



# e-TB Manager

## Version 3.0



**USAID**  
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**SIAPS**   
Systems for Improved Access  
to Pharmaceuticals and Services



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Tuberculosis (TB) control is well standardized through, for example, World Health Organization (WHO) forms, guidelines, and recommendations, but managing information for adequate TB program support usually requires a challenging and complex integration of systems with separate modules developed and managed in separate sectors.

The e-TB Manager software is a comprehensive tool for programmatic management of TB and DR-TB cases and medicines. It is designed to integrate in one place cases, medicines, and other TB commodities for NTP management purposes at different levels. The system provides key information consolidated online at any level for rapid decision making and epidemiological surveillance where interventions are needed.

The emergence of drug-resistant TB, including multidrug-resistant TB (MDR-TB) and extensively drug-resistant TB (XDR-TB), has created significant health problem in many countries, increasing the need for close monitoring and tools that can control the amplitude of TB and support an uninterrupted supply of medicines. The team approach to case management and appropriate surveillance systems is necessary to successfully address these issues.

The e-TB Manager offers great potential for significantly improving the management of TB and DR-TB cases, first- and second-line medicines, and commodities used for treatment. It is also a useful tool for TB and DR-TB surveillance and control. It can be used as a Web-based data information system integrating the central unit for TB and DR-TB surveillance with periphery treatment units. Version 3 of the program can also be used offline as a desktop version that will be able to synchronize data with a central site if an Internet connection is available.

The tuberculosis team would use the e-TB Manager tool according to TB unit procedures and approved national guidelines. The data captured and reports generated by the tool can be summarized as follows:

- *Treatment and case management:* The e-TB Manager uses online notification and follow-up, records clinical and laboratory results, tracks patients transferring in and out, and provides data for treatment adherence and patient contacts evaluation. The **Cases** module of e-TB Manager, for example, allows NTP staff to closely monitor first-line TB or DR-TB case evolution from a status of TB suspect to a notified case until the final result of treatment.
  - *Information and surveillance management:* The e-TB Manager maps TB and MDR/XDR cases, epidemiological indicators, resistance panels, co-morbidities, previous treatment history, and treatment cohort results, providing surveillance reports and updated information with ready access online at central and peripheral levels.
  - *Operational and clinical research:* The tool provides easy methods for analyzing collected data and exporting data to other statistical programs.
  - *Stock management:* A stock management module is in development.
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The e-TB Manager is—

- A tool for online notification, case treatment, monitoring, follow-up, and patient transfers in and out of TB units
- A system that allows for recording of clinical and laboratory results and provides data for treatment adherence and patient contact evaluation
- A tool for monitoring medicine safety and efficacy at the patient level by tracking side effects of TB medicines reported and providing data on treatment outcomes
- A tool that provides monitoring and evaluation (M&E) of medicine stock levels at any health facility and by each supply source
- A database from which reports can be produced that can have an impact on future policy and NTP strategies and decisions

All facilities, staffs, and programs involved in TB and DR-TB case management and first- and second-line TB medicine management may benefit from the new e-TB Manager, including:

- TB physicians
- Pharmacies
- Pharmaceutical warehouses
- DR-TB centers or TB hospitals
- TB coordinators from the district level
- NTP coordinator
- Ministry of Health
- National Health Insurance Plans
- Donors and partners such as WHO/GLC and the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)

e-TB Manager is a computer application that can be used either online via the Internet, on a local area network, or on a standalone computer. It can be used at all levels by designated facilities, such as the central warehouse, TB and DR-TB reference centers, or pharmacies and by TB physicians and health centers in charge of authorizing and validating medicine orders.

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Every user has access to the system depending on his or her level of participation in medicine management.

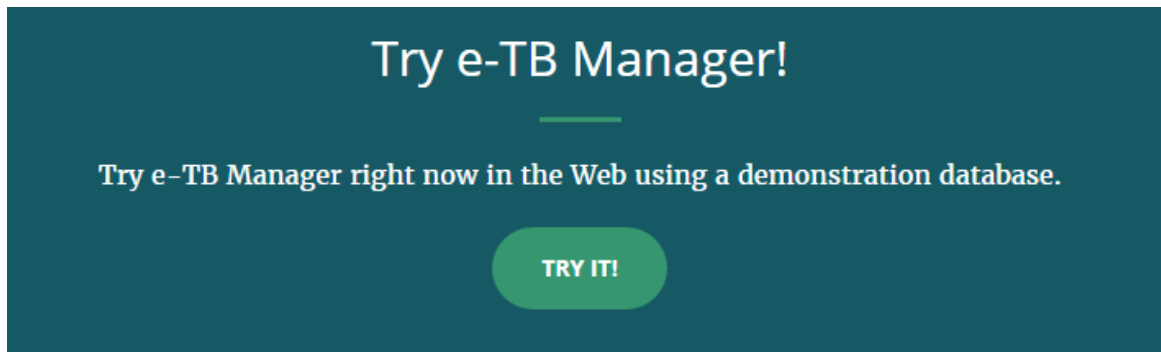
To use the application, the user must to be equipped with-

- A computer (with Internet capabilities if e-TB Manager is to be synchronized with other computers in the country)
- A network connection to the system (Internet access is required only if the system is based on an Internet server)
- An HTML browser (e.g., Google Chrome, Internet Explorer, or Mozilla FireFox)

The instructions and figures in this Quick Start Guide refer to both the web-based version of e-TB Manager and the desktop version. This Guide is meant to give a quick overview of the software and is not intended to cover all of the requirements for installing, configuring, and using the system. If you are interested in more information or technical assistance on e-TB Manager, please contact us at [siaps@msh.org](mailto:siaps@msh.org).

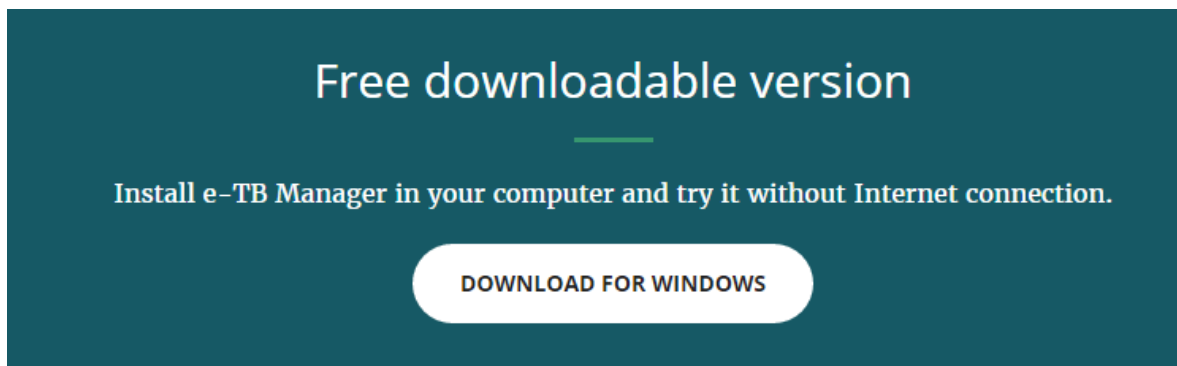


You can review the web version of e-TB Manager and explore the software by visiting [www.etbmanager.org](http://www.etbmanager.org). Click the **Try It!** button to see the online version's features with sample data. You will need to register on the site to be able to access the software.



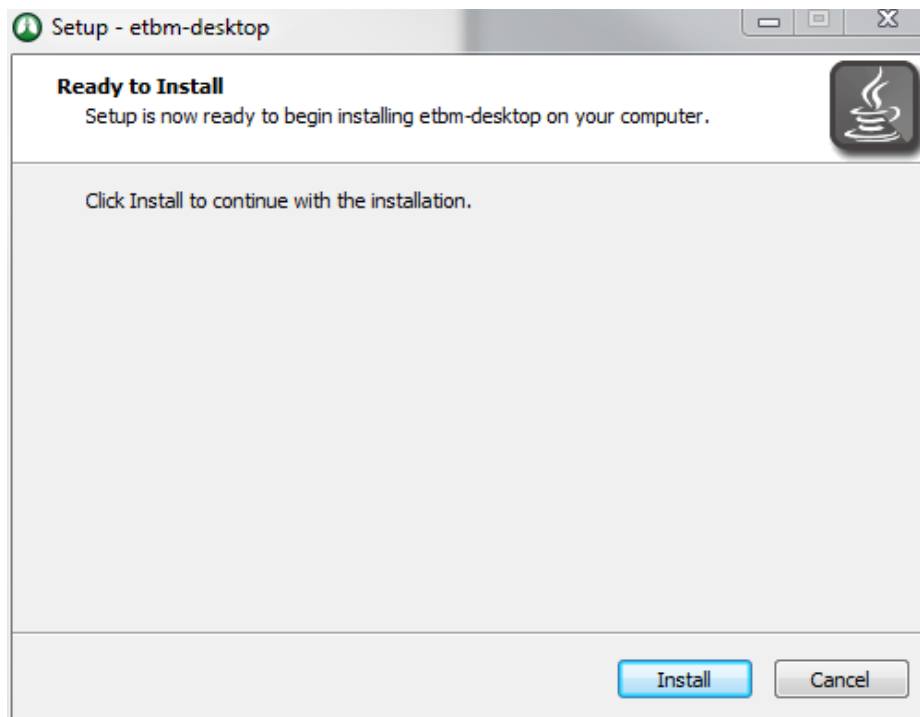
**Figure 1**

This site also contains a file you can download to install on your own computer to use offline. **Click the Download for Windows** button to get the file. This version doesn't contain all functions and is meant to let you experiment with QuanTB.



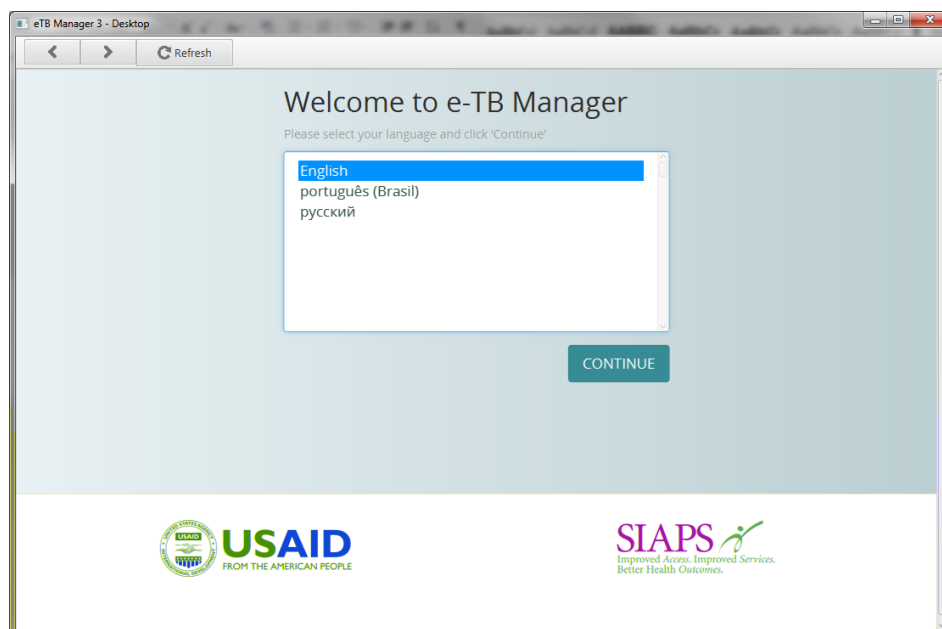
**Figure 2**

After you have downloaded the **etbm-desktop.exe** file, double-click it to start the installation process. The installation will take a few seconds to begin.



**Figure 3**

You can choose English, Portuguese, or Russian as your language.



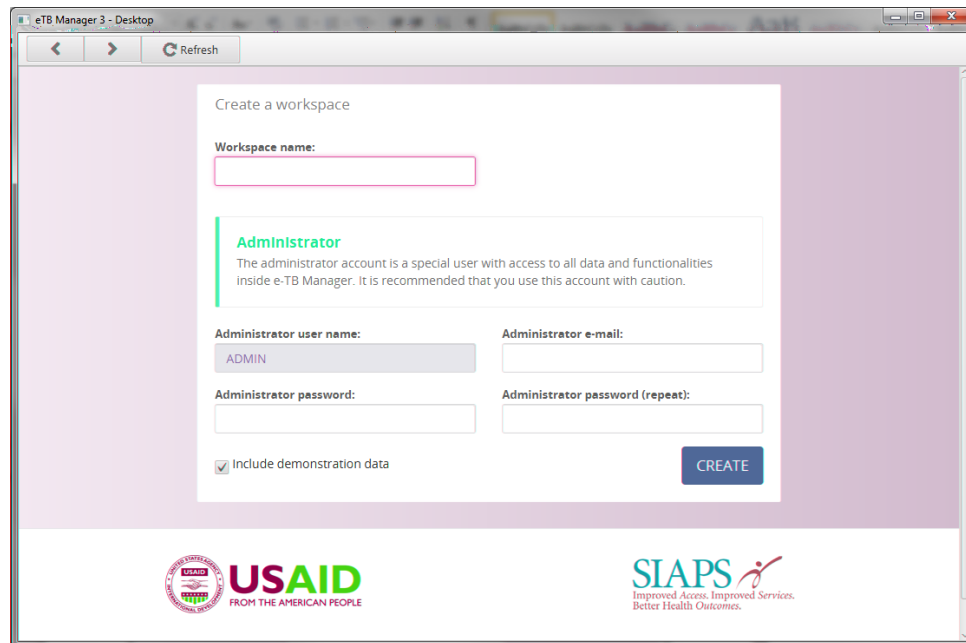
**Figure 4**

The next step is to create a workspace. This represents your data's institution, so it could be a country, a hospital, etc. You also enter a name and password for the administrator of the

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software. Tick the box in the lower left corner of the screen to include demonstration data in your installation. When you're finished entering information, click **Create**.



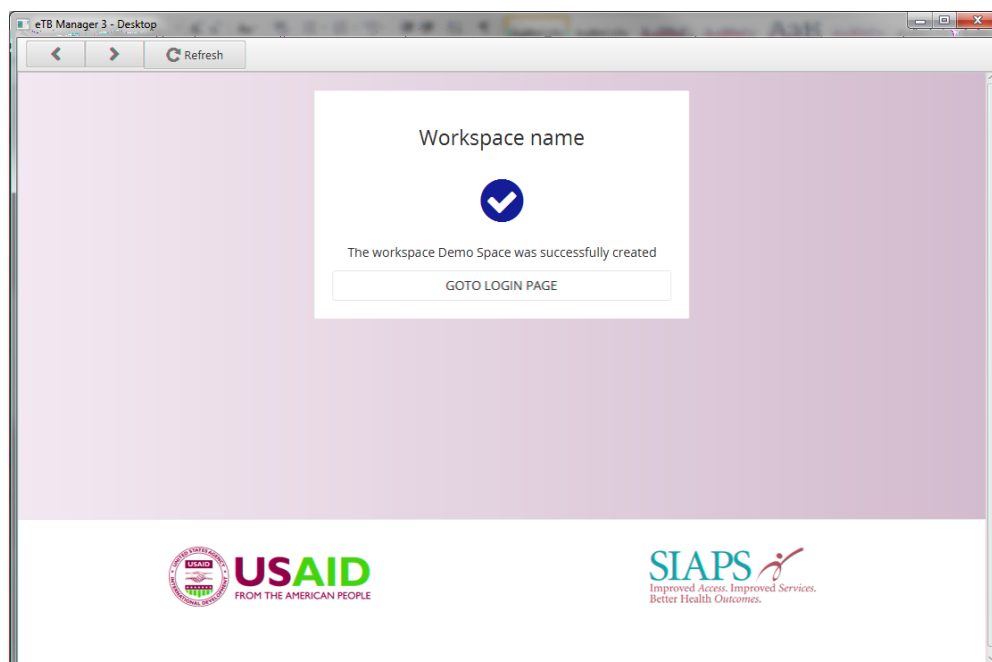
The screenshot shows the 'eTB Manager 3 - Desktop' application window. The main content area is titled 'Create a workspace'. It contains a form with the following fields and elements:

- Workspace name:** A text input field.
- Administrator:** A section header with a green bar.
- The administrator account is a special user with access to all data and functionalities inside e-TB Manager. It is recommended that you use this account with caution.** A warning message.
- Administrator user name:** A text input field with the value 'ADMIN'.
- Administrator e-mail:** A text input field.
- Administrator password:** A text input field.
- Administrator password (repeat):** A text input field.
- ☒ **Include demonstration data** A checkbox.
- CREATE** A blue button.


At the bottom of the window, there are two logos: the USAID logo (FROM THE AMERICAN PEOPLE) and the SIAPS logo (Improved Access. Improved Services. Better Health Outcomes.).

**Figure 5**

The installation will finish and display a screen to confirm the workspace creation. Click the **Goto Login Page** button to continue.



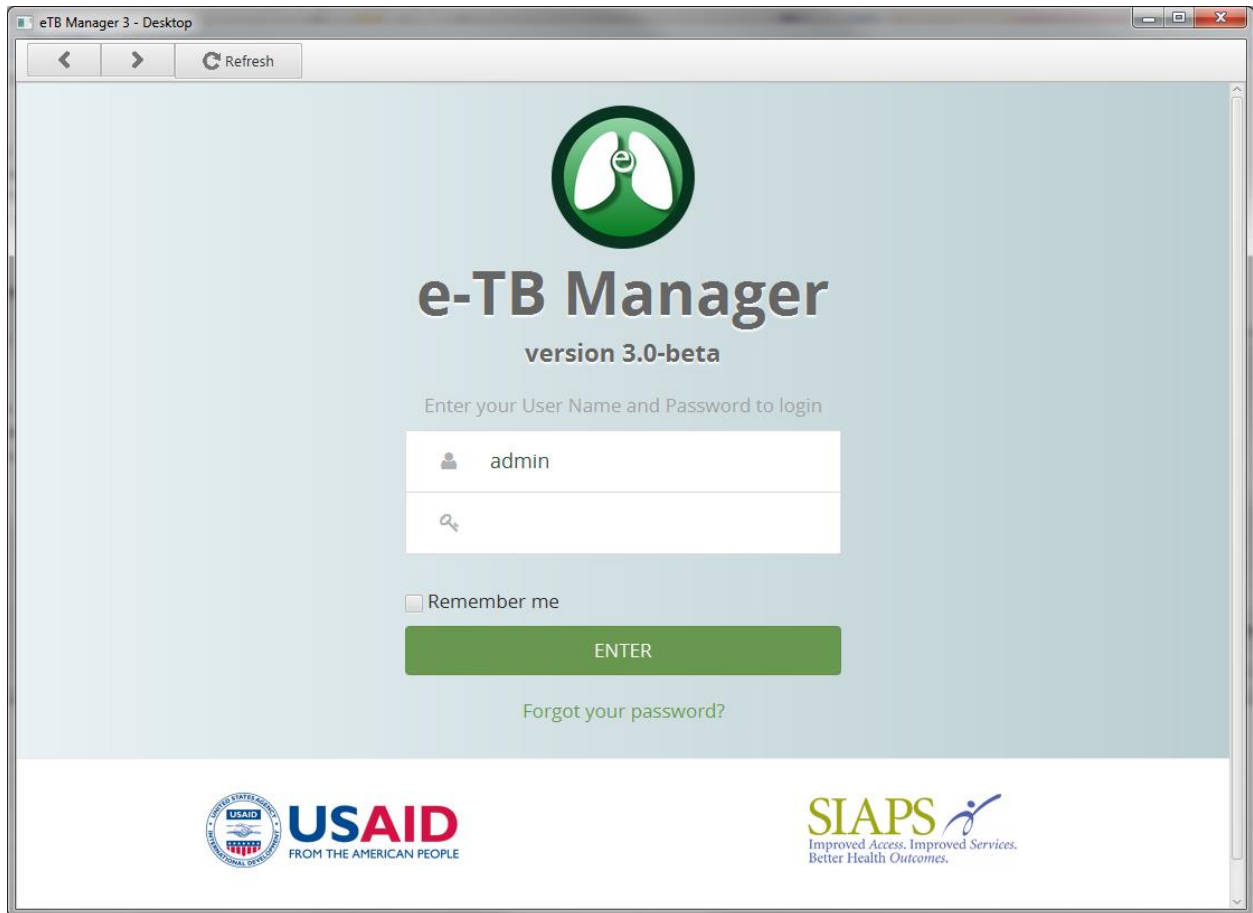
The screenshot shows the 'eTB Manager 3 - Desktop' application window. The main content area is titled 'Workspace name'. It contains a confirmation message and a button:

- Workspace name** A section header.
-  A blue checkmark icon.
- The workspace Demo Space was successfully created** A confirmation message.
- GOTO LOGIN PAGE** A button.

At the bottom of the window, there are two logos: the USAID logo (FROM THE AMERICAN PEOPLE) and the SIAPS logo (Improved Access. Improved Services. Better Health Outcomes.).


**Figure 6**

Enter the name and password you created, and then click **Enter** to start the program.

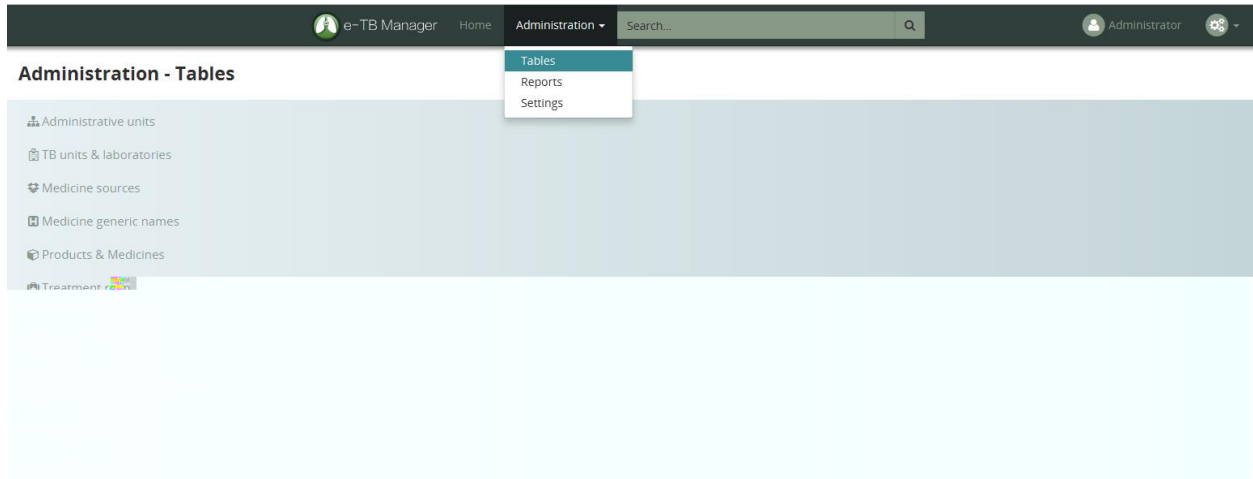


The screenshot shows a web browser window titled "eTB Manager 3 - Desktop". The browser's address bar contains navigation buttons (back, forward) and a "Refresh" button. The main content area has a light blue background. At the top center is a circular logo with a green border and a white interior showing a stylized lung with a green 'e' inside. Below the logo, the text "e-TB Manager" is displayed in a large, bold, dark grey font, followed by "version 3.0-beta" in a smaller, bold, dark grey font. Underneath, the instruction "Enter your User Name and Password to login" is shown in a small, grey font. There are two input fields: the first contains the text "admin" and has a user icon to its left; the second is empty and has a magnifying glass icon to its left. Below these fields is a checkbox labeled "Remember me". A large green button with the text "ENTER" in white is positioned below the checkbox. Below the button is a link that says "Forgot your password?". At the bottom of the page, there are two logos: on the left, the USAID logo with the text "USAID FROM THE AMERICAN PEOPLE"; on the right, the SIAPS logo with the text "SIAPS Improved Access. Improved Services. Better Health Outcomes."

**Figure 7**

Your initial login for the program has administrator privileges, which means you can access parts of the software that a normal user cannot. This is to allow you to see how e-TB Manager can be configured. Throughout the software, required fields are marked with .

Click on the **Administration** link in the menu bar to open the list of options: **Tables**, **Reports**, and **Settings**.



**Figure 8**

## **Tables**

Click the **Tables** menu option to see a list of the tables in which you can enter information specific to your setting. These tables are Administrative units, TB units & laboratories, Medicine sources, Medicine generic names, Products & Medicines, Treatment regimens, Case tags, Age ranges, Users, and User's profiles. A few sample tables are show below.

The **Products & Medicines** screen is for customizing your list of medicines. Enter information about your medicine or product, and then click **Save** or **Cancel** to finish. If you want to enter information on another medicine, click the **ADD** button.

## Administration - Tables

**New medicine**

Short name:  Name:  Custom ID:

Active: ☒ Yes ☐ No Category:

Type:

Components of the medicine:

**Products & Medicines** 12

HR 250C - HR 225mg tablet	HRZE 48DC - HRZE 75/150/400/275mg Tablet
Am	Cm

**Figure 9**

The **Treatment regimens** table is shown below. You can enter multiple treatment regimens by clicking the **ADD** button.

## Administration - Tables

**New treatment regimen**

Name:  Classification:

Custom ID:  Active: ☒ Yes ☐ No

Medicine:  Default dose unit:  Default Frequency:  Starting consumption day:  Duration (days):

**Treatment regimens** 2

Category I	Category IV - Gen.
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**Figure 10**

The **Case tags** table allows you to enter “tags” to attach to your cases. These are various categories or descriptions that you want to assign to cases in order to easily group or find or report on cases with the same tag. These are optional. Some examples are shown below.

Administration - Tables

Administrative units

TB units & laboratories

Medicine sources

Medicine generic names

Products & Medicines

Treatment regimens

**Case tags**

Age ranges

Case tags 1

AIDS as comorbidity without HIV result

ADD

Figure 11

Case tags	
DR-TB Confirmed cases without DST recorded	47
DST result recorded without type of drug resistance	6
HIV positive without AIDS as comorbidity	237
On treatment and not validated	17
Suspect with DST result	10
Treatment period overdue without outcome	59
Type of drug resistance recorded without DST	36
Confirmed cases on treatment	1164
Not validated	86
Suspect on treatment	26
Check treatment regimen	13
Defaulter	6
Genexpert exams	3
New culture result released	5
New DST result released	2
Pediatric	1
Please Dr. validate this Case	4

Figure 12

If you installed e-TB Manager with sample data it is not necessary to enter additional information in these tables to experiment with the program.

### **Reports**

The Reports option in the Administrator menu is where you find reports on the use of the software, such as user session histories. It does not contain reports on your case data.

### **Settings**

The Settings option in the Administrator menu allows you to add and delete workspaces.

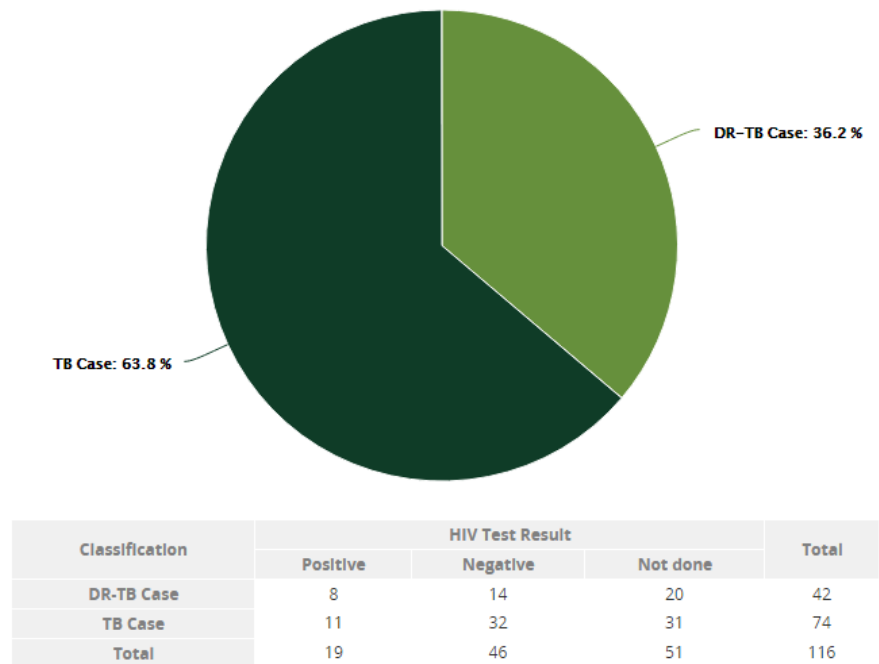
After the software is configured, the primary work in e-TB manager takes place in the **General** and **Cases** screens.

The General screen shows a **Dashboard** that can be customized to display selected data. Two examples of Dashboard graphs are shown below.



**Figure 13**

HIV result of cases on treatment



**Figure 14**

On the **General** screen, select one of the TB units that has patients to be able to access case information or notify cases.



If you have selected a TB unit that has patients, clicking the **Cases** link takes you to a screen with three “tabs” showing the Presumptive cases, TB cases, and DR-TB cases, if you have all three of those types entered. Click the appropriate option on the left side of the screen to **Notify case** if the patient has been confirmed to have TB, DR-TB, or NTM. Click **Notify presumptive** if the patient is presumed to be a TB, DR-TB, or NTM case.

The screenshot shows the 'CASES' tab in the e-TB Manager interface. On the left, there is a sidebar with navigation options: 'Notify case', 'Notify presumptive', 'Views' (Open cases, Case search, Reports), 'Summary' (Not on treatment: 2, Confirmed on treatment: 2, Confirmed not on treatment: 1, Closed), and 'Case tags' (AIDS as comorbidity without HIV result: 1). The main area displays three tabs: 'PRESUMPTIVES' (1), 'TB CASES' (2), and 'DR-TB CASES' (1). Below these tabs is a table with the following data:

Patient	Registration date	Xpert MTB/RIF test	Microscopy
Miller, Jack 776544	10/24/2016 2 days ago	-	-

**Figure 15**

Before you can enter a new case in e-TB Manager, you must search the database to ensure that the case is not already in the system.

The screenshot shows the 'Working unit' section with the text 'City 1, Region 1' and 'MSH Demo Workspace'. Below this is a search form titled 'Search for patient to be notified'. The form includes fields for 'Patient name' (Last name, First name, Middle name) and 'Birth date' (with a calendar icon). There are 'SEARCH' and 'CANCEL' buttons at the bottom.

**Figure 16**



If you do not find your patient when you search, click the **New Patient** button that appears on the screen.


The screenshot displays a patient search form within a light blue border. At the top, the text 'Search for patient to be notified' is centered. Below this, the 'Patient name' section includes three input fields: the first contains 'Frye', the second contains 'Julie', and the third is labeled 'Middle name'. To the right, the 'Birth date' section features a date input field with the placeholder 'dd/mm/yyyy' and a calendar icon. Below the name fields are two buttons: a dark teal 'SEARCH' button and a green 'CANCEL' button. A yellow banner with the text 'No record found' is positioned below the search area. At the bottom of the form, a green 'NEW PATIENT' button is visible.

**Figure 17**


Enter information for your new case on the next screen. The screen is similar for notifying presumptive and confirmed cases. When you are done entering information click **Save** to keep your information.

New notification of Confirmed TB Case



Date entered in BMU TB register:   



BMU TB register number: 


**Patient data**


Patient name: 

Mother's name:

Gender:   

Age:   

Birth date:  

Nationality:  

Phone number:



Mobile number:

Patient address at the moment of notification



Address



Complement


Zip code

Region:   

**Case data**

Diagnosis date:   

Registration group:   

Site of Disease:  

**Figure 18**

After you have a patient in the system, you can add more information about them, including **Adverse Reactions to Medicines, Comorbidities and Associated Factors, Previous TB Treatment, and Contacts Information**. Click the **ADD** or **EDIT** buttons to enter information in these areas.

**Frye, Julie**  
CONFIRMED TB CASE

Working unit  
City 1, Region 1

Confirmed case | Waiting to start treatment | Waiting validation

**CASE DATA** | FOLLOW-UP | TREATMENT | ISSUES

Date entered in BMU TB register: October 2, 2016 | BMU TB register number: 456977

**Patient data**

Mother's name: -

Age: 42 | Birth date: - | Nationality: Native

Phone number: - | Mobile number: -

Patient address at the moment of notification: City 1, Region 1 | Current address: City 1, Region 1

**Case data**

Notification health unit: Working unit

Diagnosis date	Registration error	Lab by address	Site of Disease
September 20, 2016	Screening	City 1, Region 1	Pulmonary

Pulmonary forms: Normal

Add comment

**Adverse Reactions to Medicines** - ADD

Add comment

**Comorbidity and associated factors** - EDIT

Add comment

**Previous TB treatments** - ADD

Add comment

**Contacts Investigation** - ADD

Add comment

**Figure 19**

In addition to case data, you can also enter **Follow-Up**, **Treatment**, and **Issues** information about each patient, as shown in the screens below.

The **Follow-Up** section allows you to enter information about lab results.

**Frye, Julie**  
CONFIRMED TB CASE

Working unit  
City 1, Region 1

Confirmed case | Waiting to start treatment | Waiting validation

CASE DATA | **FOLLOW-UP** | TREATMENT | ISSUES

ADD

- Medical Consultation
- Microscopy
- Culture
- Xpert MTB/RIF test
- Drug susceptibility test (DST) and line probe assay (LPA)
- X-Ray
- HIV

TB/RIF test | Drug susceptibility test (DST)

**Figure 20**

Enter information about the patient's regimen in the **Treatment** section, as shown in the next three figures.

The screenshot shows a patient management interface for Julie Frye, a confirmed TB case. The interface includes a patient profile section with a purple female icon, name, and status. Below this are tabs for CASE DATA, FOLLOW-UP, TREATMENT (active), and ISSUES. A left sidebar contains action buttons: Delete case, Validate case, Close case, and Transfer to another health unit. A 'Case tags' section is also visible. The TREATMENT section displays a warning 'Treatment not started' and a 'START TREATMENT' button. A dropdown menu is open, showing options for 'STANDARDIZED REGIMEN' and 'INDIVIDUALIZED REGIMEN'. Status tags at the top indicate 'Confirmed case', 'Waiting to start treatment', and 'Waiting validation'.

Figure 21

## Start standard regimen

The 'Start standard regimen' form contains the following fields and controls:

- Treatment health unit:** A dropdown menu currently showing 'Region 1'.
- Working unit:** A dropdown menu.
- Start treatment date:** A date input field with a placeholder 'dd/mm/yyyy' and a calendar icon.
- Treatment Regimen:** A dropdown menu.
- Buttons:** A green 'SAVE' button and a grey 'CANCEL' button.

Figure 22

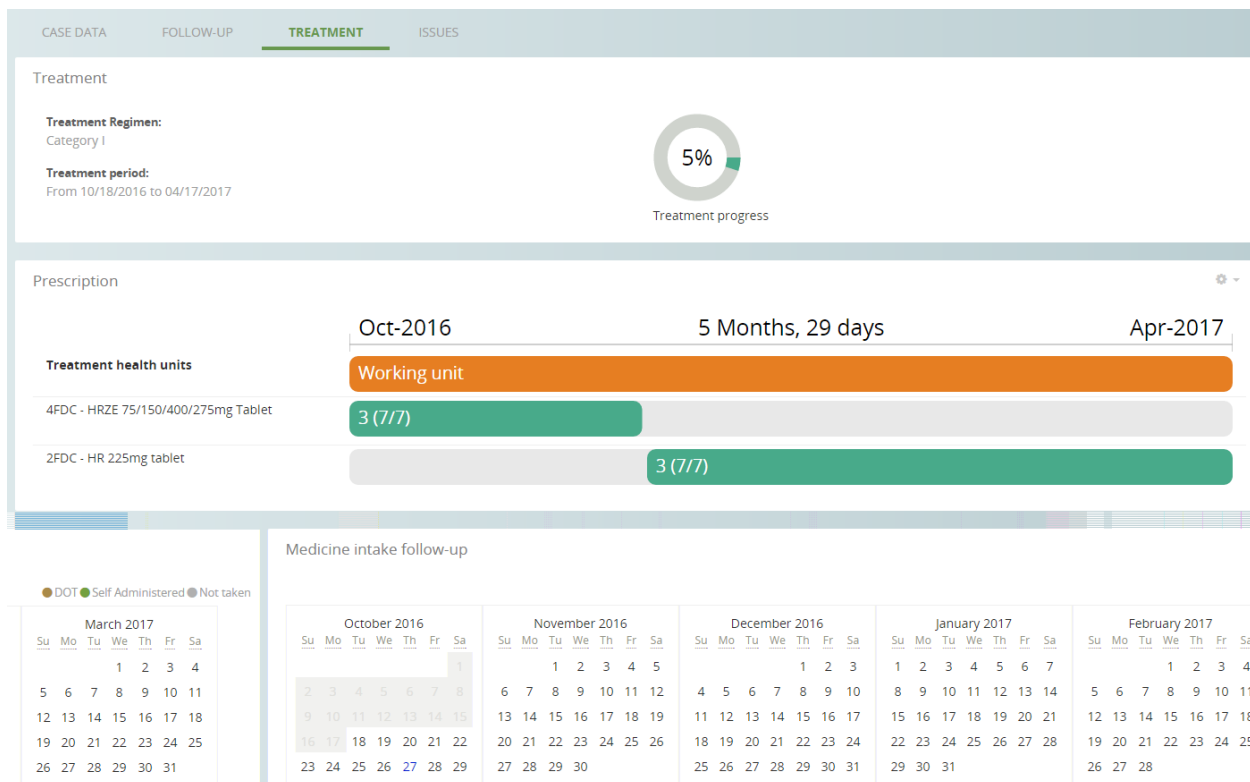


Figure 23

Other actions that you may need with a case are on the left side of the screen. Options include buttons to **Delete case**, **Validate case**, **Close case**, and **Transfer to another health unit**. Any tags that you have assigned to the case will appear in the **Case tags** section, and any other cases the patient has will appear in the **Other cases** section.

**John, Smith**  
CONFIRMED TB CASE

Working unit: City 1, Region 1

Confirmed case On treatment Waiting validation

**CASE DATA**

Date entered in BMU TB register: October 17, 2016 BMU TB register number: 2514

**Patient data**

Mother's name: Helena Smith

Age: 16 Birth date: October 17, 2000 Nationality: Native

Phone number: 854 845 794 325 Mobile number: -

Patient address at the moment of notification: Street 1 House 4 Zip code: 85001 City 1, Region 1

Current address: Street 1 House 4 Zip code: 85001 City 1, Region 1

**Case data**

Notification health unit: Working unit

Discharge date: -

Case tags: No tags attached to this case

Other cases: This patient has no other case

Figure 24

The e-TB Manager software allows you to easily create your own reports. Click on the **Cases** tab and then on **Reports** in the left menu. Click the **NEW REPORT** button to begin creating your report, as shown in the figure below. Click the + sign under Filters to select the filters for your report.

**CASES**

Report title (click here to change) SAVE CLOSE

☐ Display report in dashboard

FILTERS + GENERATE

Indicator title (click here to change) ×

FILTERS +

COLUMNS - ROWS -

Display: ALL Size: 6 Chart: PIE REFRESH

ADD INDICATOR

**Figure 25**

