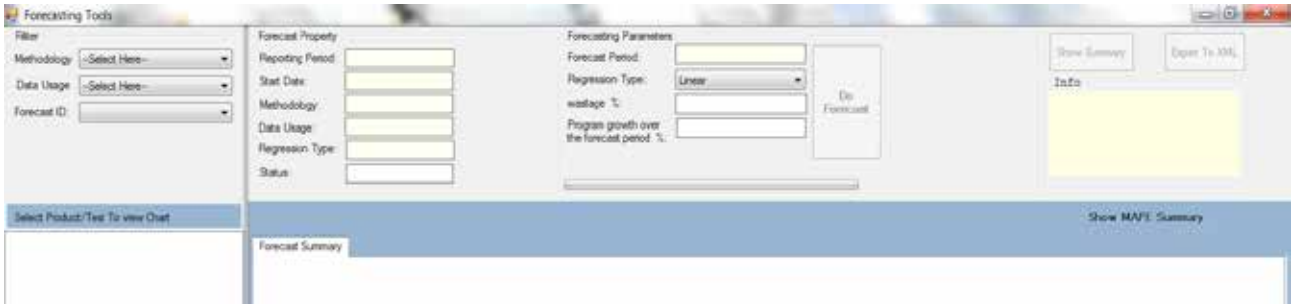


Figure 65. Forecasting Tools

2 Select Service Statistics Methodology from dropdown list.

3 Select Data Usage from the dropdown list.

Once the ID of the Forecast is selected "Do Forecast" button will be enabled. Under Forecasting Parameters users can change the regression of the forecast and the Wastage and Add by % to be added on the forecast result.

4 Select the Regression Type from the dropdown list.

5 Type in the Wastage %.

6 Type in the Program Growth % over the forecast period.

7 Click on Do Forecast button to start the Forecast.

The Forecasting process takes time to finalize; when complete the Forecast Result Form is shown. (Figure 67)

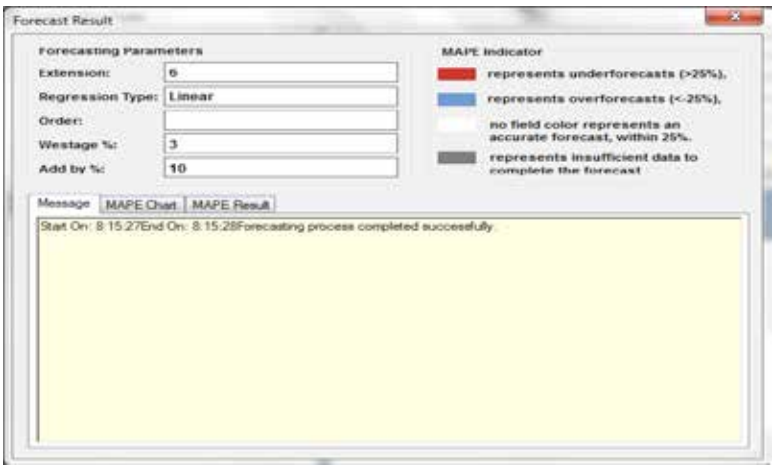


Figure 67. Forecast Result

This form displays the forecasting parameters entered on the previous form along with any messages. Forecast accuracy is measured using the Mean Absolute Percent Error (MAPE) and is defined as the average of percentage errors. The MAPE Chart tab (Figure 68) will display this indicator as a chart and the MAPE

Result tab (Figure 66) will display the calculated percentage errors. The results are also color coded to quickly determine under forecasts, over forecasts and insufficient data in the forecast.

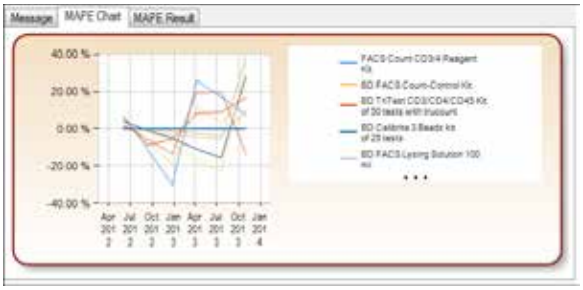


Figure 68. MAPE Chart tab

Figure 69. MAPE Result Tab

Managing Forecast Result

Once a forecast is done, different summary information of the result can be seen on the forecast form. (Figure 69) From this form, results can be viewed for each site included in the forecast or as all sites combined.

Managing Forecast Result

Once a forecast is done, different summary information of the result can be seen on the forecast form. (Figure 69) From this form, results can be viewed for each site included in the forecast or as all sites combined.

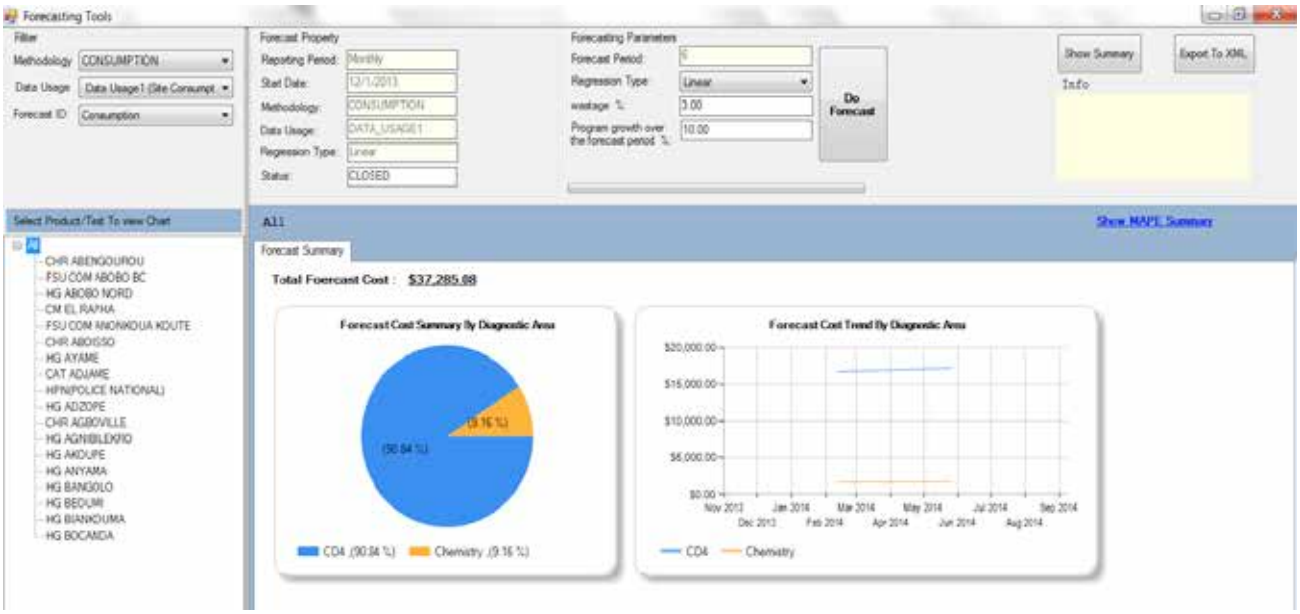


Figure 69. Forecast Summary

1 Select all or an individual Site in the Select Site to view Chart field.

The Forecast Summary will refresh based on the selection

Forecasted Service

This report shows the forecasted diagnostics contribution, Instrument utilization and instrument distribution for the instruments under the overall forecast or for a specific selected site.

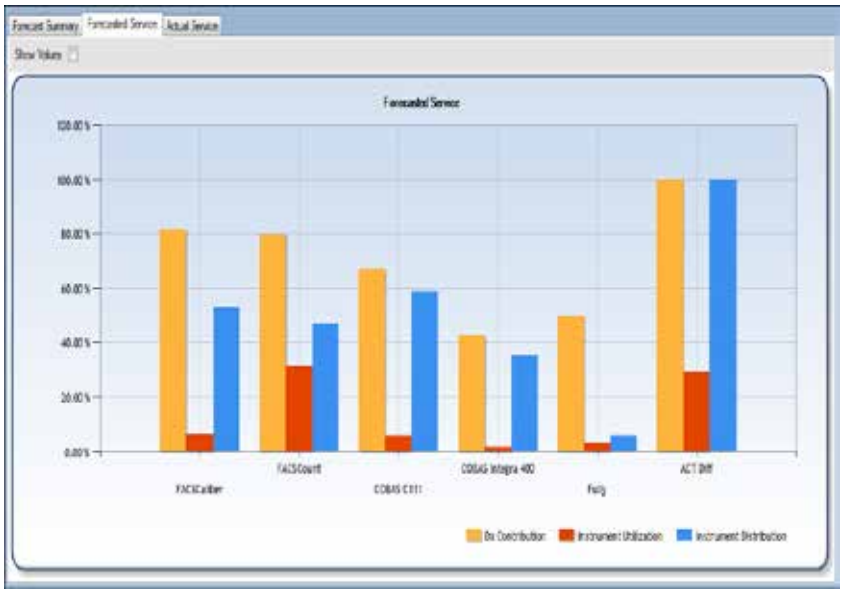


Figure 70. Forecasted Service

Actual Service

This report shows the actual diagnostics contribution, Instrument utilization and instrument distribution for the instruments under the overall forecast or for a specific selected site.

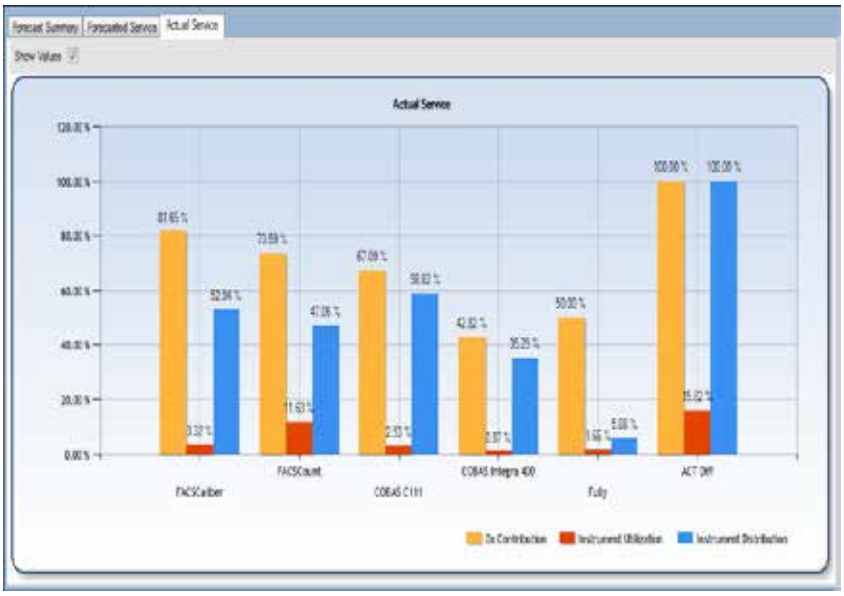


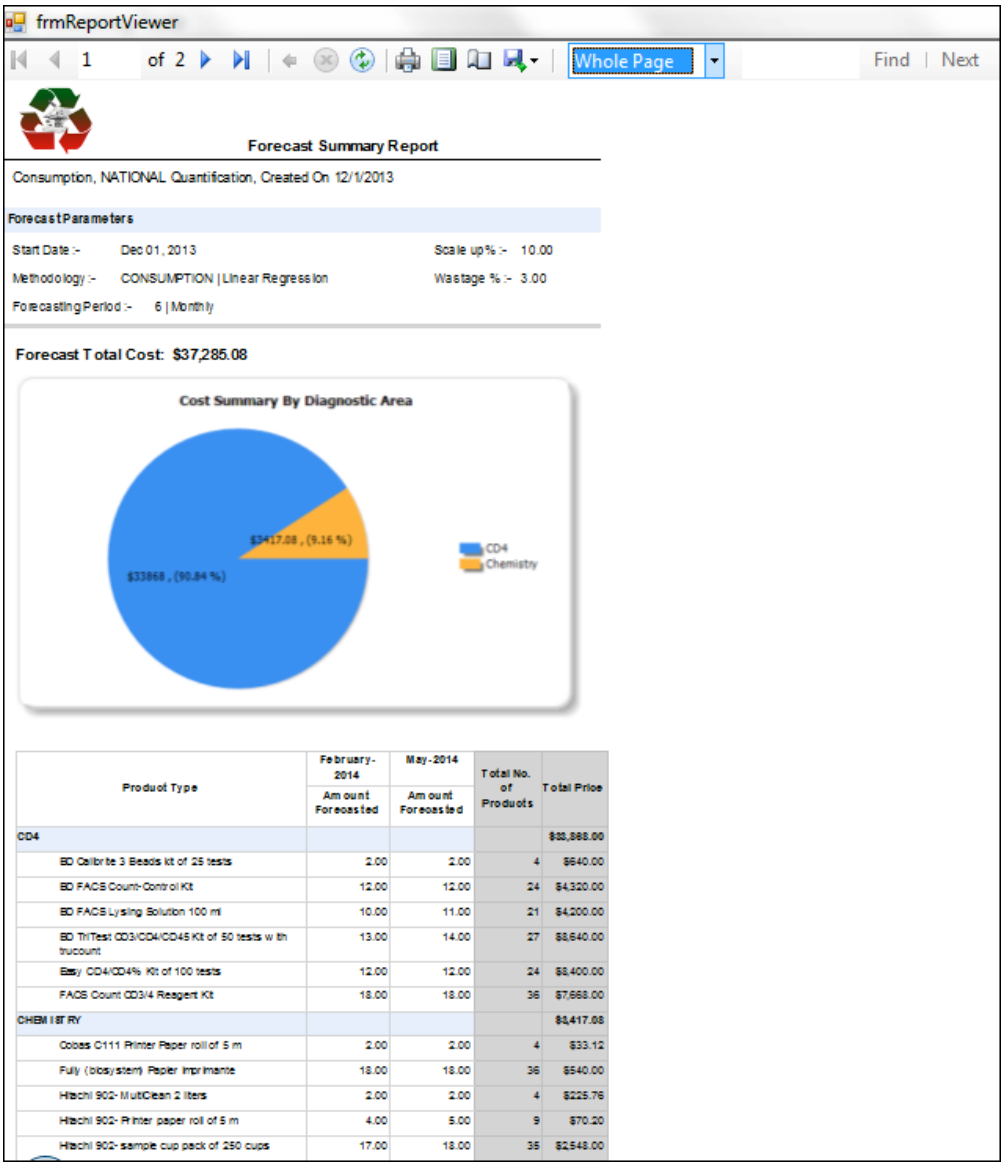
Figure 71--Actual Service

Printable Summary

To view detailed printable version of a forecast result –

1 Click on Show Summary button.

The frmReportViewer form will display. (Figure 72)



Product Type	February-2014 Amount Forecasted	May-2014 Amount Forecasted	Total No. of Products	Total Price
CD4				$33,868.00
BD Calibrite 3 Beads kit of 25 tests	2.00	2.00	4	$640.00
BD FACS Count-Control Kit	12.00	12.00	24	$4,320.00
BD FACS Lysing Solution 100 ml	10.00	11.00	21	$4,200.00
BD TriTest CD3/CD4/CD45 Kit of 50 tests w th trucount	13.00	14.00	27	$8,640.00
Easy CD4/CD4% Kit of 100 tests	12.00	12.00	24	$8,400.00
FACS Count CD3/4 Reagent Kit	18.00	18.00	36	$7,668.00
CHEMISTRY				$3,417.08
Cobas C111 Printer Paper roll of 5 m	2.00	2.00	4	$33.12
Fully (biosystem) Papier imprimante	18.00	18.00	36	$540.00
Hitachi 902- MultiClean 2 liters	2.00	2.00	4	$225.76
Hitachi 902- Printer paper roll of 5 m	4.00	5.00	9	$70.20
Hitachi 902- sample cup pack of 250 cups	17.00	18.00	35	$2,548.00

Figure 72. frmReportViewer

2 Click on printer button to send report to printer

Or, Click on disk button to send report to PDF, Word, or Excel.

Chapter 11

Forecasting: Morbidity Methodology

The morbidity method forecasts the quantity of laboratory commodities demanded for the diagnosis, care and treatment of specific diseases based on existing disease prevalence and program targets.

Morbidity Methodology

The Morbidity Methodology tree view option enables you to modify forecast information.

1. Click on Quantification Process tree view option.
2. Click on the Morbidity Methodology tree view option.

ForLAB opens the Morbidity Forecast Methodology screen (Figure 73) that will show the list of forecasts that have been entered into the database.

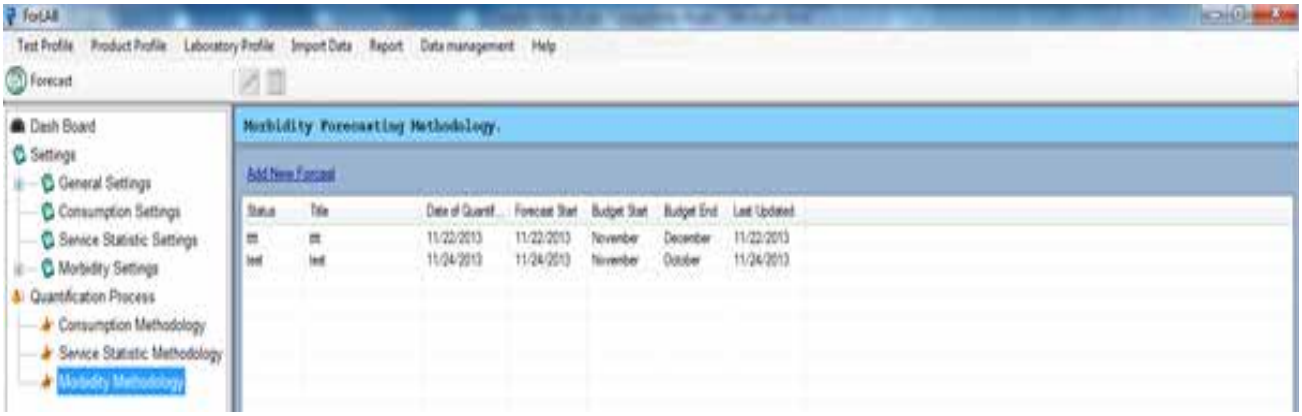


Figure 73. Morbidity Forecast Methodology screen

Adding New Forecast

With the Morbidity Forecast Methodology screen displayed—

1. Click on the Add New Forecast link to display a blank Morbidity Quantification data entry form (Figure 74).

The Title of Quantification field specifies a short title describing the forecast.

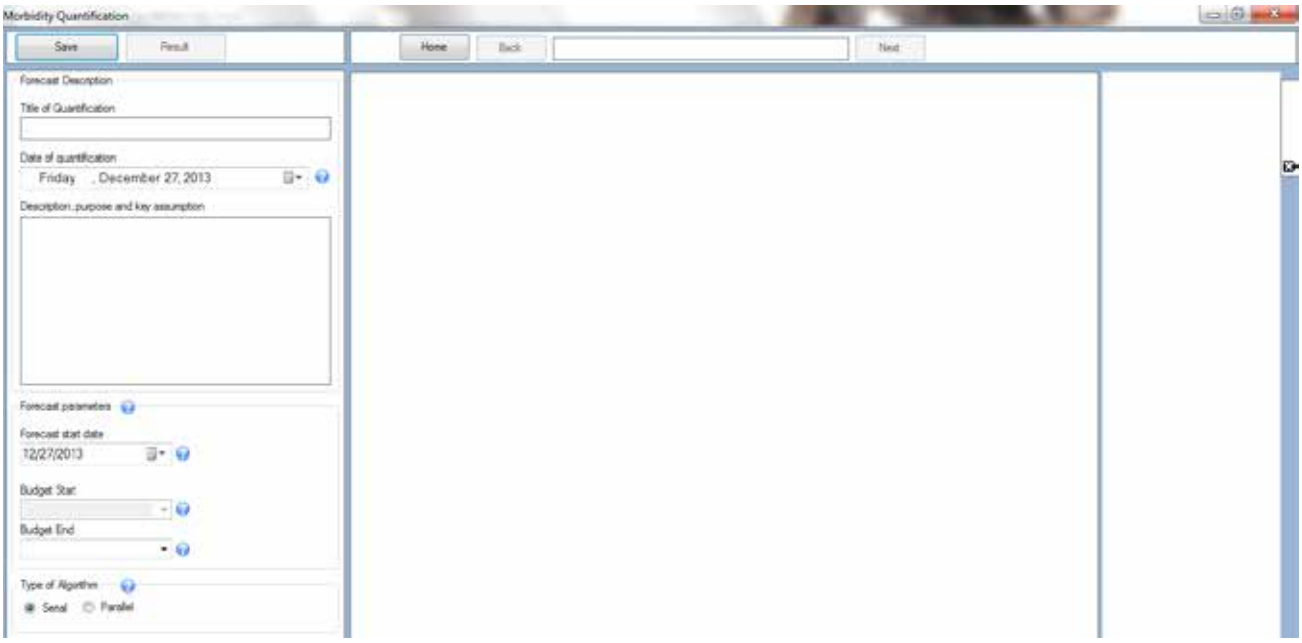


Figure 74. Morbidity Quantification

2 Type the Title of Quantification.

3 Select the Date of Quantification.

The Description, Purpose and Key Assumptions field specifies the description of the quantification, including the purpose and key assumptions that have been made to create the quantification.

4 Type the Description, Purpose and Key Assumptions.

The Forecast Start Date field is the date the forecast period will start.

5 Type in the Forecast Start Date for the forecast.

It is important to understand the distinction between the forecast timeframe and the budget period. The forecast timeframe always includes the twelve months starting with the forecast start date. However, it is sometimes desirable to perform quantification for only a specific number of months within that 12-month forecast timeframe. This period is the Budget Period. The Budget Start field is disabled since this will always be the same as the Forecast Start month. The Budget End field is the last month in to include in the budget. ForLAB will include all months from the Budget Start through the Budget End.

6 Select the Budget End.

The Type of Algorithm field specifies the desired algorithm for rapid testing to be used in the forecast. Serial indicates that each patient is tested once initially, those that receive a positive result are retested to confirm the result, and patients with discordant results are tested a third time. Parallel indicates that all patients are tested twice initially and patients with discordant results have the option to be tested a third time.

7 Click in the radial button for the appropriate algorithm.

When you finish—

8 Click on the Save button to save the data.

Upon saving the data, the working area to the right will be activated (Figure 75). At the top of this working area are three buttons and a description of the Working Area page. These buttons will move you through the working area. The Next button will move you to the next page in the working area. The Back button will return you to the previous page. The Go Home button will return you to the first page in the working area. Please remember to use the Save button in the top left hand corner to save your work are you go through the working area.

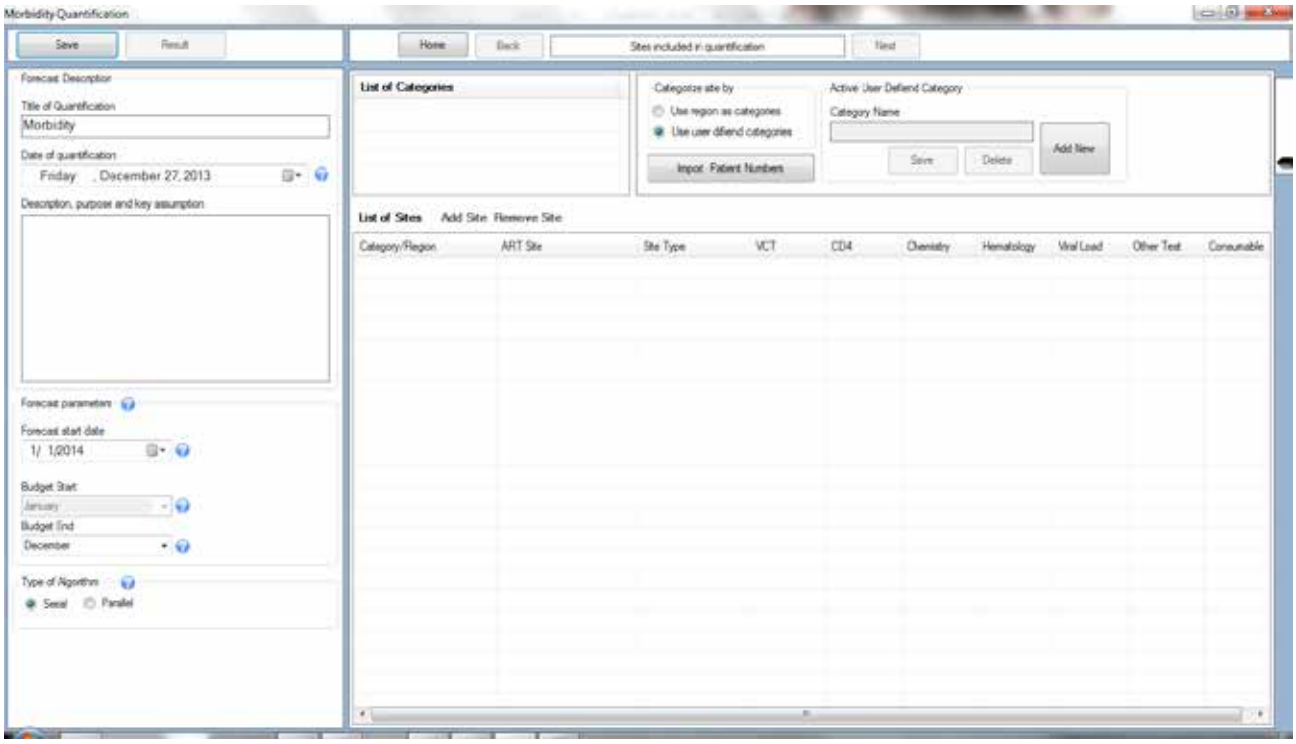


Figure 75. Morbidity Quantification with Working Area enabled

Sites included in quantification

The home screen in the working area is the Sites Included in Quantification screen. (Figure 76)

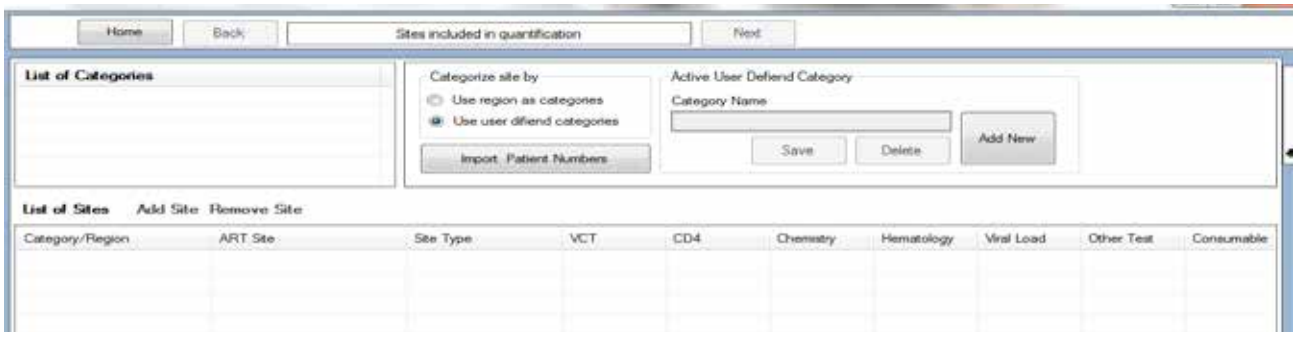


Figure 76. Sites included in quantification

The Categorize Site By field allows the user to categorize sites when adding them into the forecast. There are two ways of categorizing sites: (1) using region as a category; or (2) defining your own custom category.

1 Click the Use Region as Categories or Use User Defined Categories radial button.

USING REGION AS A CATEGORY

1 Click in the Use region as categories radial button.

The complete list of regions will display in the List of Categories field.

USER DEFINED CATEGORY

1 Click in the Use user defined categories radial button.

Repeat the following steps 2 through 4 for each user defined category needed:

2 Click Add New button.

The Category Name field describes the category being defined.

3 Edit Category Name.

4 Click Save to save the user defined category

Or, click Delete to remove it from the list.

The complete list of categories will display in the List of Categories field.

2 Select a category in the List of Categories.

3 Click Add Site link to add sites to the quantification for the specified category.

The Select Site form will display (Figure 77).

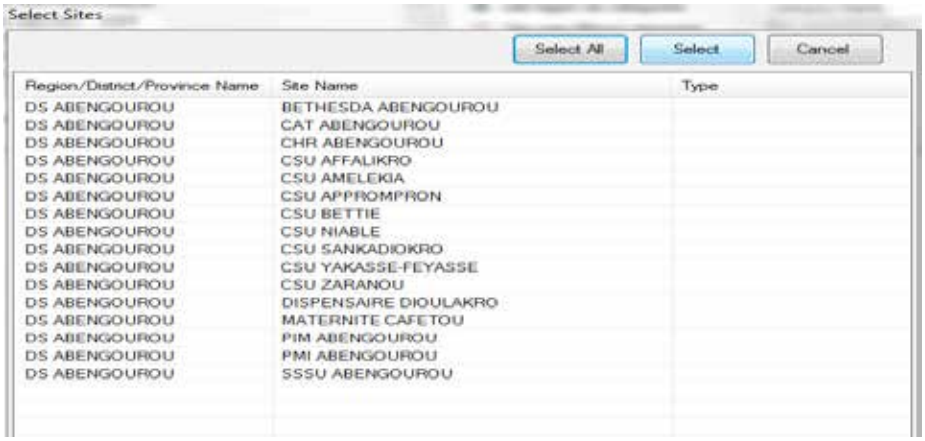


Figure 77. Select Sites

4 Click Select all to add all sites to the quantification

Or, select the individual sites to add to the quantification and click Select

Or, click Cancel button to close form and return to Working Area screen.

Next, you can indicate which categories of testing services are available at each site, and which supplies each site requires. In some countries, all services will be available at every site, and all supplies will be required. However, in other countries, certain services will only be available at some sites and not at others. For each site,

5 Double click on the  or  to indicate whether or not a service is available.

6 Repeat steps 2 through 5 for each category.

7 Click Save button to save working area.

8 Click Next button to move to next working area.

Initial Patient Data

Before forecasting patient demand during the upcoming time period, a baseline patient level in "Time Zero" using known numbers of patients on treatment and on pre-treatment at each site must be set.

Figure 78. Initial Patient Data

There are two ways of setting a baseline:

- Option 1: Enter patient numbers for each site
- Option 2: Enter patient numbers for a different month that is available and apply the same percentages to sites for the current forecast

It is recommended to use Option 1 if site level data from the last month prior to the start of the forecast is available; otherwise Option 2 allows the use of the most recent data available.

1 Click on the checkbox to 1-Enter patient numbers for each site

Or, Click on the checkbox to 2-Enter patient numbers for a different month that is available and apply the same percentages to sites for the current forecast.

2 Click Save button to save working area.

3 Click Next button to move to next working area.

Current Patient Numbers by Site

Depending on which option was chosen on the previous Working Area screen, the appropriate Current Patient Numbers by Site screen will display.

OPTION 1

If Option 1 was chosen on the previous screen, this screen will appear (Figure 79). For each site, the number of patients on treatment and pre-treatment for "Time Zero" needs to be entered.

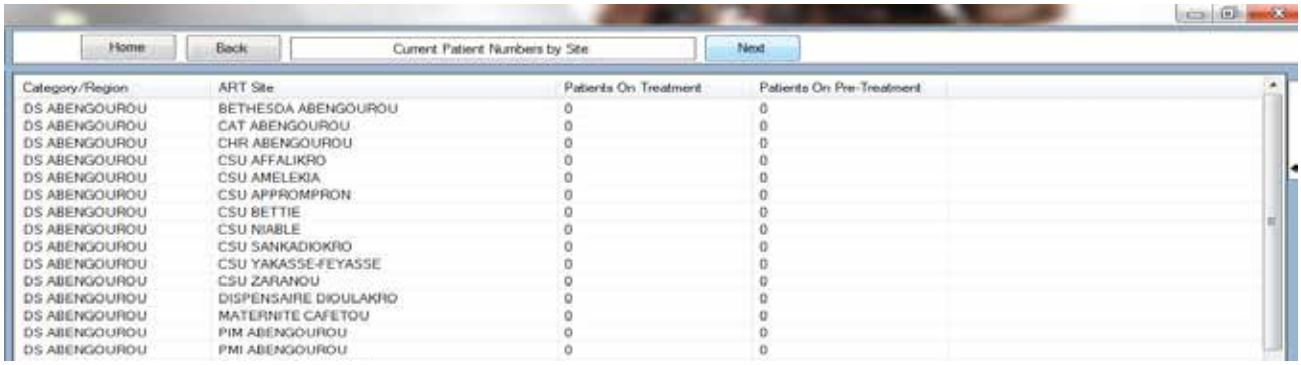


Figure 79. Option 1: Current Patient Numbers by Site

1. Double click in the Patients on Treatment cell.
2. Type in the number of patients on treatment
3. Double Click in the Patients on Pre-Treatment cell.
4. Type in the number of patients on pre-treatment.
5. Repeat steps 20.1 to 20.4 for each site on the list.

When all sites have been entered –

6. Click Save button to save working area
7. Click Next button to move to next working area.

OPTION 2

If Option 2 was chosen on the previous screen, this screen will appear (Figure 80). The On Treatment and On Pre-Treatment fields indicate the total number of patients for the last month prior to the start of the forecast.

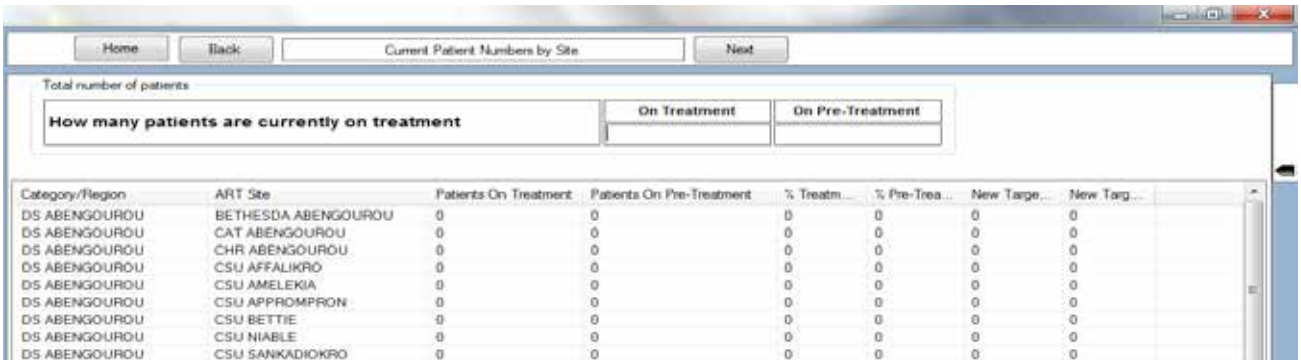


Figure 80. Option 2: Current Patient Numbers by Site

1. Type in the current total number of patients On Treatment.
2. Type in the current total number of patients On Pre-Treatment.

For each site, the number of patients on treatment and pre-treatment for the most recent month needs to be entered.

3. Double click in the Patients on Treatment cell.
4. Type in the number of patients on treatment
5. Double Click in the Patients on Pre-Treatment cell.
6. Type in the number of patients on pre-treatment.
7. Repeat steps 3 to 6 for each site on the list.

When all sites have been entered, the model will automatically use the percent allocation of the patients across sites from the older data to estimate the number of patients at each site for "Time Zero."

8 Click Save button to save working area

9 Click Next button to move to next working area.

Patient Treatment Target

In preparation for entering the patient treatment targets, users must select whether to set targets according to the number of patients that are ON TREATMENT at the end of the forecast period, or the number of patients that have EVER STARTED ON TREATMENT by the end of the forecast period. Different Countries often track the number of patients on treatment in different ways, depending on what data is available. Due to high levels of attrition and death, it is often difficult to estimate how many patients remain on treatment at any given time. The number of patients that have ever started on treatment will not take into account attrition and death, whereas the number of patients actually on treatment will. In order to reach a given target of patients on treatment, the system must add enough patients over the course of the forecast period to outweigh the patients lost due to attrition and death.

Figure 81. Patient Treatment Target

And so, there are two ways of entering a target:

- Option 1: Patients actually on treatment
- Option 2: Patients EVER STARTED on treatment

1 Click on the checkbox to 1-Patients actually ON treatment

Or, Click on the checkbox to 2-Patients EVER STARTED on Treatment.

2 Click Save button to save working area.

3 Click Next button to move to next working area. If Option 1 is chosen, continue with step 1.

Patient Ever Started on Treatment

If Option 2 is chosen, the Patient Ever Started On Treatment screen will appear in order to select a method for establishing a baseline of how many patients were EVER STARTED ON TREATMENT before the forecast time period (Figure 82).

Figure 82. Patient Ever Started on Treatment

There are three ways of setting a baseline:

- Option 1: Enter EVER STARTED patient numbers for each site
- Option 2: Enter data for a different month that is available and apply the same percentages to sites for the current forecast
- Option 3: Enter on national number for patients EVER STARTED. Apply same percentages used for current patients to each of the sites.

It is recommended to use Option 1 if site level data from the last month prior to the start of the forecast is available; Option 2 allows the use of the most recent data available if site level data from the last month prior to the start of the forecast is unavailable; otherwise Option 3 should be used if there is no data on how many patients have EVER STARTED ON TREATMENT at each site prior to the start of the forecast period.

1 Click on the checkbox to 1- Enter EVER STARTED patient numbers for each site

Or, Click on the checkbox to 2- Enter data for a different month that is available and apply the same percentages to sites for the current forecast.

Or, Click on the checkbox to 3- Enter on national number for patients EVER STARTED. Apply same percentages used for current patients to each of the sites.

2 Click Save button to save working area.

3 Click Next button to move to next working area.

EVER STARTED Patient Numbers by Site

Depending on which option was chosen on the previous Working Area screen, the appropriate Current Patient Numbers by Site screen will display.

OPTION 1

If Option 1 was chosen on the previous screen, this screen will appear (Figure 83). For each site, the number of EVER STARTED patients on treatment and pre-treatment for "Time Zero" needs to be entered.

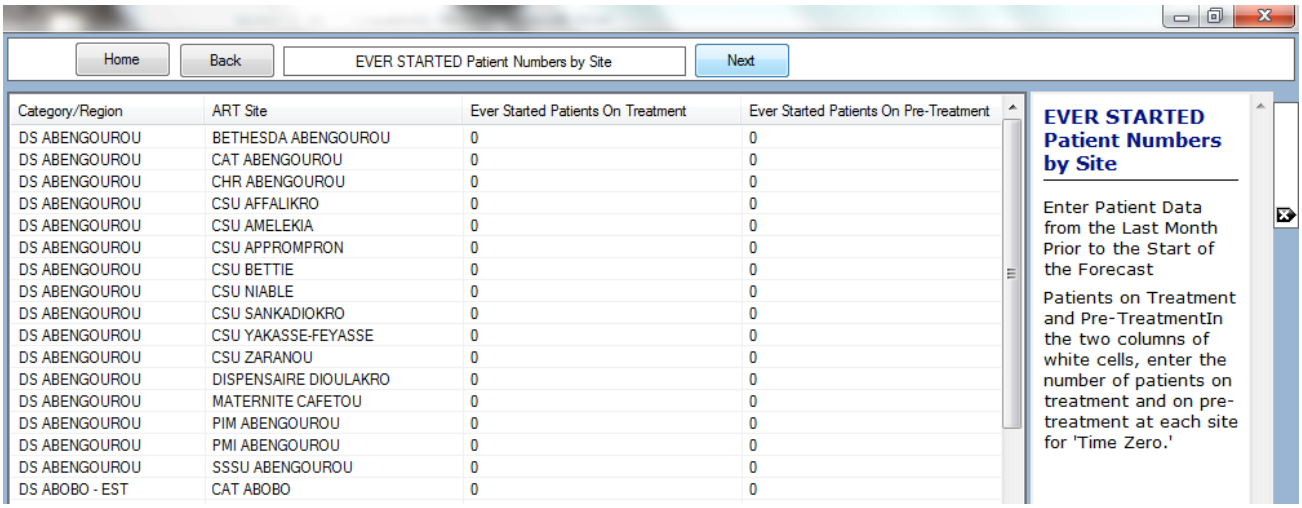


Figure 83. Option 1: EVER STARTED Patient Numbers by Site

1. Double click in the Ever Started Patients on Treatment cell.
2. Type in the number of ever started patients on treatment
3. Double Click in the Ever Started Patients on Pre-Treatment cell.
4. Type in the number of ever started patients on pre-treatment.
5. Repeat steps 22.1 to 27.4 for each site on the list.

When all sites have been entered –

6. Click Save button to save working area
7. Click Next button to move to next working area.

OPTION 2

If Option 2 was chosen on the previous screen, this screen will appear (Figure 84). The On Treatment and On Pre-Treatment fields indicate the total number of ever started patients for the last month prior to the start of the forecast.

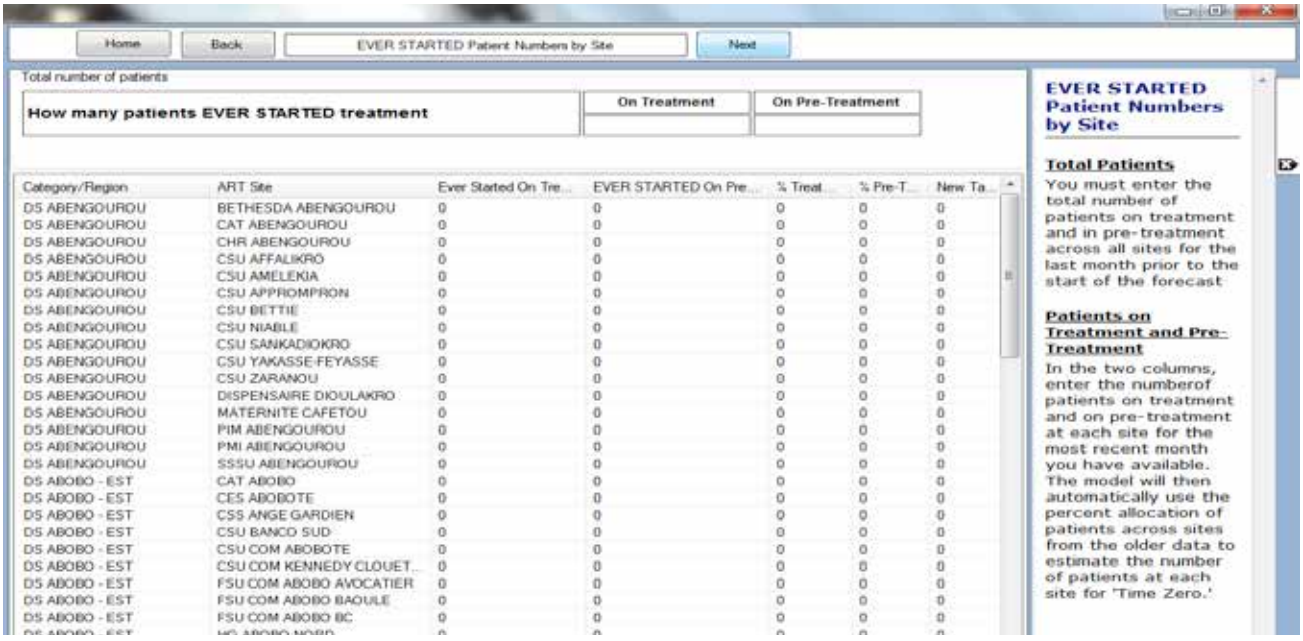


Figure 84. Option 2: EVER STARTED Patient Numbers by Site

1. Type in the current total number of ever started patients On Treatment.
2. Type in the current total number of ever started patients On Pre-Treatment.

For each site, the number of ever started patients on treatment and pre-treatment for the most recent month needs to be entered.

3. Double click in the Ever Started on Treatment cell.
4. Type in the number of ever started patients on treatment
5. Double Click in the Ever Started on Pre-Treatment cell.
6. Type in the number of ever started patients on pre-treatment.
7. Repeat steps 3 to 6 for each site on the list.

When all sites have been entered, the model will automatically use the percent allocation of the patients across sites from the older data to estimate the number of patients at each site for "Time Zero."

8. Click Save button to save working area
9. Click Next button to move to next working area.

OPTION 3

If Option 3 was chosen on the previous screen, this screen will appear (Figure 85). The On Treatment and On Pre-Treatment fields indicate the total number of ever started patients for the last month prior to the start of the forecast.

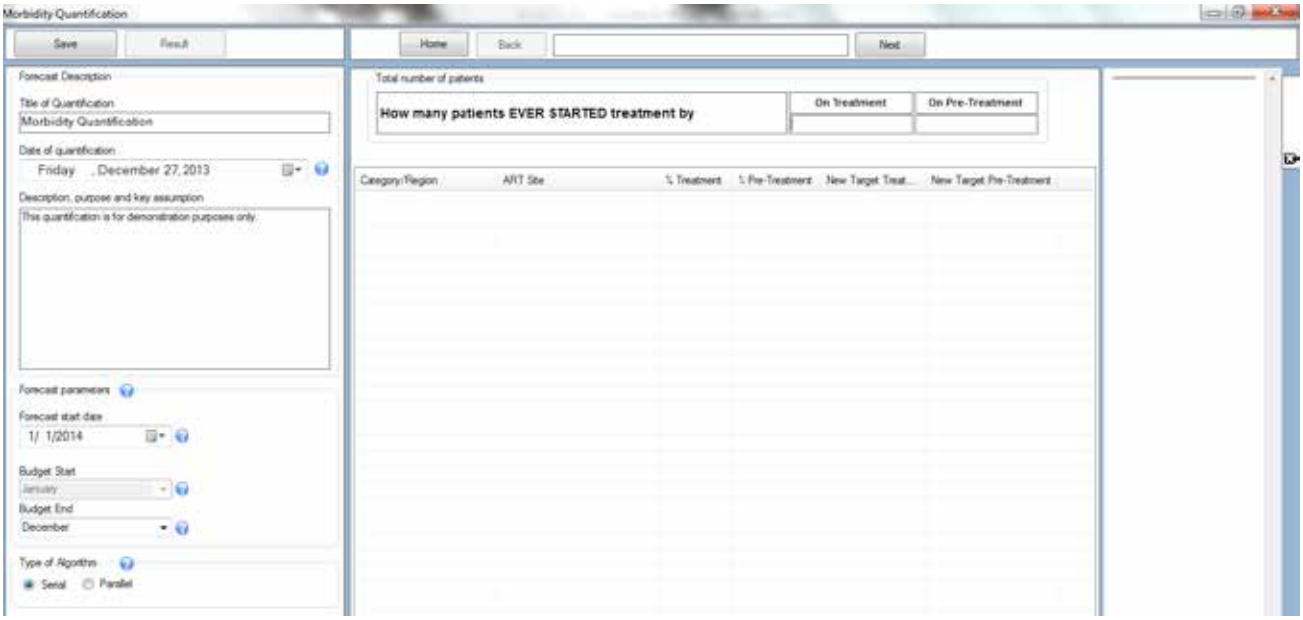


Figure 85. Option 3: EVER STARTED Patient Numbers by Site

1. Type in the current total number of ever started patients On Treatment.
2. Type in the current total number of ever started patients On Pre-Treatment.

The model will automatically use the percent allocation of the patients across sites from the current data to estimate the number of patients at each site for "Time Zero."

3 Click Save button to save working area

4 Click Next button to move to next working area.

ART Patient Target

Next, the preferred method of setting ART patient targets for the selected site groups in the quantification is selected.

Figure 86. ART Patient Target

There are four options depending on how much data is available:

- Option 1: Enter National Targets – Simply apply equal linear growth to all sites
- Option 2: Enter National Targets – But grow some sites at a different rate
- Option 3: Enter National Targets – But enter specific targets for some sites
- Option 4: Enter specific targets for each site

It is recommended to select Option 1 if you can only enter a national target and you plan to assume that all sites will grow at the same rate to hit this target; Option 2 if you want to enter one national target but want the flexibility to manually set different growth rates for different sites; Option 3 if you want to enter one national target but want the flexibility to manually set different absolute targets for different sites; otherwise, Option 4 if you want to manually set a different target for every site without entering a national target.

1 Click on the checkbox to 1 – Enter National Targets – Simply apply equal linear growth to all sites

Or, Click on the checkbox to 2 – Enter National Targets – But grow some sites at a different rate

Or, Click on the checkbox to 3 – Enter National Targets – But enter specific targets for some sites

Or, Click on the checkbox to 4 – Enter specific targets for each site

2 Click Save button to save working area.

3 Click Next button to move to next working area. If Option 4 is chosen, continue with step 1.

Site Target Calculator

Depending on which option was chosen on the previous Working Area screen, the appropriate Site Target Calculator screen will display.

OPTION 1

If Option 1 was chosen on the previous screen, this screen will appear (Figure 87). For each month, the National Treatment Target needs to be entered.

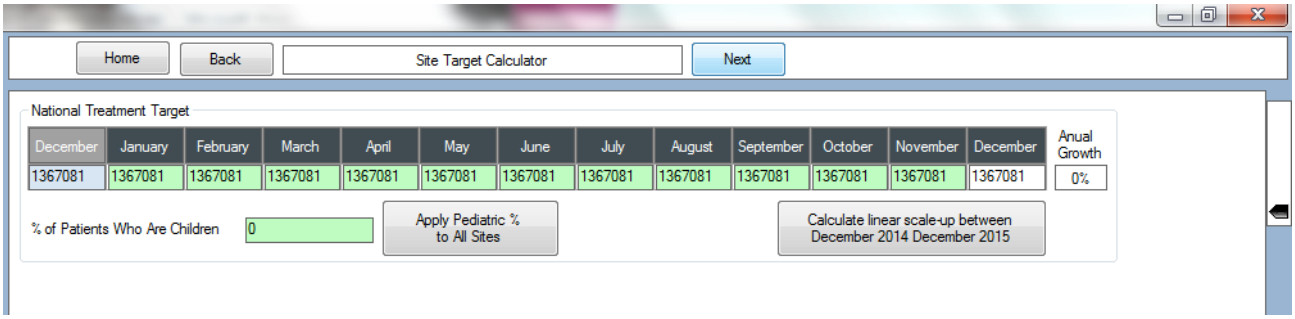


Figure 87. Option 1: Site Target Calculator

1. 1. Enter the number of patients expected to be on treatment by the end of the forecast period in the white cell
2. Populate the optional green cells by manually inputting monthly national targets

Or, Click on the Calculate Linear Scale Up button to assume linear growth.

To allow for demographic differences between adults and children, the percentage of patients on treatment who are children for the group of sites in the quantification should be entered.

3. Enter the % of Patients who are children.
4. Click Apply Pediatric % to All Sites.
5. Click Save button to save working area
6. Click Next button to move to next working area.

OPTION 2

If Option 2 was chosen on the previous screen, this screen will appear (Figure 88). For each month, the National Treatment Target needs to be entered.

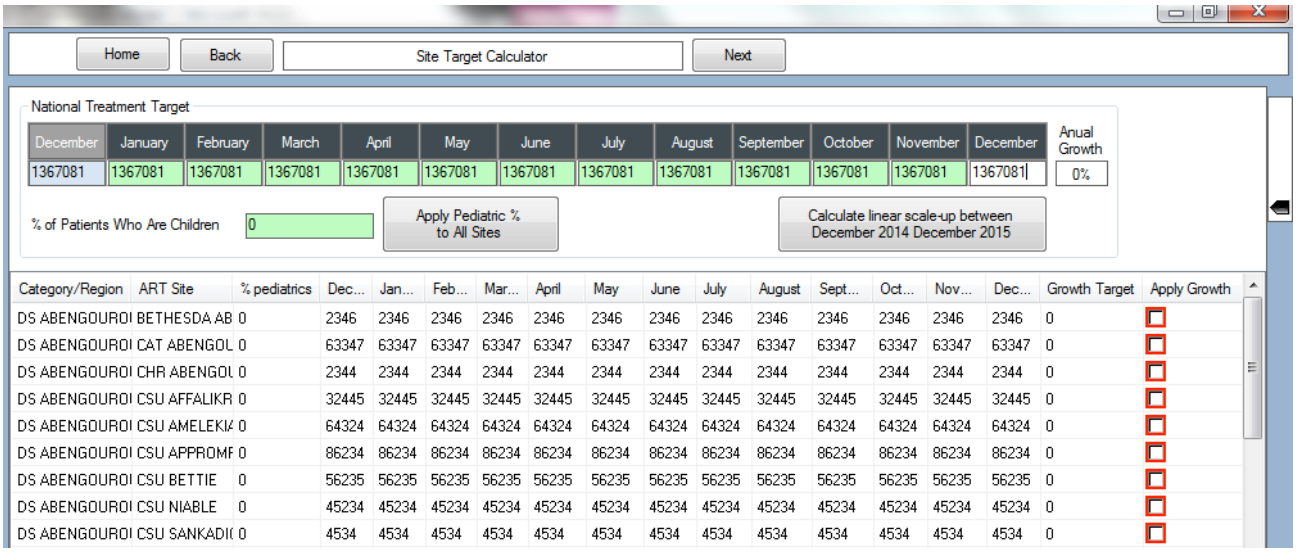


Figure 88. Option 2: Site Target Calculator

1. Enter the number of patients expected to be on treatment by the end of the forecast period in the white cell
2. Populate the optional green cells by manually inputting monthly national targets

Or, Click on the Calculate Linear Scale Up button to assume linear growth.

To allow for demographic differences between adults and children, the percentage of patients on treatment who are children for the group of sites in the quantification should be entered.

3. Enter the % of Patients who are children.
4. Click Apply Pediatric % to All Sites.

The lower part of the screen lists the ART sites in the quantification and displays the targets for each month in the forecast including the % of patients who are children at the site and the growth rate at the site.

The % pediatrics can be entered separately if the percentage is different than the national average for that specific site.

5. Enter % Pediatrics for each site where pediatric data at site level is available. (For a site where additional data is unavailable, assume the same percentage of pediatrics as the overall population.)

The growth target rate can be entered separately if the rate is different than the national average for that specific site.

6. Enter Growth Target for each site where the % growth rate at site level is available. (For a site where additional data is unavailable, assume the same growth rate as the national average.)
7. Check the box next to Growth Target field to apply the site specific target.
8. Click Save button to save working area
9. Click Next button to move to next working area.

OPTION 3

If Option 3 was chosen on the previous screen, this screen will appear (Figure 89). For each month, the National Treatment Target needs to be entered.

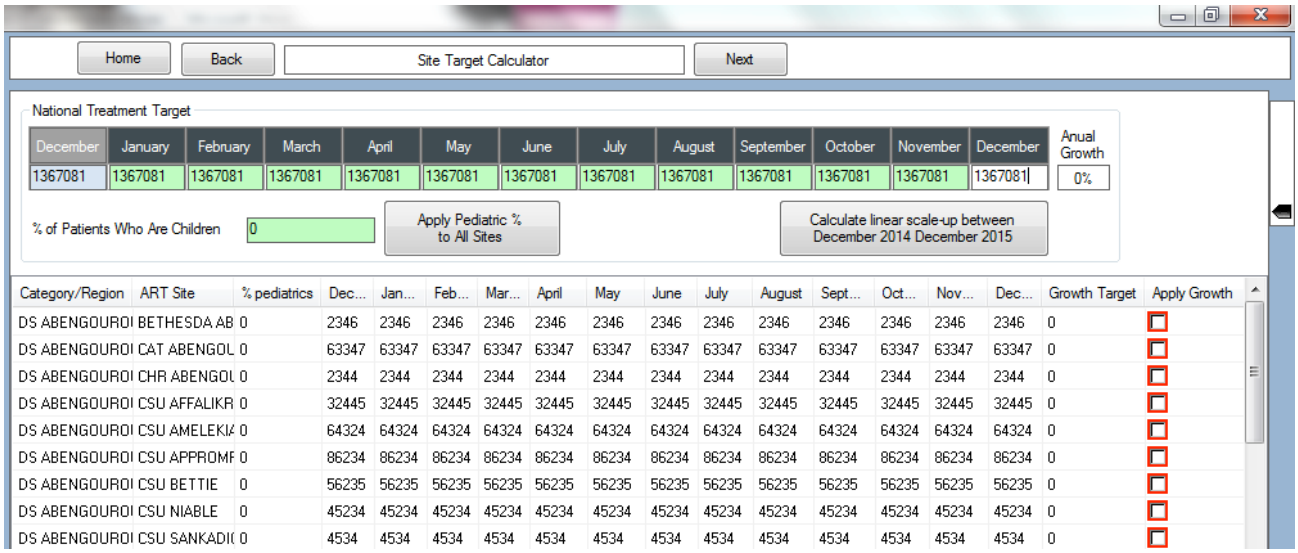


Figure 89. Option 3: Site Target Calculator

1. Enter the number of patients expected to be on treatment by the end of the forecast period in the white cell
2. Populate the optional green cells by manually inputting monthly national targets

Or, Click on the Calculate Linear Scale Up button to assume linear growth.

To allow for demographic differences between adults and children, the percentage of patients on treatment who are children for the group of sites in the quantification should be entered.

3. Enter the % of Patients who are children.
4. Click Apply Pediatric % to All Sites.

The lower part of the screen lists the ART sites in the quantification and displays the targets for each month in the forecast including the % of patients who are children at the site and the growth rate at the site.

The % pediatrics can be entered separately if the percentage is different than the national average for that specific site.

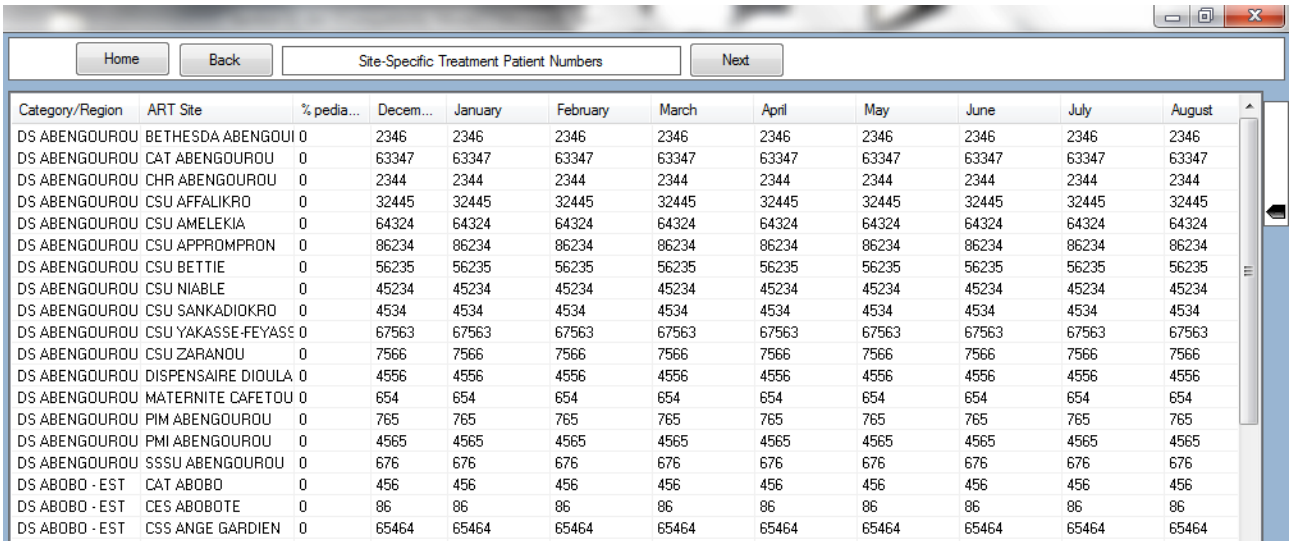
5. Enter % Pediatrics for each site where pediatric data at site level is available. (For a site where additional data is unavailable, assume the same percentage of pediatrics as the overall population.)

The actual target level can be entered separately if the target is different than the national average for that specific site.

6. Enter Growth Target for each site where the actual target level at site level is available. (For a site where additional data is unavailable, assume the same target as the calculated value.)
7. Check the box next to Growth Target field to apply the site specific target.
8. Click Save button to save working area
9. Click Next button to move to next working area.

Site Specific Treatment Patient Numbers

The next screen (Figure 90) allows the pre-populated targets by month and by site from the Site Target Calculator screen to be overridden. If Option 4 was chosen on the ART Patient Target screen, then this is the screen where the detailed targets by month and by site can be entered.



Category/Region	ART Site	% pedia...	Decem...	January	February	March	April	May	June	July	August
DS ABENGOUROU	BETHESDA ABENGOUI	0	2346	2346	2346	2346	2346	2346	2346	2346	2346
DS ABENGOUROU	CAT ABENGOUROU	0	63347	63347	63347	63347	63347	63347	63347	63347	63347
DS ABENGOUROU	CHR ABENGOUROU	0	2344	2344	2344	2344	2344	2344	2344	2344	2344
DS ABENGOUROU	CSU AFFALIKRO	0	32445	32445	32445	32445	32445	32445	32445	32445	32445
DS ABENGOUROU	CSU AMELEKIA	0	64324	64324	64324	64324	64324	64324	64324	64324	64324
DS ABENGOUROU	CSU APPROMPRON	0	86234	86234	86234	86234	86234	86234	86234	86234	86234
DS ABENGOUROU	CSU BETTIE	0	56235	56235	56235	56235	56235	56235	56235	56235	56235
DS ABENGOUROU	CSU NIABLE	0	45234	45234	45234	45234	45234	45234	45234	45234	45234
DS ABENGOUROU	CSU SANKADIOKRO	0	4534	4534	4534	4534	4534	4534	4534	4534	4534
DS ABENGOUROU	CSU YAKASSE-FEYASS	0	67563	67563	67563	67563	67563	67563	67563	67563	67563
DS ABENGOUROU	CSU ZARANOU	0	7566	7566	7566	7566	7566	7566	7566	7566	7566
DS ABENGOUROU	DISPENSAIRE DIOULA	0	4556	4556	4556	4556	4556	4556	4556	4556	4556
DS ABENGOUROU	MATERNITE CAFETOU	0	654	654	654	654	654	654	654	654	654
DS ABENGOUROU	PIM ABENGOUROU	0	765	765	765	765	765	765	765	765	765
DS ABENGOUROU	PMI ABENGOUROU	0	4565	4565	4565	4565	4565	4565	4565	4565	4565
DS ABENGOUROU	SSSU ABENGOUROU	0	676	676	676	676	676	676	676	676	676
DS ABOBO - EST	CAT ABOBO	0	456	456	456	456	456	456	456	456	456
DS ABOBO - EST	CES ABOBOTE	0	86	86	86	86	86	86	86	86	86
DS ABOBO - EST	CSS ANGE GARDIEN	0	65464	65464	65464	65464	65464	65464	65464	65464	65464

Figure 90. Site Specific Treatment Patient Numbers

1. Double click in the % pediatrics column.
2. Type in the % of patients who are children at the site.
3. Repeat steps 32 and 33 for each site in the quantification.
4. Double click in the target patient number field for the appropriate month.
5. Type in the target patient number for that month at that site.
6. Repeat for each month in the forecast and each site in the quantification.
7. Click Save button to save working area.
8. Click Next button to move to next working area.

Patient Pre-Treatment Targets

Next, the preferred method of setting ART patient targets for the selected site groups in the quantification is selected.

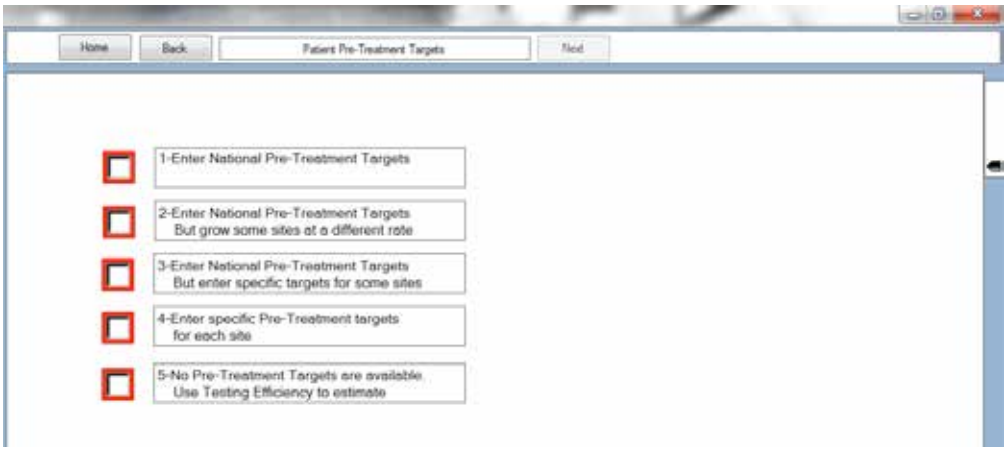


Figure 91. Patient Pre-Treatment Targets

There are four options depending on how much data is available:

- Option 1: Enter National Pre-Treatment Targets
- Option 2: Enter National Pre-Treatment Targets – But grow some sites at a different rate
- Option 3: Enter National Pre-Treatment Targets – But enter specific targets for some sites
- Option 4: Enter specific Pre-Treatment targets for each site
- Option 5: No Pre-Treatment targets are available. Use Testing Efficiency to estimate.

It is recommended to select Option 1 if you can only enter a national target and you plan to assume that all sites will grow at the same rate to hit this target; Option 2 if you want to enter one national target but want the flexibility to manually set different growth rates for different sites; Option 3 if you want to enter one national target but want the flexibility to manually set different absolute targets for different sites; Option 4 if you want to manually set a different target for every site without entering a national target; otherwise Option 5 if you do not want to input any pre-treatment targets and will use Testing Efficiency instead.

1 Click on the checkbox to 1 – Enter National Pre-Treatment Targets – Simply apply equal linear growth to all sites

Or, Click on the checkbox to 2 – Enter National Pre-Treatment Targets – But grow some sites at a different rate

Or, Click on the checkbox to 3 – Enter National Pre-Treatment Targets – But enter specific targets for some sites

Or, Click on the checkbox to 4 – Enter specific Pre-Treatment targets for each site

Or, Click on the checkbox to 5 – No Pre-Treatment Targets are available. Use Testing Efficiency to estimate.

2 Click Save button to save working area.

3 Click Next button to move to next working area. . If Option 4 is chosen, continue with step 1. If Option 5 is chosen, continue with step 1.

Site Pre-Treatment Target Calculator

Depending on which option was chosen on the previous Working Area screen, the appropriate Site Pre-Treatment Target Calculator screen.

OPTION 1

If Option 1 was chosen on the previous screen, this screen will appear (Figure 92). For each month, the National Pre-Treatment Target needs to be entered.

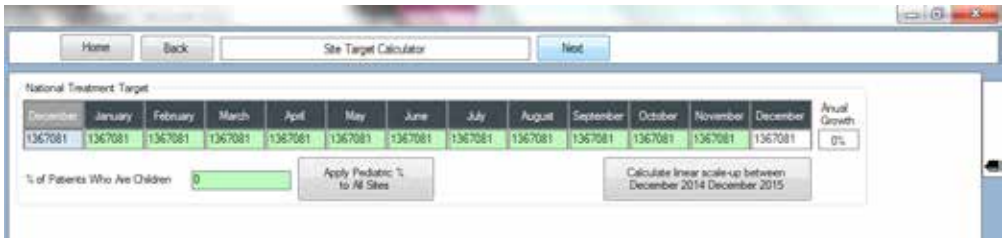


Figure 92. Option 1: Site Pre-Treatment Target Calculator

1. Enter the number of patients expected to be on pre-treatment by the end of the forecast period in the white cell
2. Populate the optional green cells by manually inputting monthly national targets

Or, Click on the Calculate Linear Scale Up button to assume linear growth.

To allow for demographic differences between adults and children, the percentage of patients on pre-treatment who are children for the group of sites in the quantification should be entered.

3. Enter the % of Patients who are children.
4. Click Apply Pediatric % to All Sites.
5. Click Save button to save working area
6. Click Next button to move to next working area.

OPTION 2

If Option 2 was chosen on the previous screen, this screen will appear (Figure 93). For each month, the National Pre-Treatment Target needs to be entered.

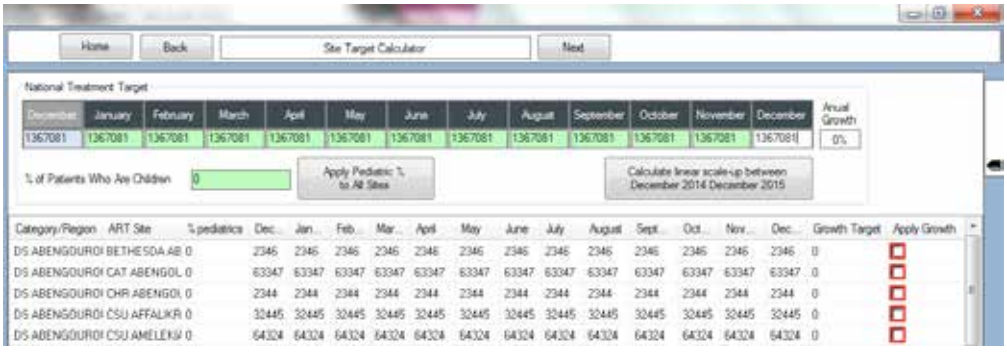


Figure 93. Option 2: Site Pre-Treatment Target Calculator

1. Enter the number of patients expected to be on pre-treatment by the end of the forecast period in the white cell
2. Populate the optional green cells by manually inputting monthly national targets

Or, Click on the Calculate Linear Scale Up button to assume linear growth.

To allow for demographic differences between adults and children, the percentage of patients on pre-treatment who are children for the group of sites in the quantification should be entered.

3 Enter the % of Patients who are children.

4 Click Apply Pediatric % to All Sites.

The lower part of the screen lists the ART sites in the quantification and displays the targets for each month in the forecast including the % of patients who are children at the site and the growth rate at the site.

The % pediatrics can be entered separately if the percentage is different than the national average for that specific site.

5 Enter % Pediatrics for each site where pediatric data at site level is available. (For a site where additional data is unavailable, assume the same percentage of pediatrics as the overall population.)

The growth target rate can be entered separately if the rate is different than the national average for that specific site.

6 Enter Growth Target for each site where the % growth rate at site level is available. (For a site where additional data is unavailable, assume the same growth rate as the national average.)

7 Check the box next to Growth Target field to apply the site specific target.

8 Click Save button to save working area

9 Click Next button to move to next working area.

OPTION 3

If Option 3 was chosen on the previous screen, this screen will appear (Figure 94). For each month, the National Pre-Treatment Target needs to be entered.

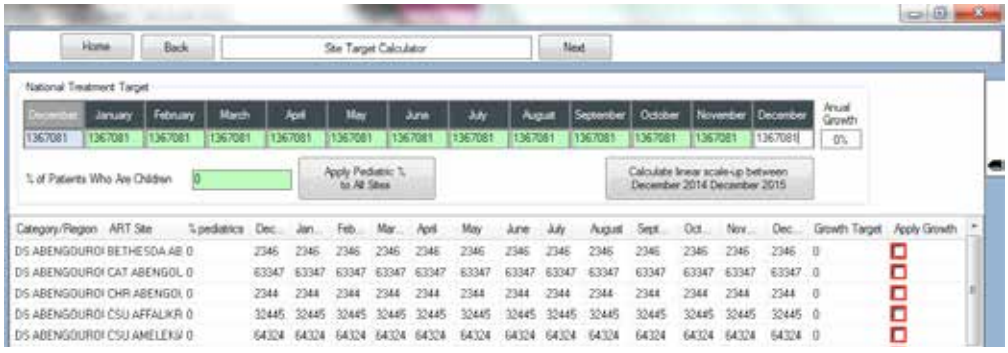


Figure 94. Option 3: Site Pre-Treatment Target Calculator

1 Enter the number of patients expected to be on pre-treatment by the end of the forecast period in the white cell

2 Populate the optional green cells by manually inputting monthly national targets

Or, Click on the Calculate Linear Scale Up button to assume linear growth.

To allow for demographic differences between adults and children, the percentage of patients on pre-treatment who are children for the group of sites in the quantification should be entered.

3 Enter the % of Patients who are children.

4 Click Apply Pediatric % to All Sites.

The lower part of the screen lists the ART sites in the quantification and displays the targets for each month in the forecast including the % of patients who are children at the site and the growth rate at the site.

The % pediatrics can be entered separately if the percentage is different than the national average for that specific site.

5 Enter % Pediatrics for each site where pediatric data at site level is available. (For a site where additional data is unavailable, assume the same percentage of pediatrics as the overall population.)

The actual target level can be entered separately if the target is different than the national average for that specific site.

6 Enter Growth Target for each site where the actual target level at site level is available. (For a site where additional data is unavailable, assume the same target as the calculated value.)

7 Check the box next to Growth Target field to apply the site specific target.

8 Click Save button to save working area

9 Click Next button to move to next working area.

Site Specific Pre-Treatment Patient Numbers

The next screen (Figure 95) allows the pre-populated targets by month and by site from the Site Pre-Treatment Target Calculator screen to be overridden. If Option 4 was chosen on the Patient Pre-Treatment Target screen, then this is the screen where the detailed targets by month and by site can be entered.

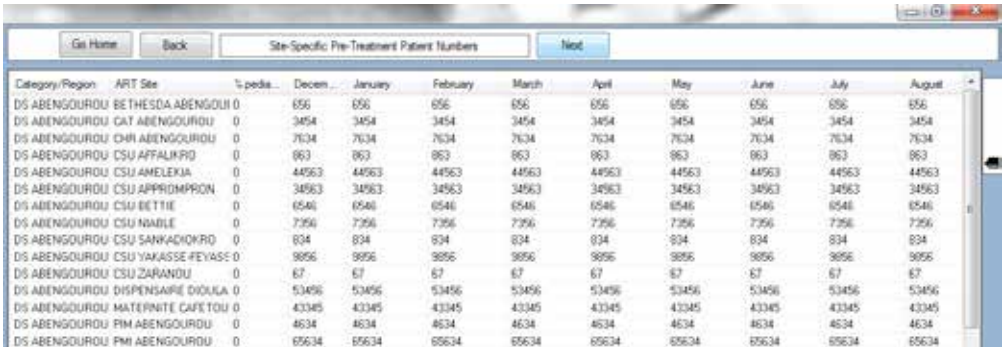


Figure 95. Site Specific Pre-Treatment Patient Numbers

1 Double click in the % pediatrics column.

2 Type in the % of patients who are children at the site.

3 Repeat steps 32 and 33 for each site in the quantification.

4 Double click in the target pre-treatment patient number field for the appropriate month.

5 Type in the target pre-treatment patient number for that month at that site.

6 Repeat for each month in the forecast and each site in the quantification.

7 Click Save button to save working area.

8 Click Next button to move to next working area. Continue with step 1

Testing Efficiency

If you selected Option 1 through 4 on the previous screen, this screen will be skipped.

Testing efficiency is the percentage of HIV-positive patients who qualify for initiating ART. It can be unique to a specific country or site, and can be used to estimate how many patients will be receiving pre-treatment care assuming a given level of patients receiving treatment. This estimate will also take into consideration overall prevalence rates of HIV in the country or sites in question. Although this method can produce a useful estimate, it is only recommended if you do not have more substantial data at the site level.

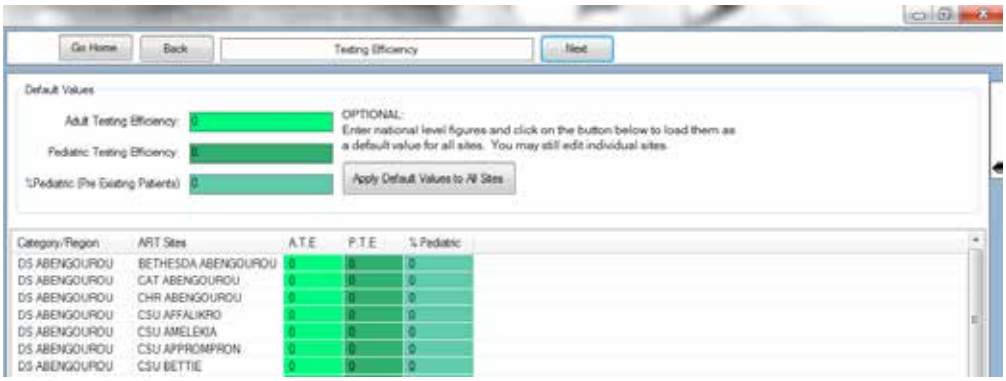


Figure 96. Testing Efficiency

1. Type in the default Adult Testing Efficiency (A.T.E.) value.
2. Type in the default Pediatric Testing Efficiency (P.T.E.) value.
3. Type in the default % Pediatric (Pre-Existing Patients).

The default values can be loaded as the default value for all sites. Each site can then be edited as needed.

4. Click the Apply Default Values to All Sites button.

For each site in the quantification –

5. Update the A.T.E., P.T.E., or % Pediatric fields as needed.
6. Click Save button to save working area.
7. Click Next button to move to next working area.

Testing Information

Figure 97. Testing Information

The % Adult Testing Population HIV Positive field (A.T.P.) is the percentage of adults test for HIV that receives a positive test result.

1 Type in the default % Adult Testing Population HIV Positive value.

The % Pediatric Testing Population HIV Positive field (P.T.P.) is the percentage of children tested for HIV that receive a positive test result.

2 Type in the default % Pediatric Testing Population HIV Positive value.

The % of HIV+ Adult diagnoses to depart w/out follow-up field (A.D.D.W.F.) is the percentage of adults with positive HIV test results that fail to follow up for care after diagnosis.

3 Type in the default % of HIV+ Adult diagnoses to depart w/out follow-up

The % of HIV+ Pediatric diagnoses to depart w/out follow-up field (P.D.D.W.F.) is the percentage of children with positive HIV test results that fail to follow up for care after diagnosis.

4 Type in the default % of HIV+ Pediatric diagnoses to depart w/out follow-up

The % of HIV+ Diagnoses That Follow up Which Receive CD4 field (D.T.F.W.R.) is the percentage of HIV positive follow-up patients who are administered a CD4 test to screen for eligibility for treatment initiation.

Type in the default % of HIV+ Diagnoses That Follow up Which Receive CD4

The default values can be loaded as the default value for all sites. Each site can then be edited as needed.

5 Click the Apply default Values to All Sites button.

For each site in the quantification –

6 Update the A.T.P., P.T.P., A.D.D.W.F., P.D.D.W.F., and D.T.F.W.R. fields as needed.

7 Click Save button to save working area.

8 Click Next button to move to next working area.

Adult Patient Behavior

Figure 98. Adult Patient Behavior

For Adults in Treatment, the Annual % Patient Attrition field (AT-A.P.A.) is the percentage of adult HIV patients on treatment that terminate their treatment for any reason (including death) over the course of a year.

1 Type in the default Annual % Patient Attrition for Adults in treatment.

For Adults in Treatment, the Avg # Blood Draws/Existing Patient/Yr field (AT-A.B.D/E.P/Yr) is the number of blood draws that each existing adult patient on treatment receives per year. This information is critical in order to efficiently combine all applicable tests which occur at the same appointment into the same blood draw.

2 Type in the default Avg # Blood Draws/Existing Patient/Yr for Adults in treatment.

For Adults in Treatment, the Avg # Blood Draws/New Patient/Yr field (AT-A.B.D/N.P/Yr) is the number of blood draws that each new adult patient on treatment received per year.

3 Type in the default Avg # Blood Draws/New Patient/Yr for Adults in treatment.

For Adults in Pre-ART, the Annual % Patient Attrition field (APA-A.P.A.) is the percentage of adult HIV patients on pre-treatment care that terminate their care for any reason (including death).

4 Type in the default Annual % Patient Attrition for Adults in Pre-ART.

For Adults in Pre-ART, the Annual % Migration into Treatment field (APA-A.M.T.) is the percentage of adult HIV patients on pre-ART that migrate to ART over the course of a year.

5 Type in the default Annual % Migration into Treatment for Adults in Pre-ART.

For Adults in Pre-ART, the Avg # Blood Draws/Existing Patient/Yr field (APA-A.B.D/E.P/Yr) is the number of blood draws that each existing adult patient on pre-ART receives per year.

6 Type in the default Avg # Blood Draws/Existing Patient/Yr for Adults in Pre-ART.

For Adults in Pre-ART, the Avg # Blood Draws/New Patient/Yr field (APA -A.B.D/N.P/Yr) is the number of blood draws that each new adult patient on pre-ART received per year.

7 Type in the default Avg # Blood Draws/New Patient/Yr for Adults in Pre-ART.

The default values can be loaded as the default value for all sites. Each site can then be edited as needed.

8 Click the Apply default Values to All Sites button.

For each site in the quantification –

9 Update the AT-A.P.A., AT-A.B.D/E.P/Yr, AT-A.B.D/N.P/Yr, APA-A.P.A., APA-A.M.T., APA-A.B.D/E.P/Yr, and APA -A.B.D/N.P/Yr fields as needed.

10 10. Click Save button to save working area.

11 11. Click Next button to move to next working area.

Pediatric Patient Behavior

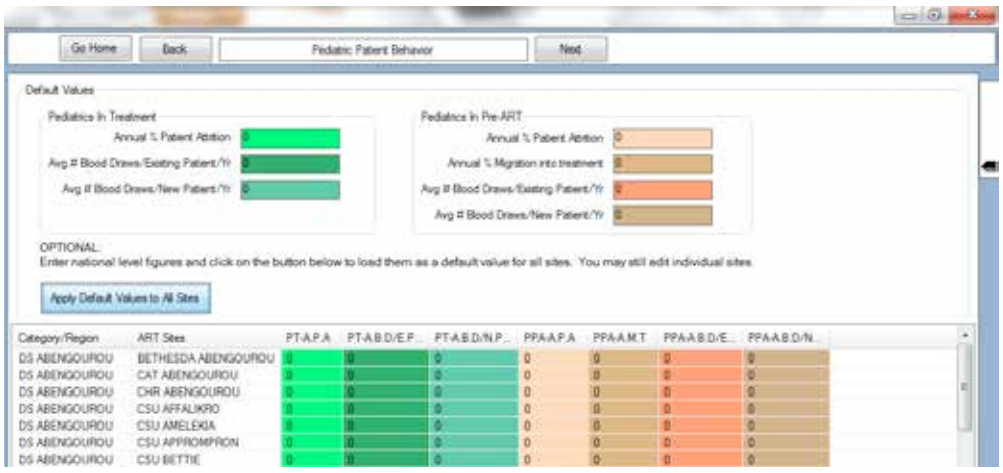


Figure 99. Pediatric Patient Behavior

For Pediatrics in Treatment, the Annual % Patient Attrition field (PT-A.P.A.) is the percentage of pediatric HIV patients on treatment that terminate their treatment for any reason (including death) over the course of a year.

1 Type in the default Annual % Patient Attrition for Pediatrics in Treatment.

For Pediatrics in Treatment, the Avg # Blood Draws/Existing Patient/Yr field (PT-A.B.D/E.P/Yr) is the number of blood draws that each existing pediatric patient on treatment receives per year. This information is critical in order to efficiently combine all applicable tests which occur at the same appointment into the same blood draw.

2 Type in the default Avg # Blood Draws/Existing Patient/Yr for Pediatrics in Treatment.

For Pediatrics in Treatment, the Avg # Blood Draws/New Patient/Yr field (PT-A.B.D/N.P/Yr) is the number of blood draws that each new pediatric patient on treatment received per year.

3 Type in the default Avg # Blood Draws/New Patient/Yr for Pediatrics in Treatment

For Pediatrics in Pre-ART, the Annual % Patient Attrition field (PPA-A.P.A.) is the percentage of pediatric HIV patients on pre-treatment care that terminate their care for any reason (including death).

4 Type in the default Annual % Patient Attrition for Pediatrics in Pre-ART.

For Pediatrics in Pre-ART, the Annual % Migration into Treatment field (PPA-A.M.T.) is the percentage of pediatric HIV patients on pre-ART that migrate to ART over the course of a year.

5 Type in the default Annual % Migration into Treatment for Pediatrics in Pre-ART.

For Pediatrics in Pre-ART, the Avg # Blood Draws/Existing Patient/Yr field (PPA-A.B.D/E.P/Yr) is the number of blood draws that each existing pediatric patient on pre-ART receives per year.

6 Type in the default Avg # Blood Draws/Existing Patient/Yr for Pediatrics in Pre-ART.

For Pediatrics in Pre-ART, the Avg # Blood Draws/New Patient/Yr field (PPA -A.B.D/N.P/Yr) is the number of blood draws that each new pediatric patient on pre-ART received per year.

7 Type in the default Avg # Blood Draws/New Patient/Yr for Pediatrics in Pre-ART.

The default values can be loaded as the default value for all sites. Each site can then be edited as needed.

8 Click the Apply default Values to All Sites button.

For each site in the quantification –

9 Update the PT-A.P.A., PT -A.B.D/E.P/Yr, PT -A.B.D/N.P/Yr, PPA-A.P.A., PPA-A.M.T., PPA-A.B.D/E.P/Yr, and PPA -A.B.D/N.P/Yr fields as needed.

10 1Click Save button to save working area.

11 1Click Next button to move to next working area.

Rapid Test Algorithm by Site

If “Serial” algorithm was selected when defining the morbidity quantification Figure will display. For each Test in the Rapid Test Algorithm,

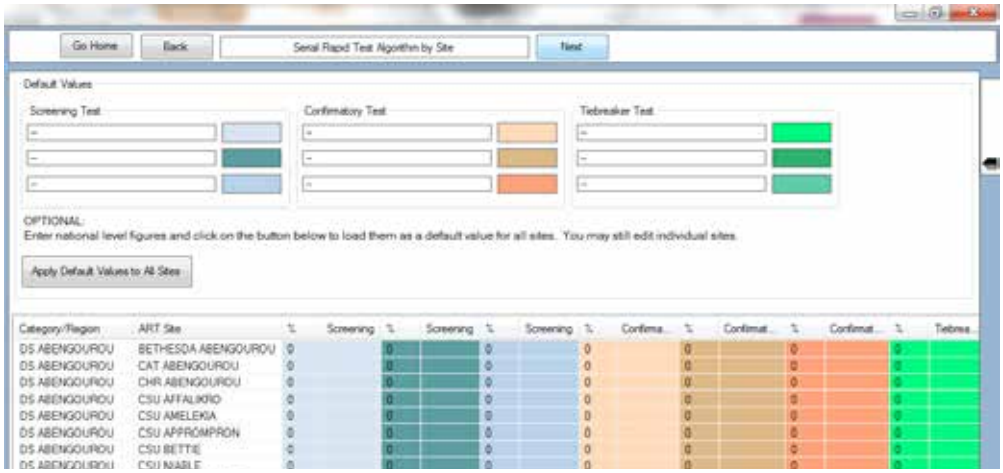


Figure 100. Serial Rapid Test Algorithm by Site

1 Type in the default % of screening, confirmatory, and tie breaker test.

The default values can be loaded as the default value for all sites. Each site can then be edited as needed.

2 Click the Apply default Values to All Sites button.

For each site in the quantification –

3 Update the % of screening, confirmatory, and tie breaker test fields as needed.

4 Click Save button to save working area.

5 Click Next button to move to next working area.

If "Parallel" algorithm was selected when defining the morbidity quantification Figure will display.

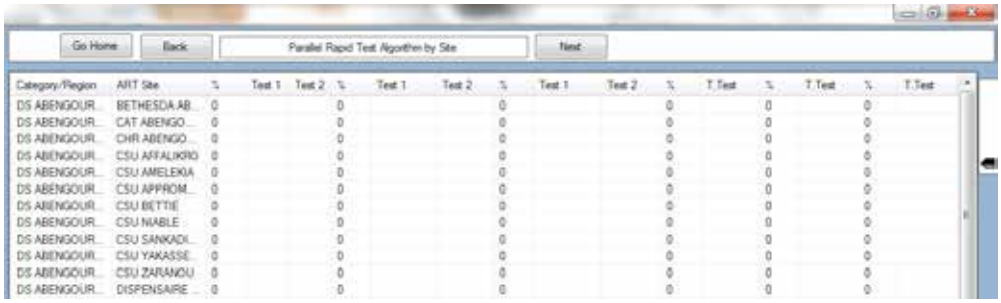


Figure 101. Parallel Rapid Test Algorithm by Site

6 Double click on the % value cells to enter the amount to screening and tie-breaker tests.

7 Repeat for each site.

Ordering and Inventory Assumptions

Next the Ordering and Inventory Assumption screen (Figure 102) is displayed.

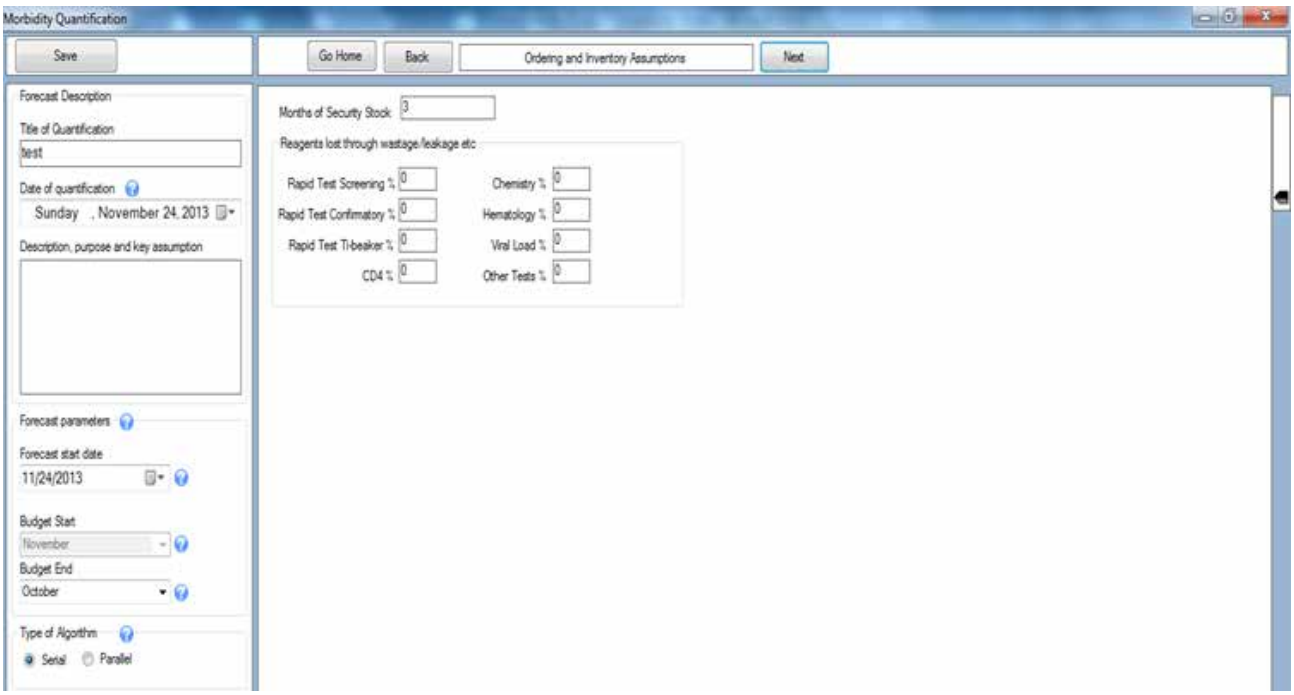


Figure 102. Ordering and Inventory Assumptions

The Months of Security Stock field indicates the number of months of security stock intended to include in the quantification. If you have run a national quantification in past years and have used it to effectively order sufficient quantities of supplies, there may be an existing security stock already on hand. In this case, it would not be necessary to include security stock here.

1 Type in the Months of Security Stock.

2 Repeat for each site.

The Reagents lost through wastage/leakage, etc. field indicates what percentage of reagents and other supplies are typically lost due to wastage, leakage, theft, expiration, etc. This is critical to ensure that sufficient quantities are ordered to account for this loss.

3 Type in the Reagents lost through wastage/leakage, etc. for each category of testing supplies.

4 Click Next button to move to next working area.

Reviewing Data

The final screen of the working area is Review Your Data screen (Figure 103).

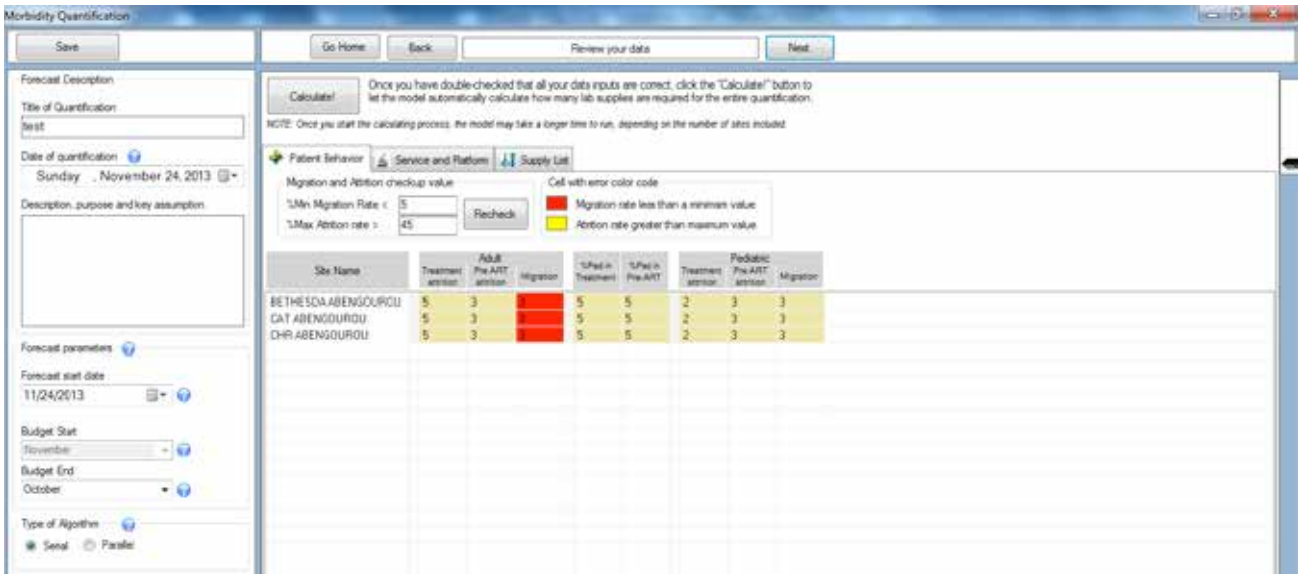


Figure 103. Review Your Data

The final step for using the morbidity methodology is to review the data that has been entered.

PATIENT BEHAVIOR

Patient Behavior tab helps to monitor if attrition and migration percentages are above or below some specific values.

With the Review you Data screen displayed—

1 Click on the Patient Behavior tab. (Figure 104)

Patient Behavior | Service and Platform | Supply List

Migration and Attrition checkup value

%Min Migration Rate < 100

%Max Attrition rate > 45

Recheck

Cell with error color code

Migration rate less than a minimam value

Attrition rate greater than maximum value

Site Name	Adult			%Ped in Treatment	%Ped in Pre-ART	Pediatric		
	Treatment attrition	Pre ART attrition	Migration			Treatment attrition	Pre ART attrition	Migration
BETHESDA ABENGOUROU	11	4	75	30	30	21	7	75
CAT ABENGOUROU	11	4	75	30	30	21	7	75
CHR ABENGOUROU	11	4	75	30	30	21	7	75
CSU AFFALIKRO	11	4	75	30	30	21	7	75
CSU AMELEKIA	11	4	75	30	30	21	7	75
CSU APPROMPRON	11	4	75	30	30	21	7	75
CSU BETTIE	11	4	75	30	30	21	7	75

Figure 104. Patient Behavior tab

Using the Cell with error color code legend, you can determine which sites has migration rate less than a minimum and which has an attrition rate greater than a maximum value. To change the minimum and maximum value—

2 Double click in the % Min Migration Rate < field.

3 Enter the minimum migration rate.

4 Double click in the % Max Attrition rate > field.

5 Enter the maximum attrition rate.

6 Click Recheck button to apply the legend to the data below.

SERVICE AND PLATFORM

Service and Platform tab helps to identify sites who doesn`t have instrument for the selected testing areas or if a referral site does not have instrument for the referral service used. From this tab you can easily modify the site information.

1 Click Service and Platform tab.

The Service and Platform tab is displayed. (Figure 105)

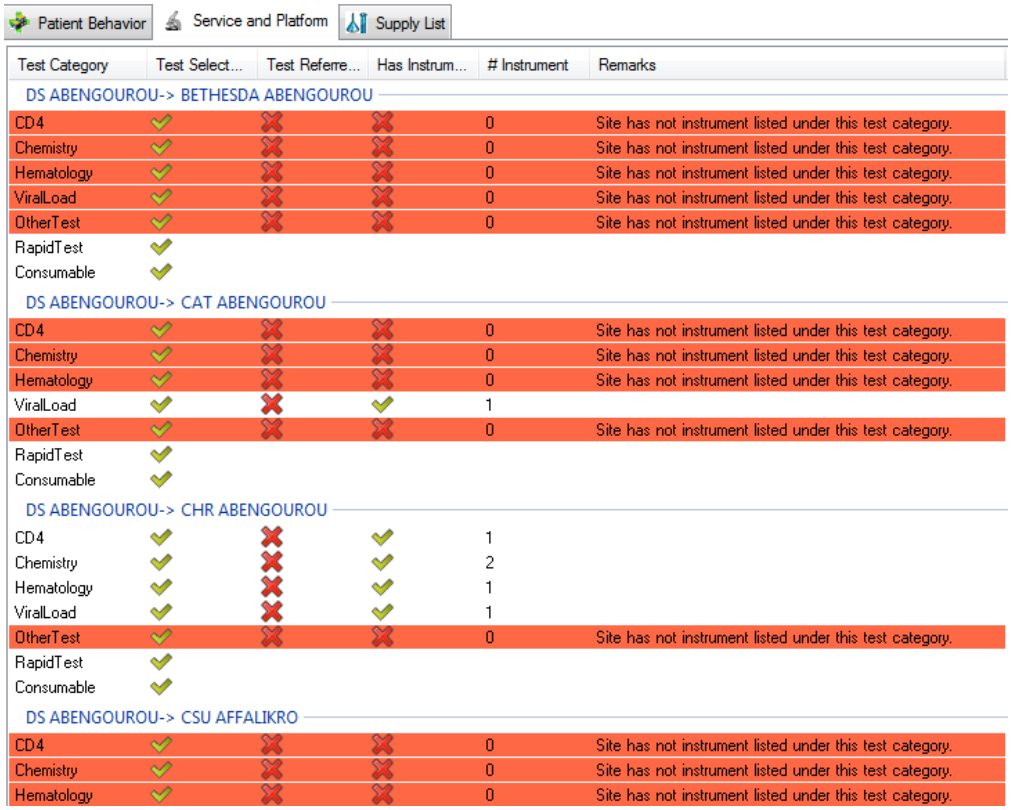


Figure 105. Service and Platform tab

2 Double click a test for the site you want to edit.

The Site data entry form for the selected site is displayed.

3 See Editing Site Data on page 47 for more information on completing this form.

4 Click Save and Close to return to the Review your Data form.

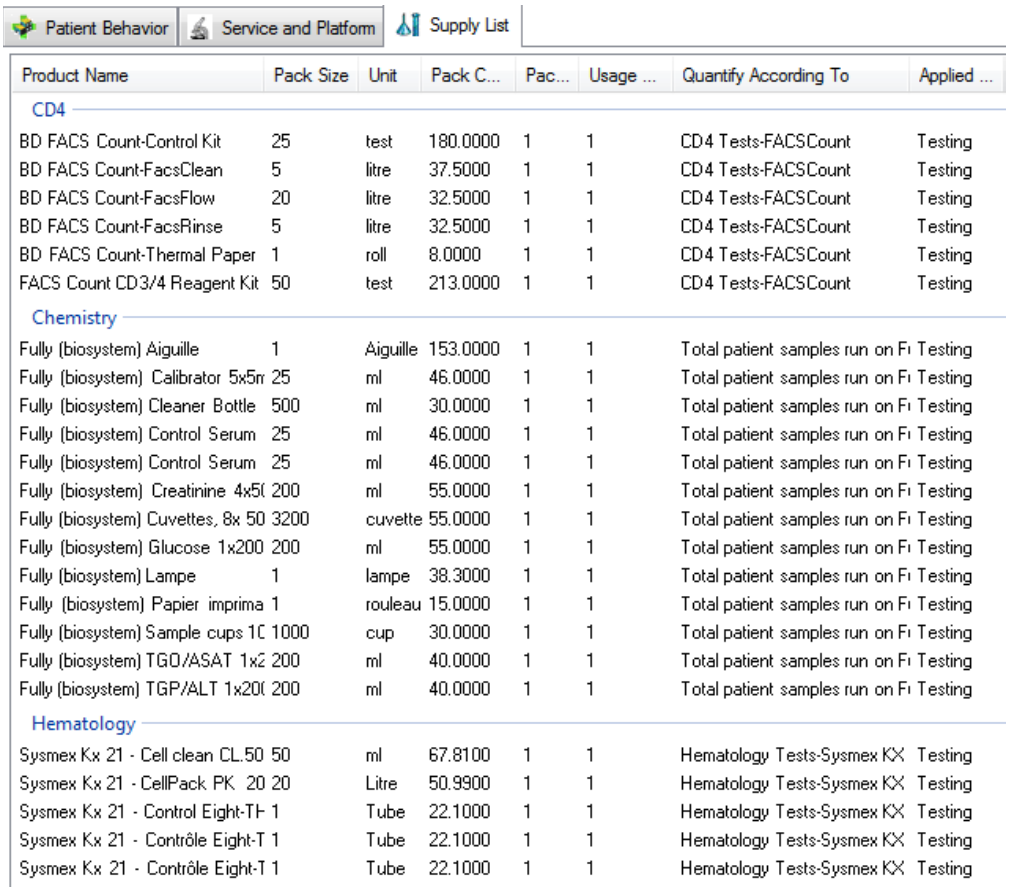
Service and Platform information for the site will be updated on this form based on changes made.

SUPPLY LIST

Supply List tab helps to identify products pack cost and usage rate.

1 Click Supply List tab to view the list of supplies included in the quantification.

The Supply List tab is displayed. (Figure 106)



Product Name	Pack Size	Unit	Pack C...	Pac...	Usage ...	Quantify According To	Applied ...
CD4							
BD FACS Count-Control Kit	25	test	180.0000	1	1	CD4 Tests-FACSCount	Testing
BD FACS Count-FacsClean	5	litre	37.5000	1	1	CD4 Tests-FACSCount	Testing
BD FACS Count-FacsFlow	20	litre	32.5000	1	1	CD4 Tests-FACSCount	Testing
BD FACS Count-FacsRinse	5	litre	32.5000	1	1	CD4 Tests-FACSCount	Testing
BD FACS Count-Thermal Paper	1	roll	8.0000	1	1	CD4 Tests-FACSCount	Testing
FACS Count CD3/4 Reagent Kit	50	test	213.0000	1	1	CD4 Tests-FACSCount	Testing
Chemistry							
Fully (biosystem) Aiguille	1	Aiguille	153.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Calibrator 5x5m	25	ml	46.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Cleaner Bottle	500	ml	30.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Control Serum	25	ml	46.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Control Serum	25	ml	46.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Creatinine 4x5(	200	ml	55.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Cuvettes, 8x 50	3200	cuvette	55.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Glucose 1x200	200	ml	55.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Lampe	1	lampe	38.3000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Papier imprima	1	rouleau	15.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) Sample cups 1(	1000	cup	30.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) TGO/ASAT 1x2	200	ml	40.0000	1	1	Total patient samples run on Fı	Testing
Fully (biosystem) TGP/ALT 1x20(	200	ml	40.0000	1	1	Total patient samples run on Fı	Testing
Hematology							
Sysmex Kx 21 - Cell clean CL.50	50	ml	67.8100	1	1	Hematology Tests-Sysmex KX	Testing
Sysmex Kx 21 - CellPack PK 20	20	Litre	50.9900	1	1	Hematology Tests-Sysmex KX	Testing
Sysmex Kx 21 - Control Eight-TH	1	Tube	22.1000	1	1	Hematology Tests-Sysmex KX	Testing
Sysmex Kx 21 - Contrôle Eight-T	1	Tube	22.1000	1	1	Hematology Tests-Sysmex KX	Testing
Sysmex Kx 21 - Contrôle Eight-T	1	Tube	22.1000	1	1	Hematology Tests-Sysmex KX	Testing

Figure 106. Supply List tab

Once the data has been reviewed—

1. Click Calculate button to move to run the forecast. See Calculate Results on page 118.

Editing Forecasts

With the Morbidity Forecast Methodology screen displayed—

1. Double click on the forecast in the Morbidity Forecast Methodology window that you want to edit.
2. Click on the Previous button, Next button and/or Go Home button to move to each of the Working Area pages that needs to be edited.
3. Enter the new data.
4. Click on the Next button to move to the Calculating Results screen.
5. See Calculating Results for information on calculating the forecast results.

Deleting Forecasts

With the Morbidity Forecast Methodology screen displayed—

1. Select the forecast that you want to delete.
2. Click on the Delete button.

Calculating Results

With the Morbidity Forecast Methodology screen displayed—

1. Click on the Calculate button once you review your data to let the model automatically calculate how many lab supplies are required for the entire quantification.
2. On the pop up dialog click on yes to confirm.
3. Click on ok once the forecast is completed.

When the calculation is finished, different reports and summary charts will be displayed.

Figure 107. Forecast Results

Patient Assumptions

This report displays the number of patients on treatment and in pre-ART for each month of the forecast period.

CD4 Assumptions

This report lists the key CD4 assumptions and displays the number of CD4 tests expected during the forecast period, broken up into existing patients in treatment (EP-T), existing patients in pre-ART (EP-Pre ART), new patients in treatment (NPT), new patients in pre-ART (NP Pre ART), symptom-directed tests (SDT), invalid tests and wastage (wastage), and buffer stock reagents used to run controls (BSRTC).

Hematology, Viral Load, Chemistry, and Other Test Assumptions

This report displays the number of tests expected in the forecast period; broken up

into tests from protocols, symptom-directed tests, repeated tests, invalid tests and wastage, buffer stock, and reagents used to run controls.

HIV Rapid Test Assumptions

This report displays the number of HIV rapid tests expected during the forecast period, broken up into screening tests, confirmatory tests, and tie-breaker tests.

Demography Total Cost

This report displays the forecasted total cost by product type.

Other Reports

To view other reports –

1. Click Save button to save working area.
2. Click on red X to close the form.
3. Double click the forecast.

The Dashboard for the forecast will display. (Figure 108)

Figure 108. Morbidity Forecast dashboard

There are two categories of reports on this screen

- Supply & Procurement Forecast result: Shows the forecast supply for each of the platforms.

- No. of Tests Forecast result: Shows the number of test forecast distribution for each of the platforms

TO NAVIGATE BETWEEN THE TWO CATEGORIES –

1 Click on the category titles.

TO PRINT THE REPORTS –

1 Select the type of report you want to print from the Report dropdown.

2 Click on Display Report button.

Each of the chart reports in the tool has a feature to Copy, Save as Image, Print and Zoom.

3 Right click on the chart to use these features.

TO VIEW THE PREVIOUS REPORTS –

1 Click on Back button.

Adjust Morbidity Supply Forecast

Procurement Summary is the most important output of the Quantification Model. It shows how many of each product needs to be purchased, and how much money is needed. It contains a section for CD4 Reagents, Chemistry Reagents, Hematology Reagents, Viral Load Reagents, Other Test Reagents, HIV Rapid Tests, and Consumables & Other Supplies. From the Dashboard of the Morbidity forecast –

1 Click on Adjust supply Procurement button.

The Adjust Morbidity Supply Forecast data entry form is displayed.

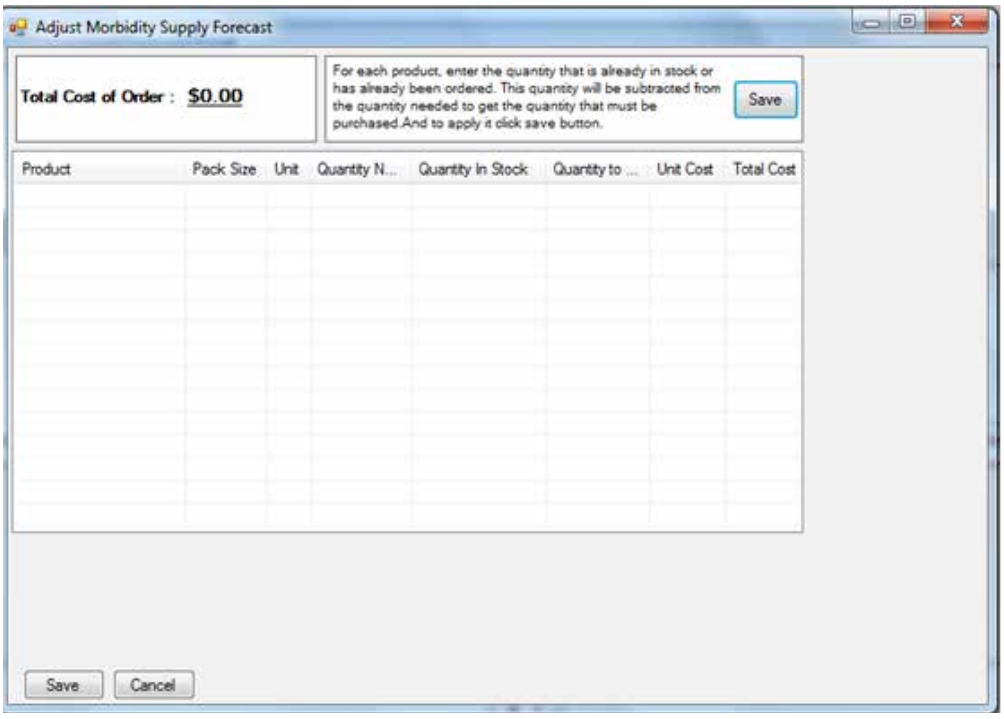


Figure 109. Adjust Morbidity Supply Forecast

2 Double click on the Quantify in Stock column.

3 Type in Quantity in Stock for each product.

4 Click on the Save button to save the data, and return to the Dashboard screen.

Or, click on the Cancel button to disregard all changes and return to the Dashboard screen.

HT95FG
M
16/MAR
F
16/MAR