

## **e-TB Manager User's Guide: A Comprehensive Web-based Tool for Programmatic Management of TB and Drug-Resistant TB**

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## **About SPS**

The Strengthening Pharmaceutical Systems (SPS) Program strives to build capacity within developing countries to effectively manage all aspects of pharmaceutical systems and services. SPS focuses on improving governance in the pharmaceutical sector, strengthening pharmaceutical management systems and financing mechanisms, containing antimicrobial resistance, and enhancing access to and appropriate use of medicines.

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## **Key Words**

User's guide, e-TB manager, information system, TB, DR-TB, case management, first- and second-line TB medicines

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## **ACRONYMS**

CSV	comma separated value [files]
e-TB manager	TB and DR-TB data management information system
DOTS	A WHO TB control strategy
DOTS Plus	The DOTS strategy for MDR-TB
DR-TB	drug-resistant tuberculosis
DST	drug susceptibility testing
FEFO	first expiry, first out (regarding products' expiry)
GDF	Global Drug Facility [Stop TB/WHO]
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GLC	Green Light Committee [Stop TB/WHO]
M&E	monitoring and evaluation
MDR-TB	multidrug-resistant tuberculosis
MoH	Ministry of Health
MSH	Management Sciences for Health
NTP	National Tuberculosis Control Program
SPS	Strengthening Pharmaceutical Systems [MSH]
TB	tuberculosis
URL	uniform resource locator
USAID	U.S. Agency for International Development
WHO	World Health Organization
XDR-TB	extensively drug-resistant TB



## DEFINITIONS

**Dispensing to patient:** *Dispensing to a patient* refers to the quantity of first- or second-line TB medicines issued by the TB doctor to a patient during a specified period.

**Drug order:** Quantity of medicines needed by the local health unit from the central level and by TB dispensaries from pharmacies constitute the drug order; quantities are estimated by the system according to the number of registered patients, prescribed treatment schemes, buffer stock requirements, and stock on hand.

**Drug receiving:** *Drug receiving* refers to all medicines received and recorded according to the standard requirements by the central warehouse and pharmacy from different external sources.

**External source:** An external source is a source of TB medicines supplied to the National Tuberculosis Control Program (NTP), central warehouse, and pharmacies from outside the NTP system. It does not include the transfer of medicines from pharmacy to pharmacy or from pharmacy to warehouse. Donors, the Ministry of Health (MoH), the Green Light Committee (GLC), and the Global Drug Facility (GDF) are considered to be external sources.

**Medicine movement:** Every event that increases or reduces the quantity of medicines in a storeroom whether a pharmacy, warehouse, or health unit is considered to be a medicine movement. Medicine movements include, for example, quantity received, quantity issued, and quantity dispensed.

**Medicine unit:** Each medicine and medicine product is recorded in the system using its basic unit as configured in the Administration module. Medicine units include, for example, tablet, vial, milligram, gram, sachet, and bottle.

**Patient enrolled:** Patients are enrolled when they are confirmed to have TB or drug-resistant TB (DR-TB) and registered in DOTS, DOTS Plus, or non-DOTS programs following the decision of the Recruitment Committee. Patients are identified in the system by their first names, last names, and security numbers.

**Stock position:** Stock position is the quantity of medicines stocked at any point in time in any facility involved in the supply of TB medicines; it is elaborated by product name and health unit.

**Stock estimation:** Based on the number of registered TB and DR-TB cases and their treatment regimens, the system is able to estimate the quantities of medicines needed by the TB dispensary for the next order period.

**TB unit:** Any unit using the e-TB Manager to manage TB patients or medicines are called *TB units*. Examples of TB units are NTP, MoH, the medicine warehouse, and TB health centers.

**User profile:** Every user in the system is assigned a profile. The profile is a set of permissions that indicates what the user can or cannot do in the system. One example is the *Administrator Profile*. Users assigned to the Administrator Profile have permission to do everything in the system; that is, they have no restrictions in the system. Another example is the *Warehouse Pharmacist Profile*, which allows only to medicines movements and some reports.

**User:** A *user* is any person or health facility authorized to enter, register, edit, order, monitor, and validate data into the e-TB Manager. Each user has his or her own login and password. Users include the NTP coordinator, the central unit of the NTP, the drug management coordinator, TB doctors, pharmacists, data entry operators, and TB/DR-TB experts.

**Workspace:** A workspace defines a unique database, with specific medicines, sources, regimens and TB units assigned to it. A single version of the e-TB Manager can hold several different workspaces—each workspace may be a country, a parallel health system in the country (for example, one workspace for the MoH and another for the penitentiary system), or any other health system.

## CHAPTER 1. INTRODUCTION

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, a comprehensive Web-based tool for programmatic management of TB and DR-TB, was designed to integrate in one Web-based tool all relevant dimensions for NTP management purposes at different levels (e.g., cases, medicines, and other TB commodities) and provide 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 the recently publicized 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. The e-TB Manager 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.

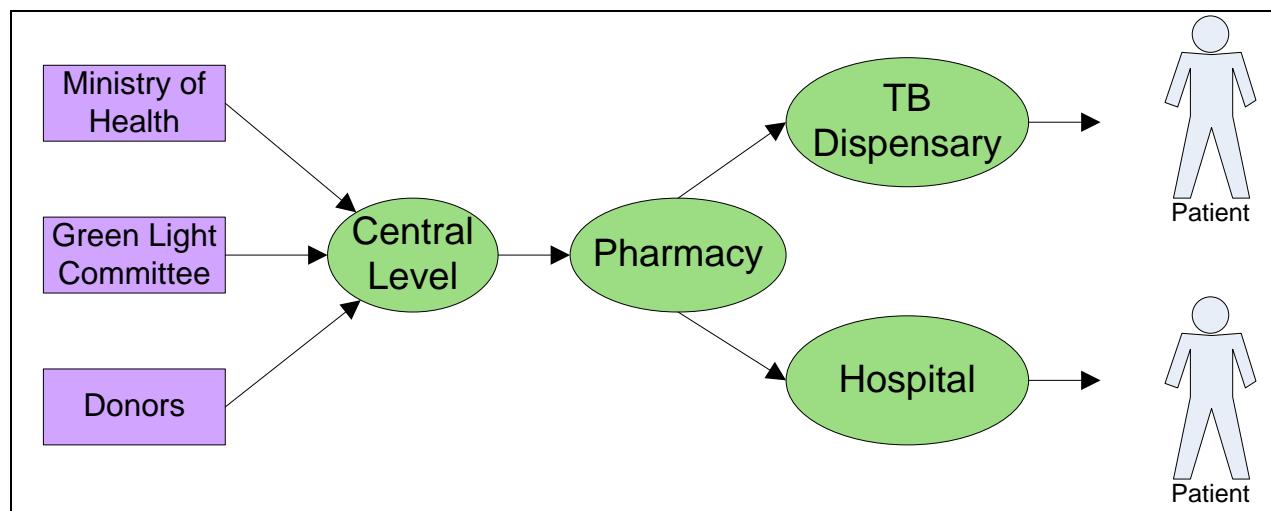
The team would use the e-TB Manager tool according to health unit procedures and approved national guidelines. The data captured and reports generated by the tool can be summarized as follows:

- *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.
- *First- and second-line medicines management:* The tool provides data for medicine needs forecasting, ordering, distributing, and dispensing, and for recording stock movements with medicines as well as batch number tracking at all levels.
- *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.

## What Is e-TB Manager?

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 tracking first- and second-line TB medicines from the date the NTP receives medicines until they are dispensed to patients (figure 1)
- 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 system that facilitates ordering and delivery of medicines between central and peripheral levels of the NTP
- A tool that provides monitoring and evaluation (M&E) of medicine stock levels at any health facility and by each supply source
- A storage database from which reports can be produced that can have an impact on future policy and NTP strategies and decisions



**Figure 1. Tracking first- and second-line medicines through the system**

## **Who Will Benefit from the e-TB Manager?**

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
- MoH
- National Health Insurance Plans
- Donors and partners such as WHO/GLC and the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)

## **What are the e-TB Manager's Technical Characteristics?**

e-TB Manager is a computer application, which is accessible over the Internet and which 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. 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
- A network connection to the system (Internet access is required only if the system is based on an Internet server)
- An HTML browser (recommended: Internet Explorer 6 or higher, or Mozilla FireFox 1.5 or higher)

## **What Are Users' Responsibilities?**

Pharmaceutical warehouse staff responsibilities are to—

- Register medicines received from external sources
- Monitor stock position
- Register delivery of medicine to pharmacies
- Record movements and adjustments of stock (e.g., returns, medicine expiry)

NTP staff responsibilities are to—

- Authorize orders from pharmacies (consolidated by TB units related to pharmacies)
- Monitor the stock positions of the pharmaceutical warehouse, pharmacies, and TB units
- Confirm data for patients enrolled in cohorts

Pharmacy staff responsibilities are to—

- Document receipt of medicines from the pharmaceutical warehouse
- Issue medicines ordered by health units
- Monitor its stock position and the stock position of related TB units
- Record stock movements and adjustments (e.g., in case of returned medicines to the pharmaceutical warehouse or medicines expiration)
- Send new medicine orders to the pharmaceutical warehouse
- Check the status of sent orders

TB physician responsibilities are to—

- Register new TB or DR-TB cases in the system (including medicines used, doses, and frequency and duration of treatment) and register patient transfers from one health unit to another
- Modify the treatment scheme of TB/DR-TB cases (i.e., medicines or doses substitution)
- Register medicines dispensed to patients
- Place new medicine orders with the pharmacy
- Receive medicines sent by the pharmacy

## CHAPTER 2. E-TB MANAGER STRUCTURE

The e-TB Manager consists of four modules—

- Cases
- Medicines
- Management
- Administration

The **Cases** module allows the user to search, notify, follow-up, exclude, close, transfer, and validate cases.

The **Medicines** module allows the user to record, search, follow, and authorize the receiving, ordering, transferring, dispensing, movements, and stock positions of medicines.

The **Management** module allows the user to generate, search, and print reports, indicators, medicine forecasting, and data exportation records.

The **Administration** module allows the system administrator to manage the system to include, remove, and change users, health system structure, medicines, treatment regimens, and other elements.



## CHAPTER 3. USING THE SYSTEM

### Launching the Browser

The e-TB Manager is a Web-based system, so you will need a Web browser to run this application. Several Internet navigators (browsers) are available, and each one offers specific characteristics and resources. To have the system working properly, you must enable Java-script in your browser. If it's not enabled, please contact your system administrator.

You may choose whatever browser you want, but it is important to note that the system was tested and validated using the following browsers—

- Microsoft Internet Explorer 6 or higher (recommended)
- Mozilla FireFox 1.5 or higher (recommended)

To start the application, open your browser and enter the system URL. If you don't know the system URL, contact the NTP representatives for instructions.

#### Box 1. What is a URL?

URL is the abbreviation for *uniform resource locator*. It's a global address of documents and other resources on the World Wide Web. The URL of the e-TB manager depends on where it was installed. MSH maintains a demonstration version of the system at the URL <http://www.etbmanager.org>, but check with your technical support for the right URL of the system in use.

When you enter the correct URL, the system shows you the login page. The login page is used to authenticate the user in the system.

To enter into the system, you'll need a user login and password. If you don't have one, you can receive a new one by clicking on the link **Click here** below the sentence **Don't have a user name?** displayed at the login page. Fill in the **Registration page** (figure 2); clicking the OK button the system automatically sends a user login and password to your e-mail address as registered in the e-TB Manager. Once you have entered your user account and password, click **ENTER** (figure 3). If you need technical support, contact MSH using this e-mail address: [info@etbmanager.org](mailto:info@etbmanager.org).

## Registration page

Please fill the form below to get access to e-TB Manager:

Name:*	<input type="text"/> (Ex.: John Smith)
Login:*	<input type="text"/> (Ex.: jsmith)
e-mail:*	<input type="text"/> (Ex.: jsmith@msh.org)
Organization:*	<input type="text"/> (Ex.: MSH)

OK CANCEL

Figure 2

## Welcome to e-TB Manager

**e-TB Manager**  
TB Management Information System

Enter your User Name and Password to login

User Name:   
Password:

Remember me

 **USAID**  
FROM THE AMERICAN PEOPLE

**International Version**

Language:

[Forgot your password?  
Click here](#)

 Strengthening Pharmaceutical Systems

 [Don't have an User Name?  
Click here](#)

e-TB Manager version 1.5-b238  
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Figure 3

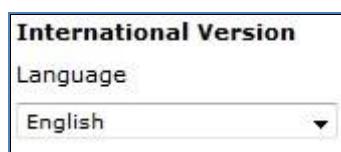
The system will check for the **User Account** and **Password**. If you have not entered a valid login or password, an error message will be displayed (figure 4). In this case, repeat the operation.

The screenshot shows the 'Welcome to e-TB Manager' login page. On the left, the 'e-TB Manager' logo is displayed with the subtitle 'TB Management Information System'. The main form area has a green header 'Enter your User Name and Password to login'. It contains fields for 'User Name' (containing 'jfrye') and 'Password', a 'ENTER' button, and a 'Remember me' checkbox. Below the form, an orange box displays the error message 'Login failed'. At the bottom of the page, there are logos for USAID ('FROM THE AMERICAN PEOPLE') and SPS ('Strengthening Pharmaceutical Systems'). Navigation links include 'International Version', 'Language' (set to 'English'), 'Forgot your password? Click here', and 'Don't have an User Name? Click here'. A copyright notice at the bottom states 'e-TB Manager version 1.5-b238 Copyright © 2005 Management Sciences for Health, Inc. All rights reserved.'

**Figure 4**

## Language Selection

The system is available in several languages. If the language selected is not the one you want, on the left side of the login page, you'll find the language selector (figure 5).



**Figure 5**

When you select the language you want from the drop-down menu, the system will update the login page with the selected language.

### **Forgot Your Password?**

If you have forgotten your password, you can receive a new one by clicking on the link **Click here** below the sentence **Forgot your password?** displayed at the login page. The system will ask for your e-mail address assigned to your user login (figure 6).



**Figure 6**

Enter your e-mail address, click on **OK**, and a new password will be generated by the system and will be sent to the user's e-mail address. Otherwise, click on **CANCEL** to cancel the operation.

### **The Home Page**

After you complete the login page, the system will welcome and redirect you to the home page. On the home page, you'll find the system's main menu (figure 7).

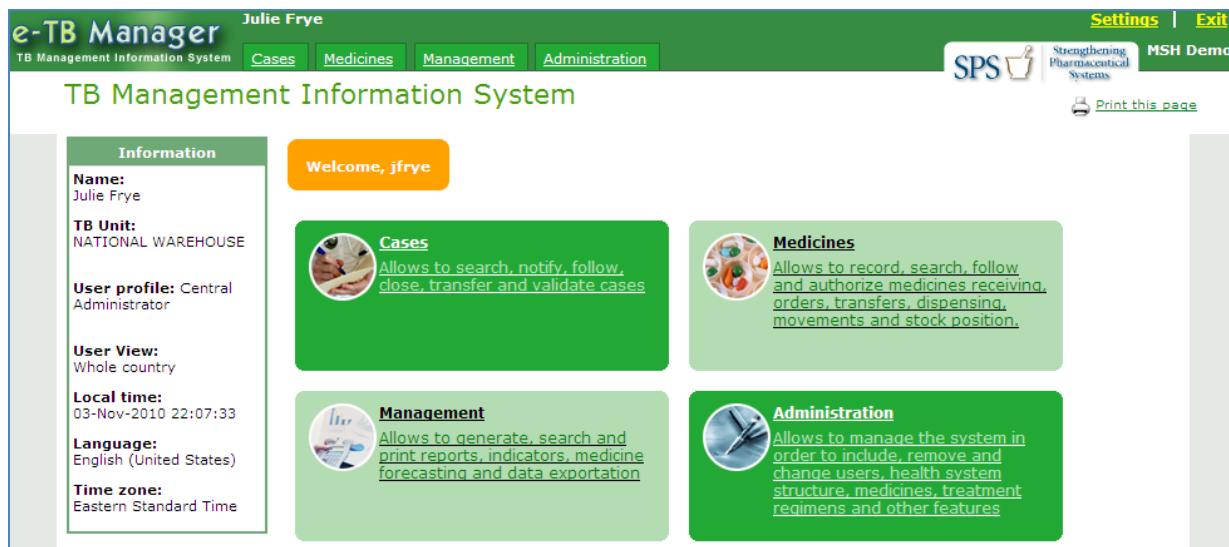


Figure 7

The main menu contains the four main functionalities of the system and the *Settings* link—

- **Cases**—Allows the user to search, notify, follow-up, exclude, close, transfer, and validate cases.
- **Medicines**—Allows the user to record, search, follow, and authorize the receiving, ordering, transferring, dispensing, movements, and stock positions of medicines.
- **Management**—Allows the user to generate, search, and print reports, indicators, medicine forecasting and data exportation records.
- **Administration**—Allows the system administrator to manage the system to include, remove, and change users, health system structure, medicines, treatment regimens, and other elements.
- **Settings** (located in upper right corner of the home page)—Allows the general user to set up and change the many system configurations such as names, e-mail addresses, language in use, workspace in use, and password.

You can select any of the five functions above by clicking on the displayed links at the system's main menu (figure 7).

## User Interface

As you browse the system, you'll notice that the pages follow a standard layout. For example, at the top of each page you find links to the four main modules of the system (figure 8).



**Figure 8**

These options are the same ones you've seen on the home page above. They are shortcuts that save you time; for instance, if you are in the **Management** function and want to go to the **Cases** function, just click on the appropriate menu button. You have the same options going back to the home page by clicking on the **e-TB Manager** logo of the system (top left corner of the page). If you want to close your login session without closing the browser, click on the **Exit** link at the top right corner of the page. It will redirect to the login page, and you (or the next user) will need to enter the appropriate login and password again.

At the left side of the page you'll find an **Information** block about your session in the system. The block shows your **Name**, your **TB Unit**, your **User Profile**, your **User View**, the date and **Local time** you entered into the system, the **Language** in use, and which **Time zone** you are in now (figure 9).



**Figure 9**

## Changing Your Preferences, Password, and Workspace

By clicking on the **Settings** link on the upper right side of each page you will be able to modify your personal data (figure 10).

The screenshot shows the 'Change profile' page of the e-TB Manager application. At the top, there is a green header bar with the title 'e-TB Manager' and the user name 'Julie Frye'. Below the title, it says 'TB Management Information System'. There are four tabs: 'Cases' (highlighted in blue), 'Medicines', 'Management', and 'Administration'. On the right side of the header, there are links for 'Settings' (highlighted in red), 'Exit', and the 'SPS' logo (Strengthening Pharmaceutical Systems). Below the header, there is a 'Print this page' link.

The main content area is titled 'Change profile'. It contains two main sections: 'Preferences' and 'Change password'.

**Preferences:** This section contains fields for Name (Julie Frye), e-mail (jfrye@msh.org), Language (checkbox for 'Display messages keys instead of text (translation mode)'), Time zone (selected as '(GMT-05:00): America/New\_York'), and an 'OK' button.

**Change password:** This section contains fields for 'Password in use', 'New password', and 'Confirm new password', along with an 'OK' button.

**Workspace:** This section contains a field for 'Workspace in use' (set to 'MSH Demo') and an 'OK' button.

At the bottom of the page, there is a 'CANCEL' button.

Figure 10

## **Preferences**

The preferences box allows you to change your name (i.e., the name displayed by the system), your e-mail address (i.e., the e-mail the system uses to communicate with you), the language in use, and the time zone you are in now. Adjusting the time zone allows the system to display the correct date and time according to where you are in the world.

To change your preferences, just modify your information and click **OK** to confirm (figure 11) or **CANCEL** (at the bottom of the page) to undo it.

The screenshot shows a 'Preferences' dialog box with the following fields:

- Name:** Julie Frye
- e-mail:** jfrye@msh.org
- Language:**  Display messages keys instead of text (translation mode)  
□
- Time zone:** (GMT-05:00): America/New\_York

At the bottom is a green **OK** button.

**Figure 11**

## **Password**

For security reasons, to change your password you must enter your password in the **Password in use** field, then enter a new password in the **New password** field and retype it in the **Confirm new password** field. Make sure you write your new password correctly in both fields. Click **OK** to confirm (figure 12) or **CANCEL** (at the bottom of the page) to undo it.

The screenshot shows a 'Password' dialog box with the following fields:

- Password in use:** [empty input field]
- New password:** [empty input field]
- Confirm new password:** [empty input field]

At the bottom is a green **OK** button.

**Figure 12**

## Workspace

To change the workspace in use, select your workspace from the list and click on to **OK** to confirm or **CANCEL** to undo it (figure 13). Your access to different workspaces depends on your user's profile registered in the system, and normally you are limited to access only your authorized workspaces.

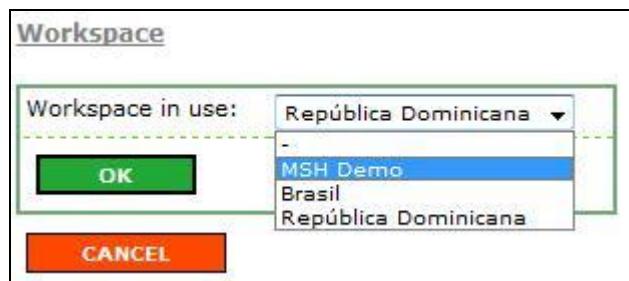


Figure 13

When you click the **OK** button shown above, and all the information is validated (accepted) by the system, the message **The password was successfully changed** will be shown on the main page (figure 14).



The screenshot shows the e-TB Manager main interface. At the top, there is a green header bar with the title "e-TB Manager" and "Julie Frye". Below the header is a navigation bar with tabs: "Cases", "Medicines", "Management", and "Administration". On the right side of the header, there are links for "Settings", "Exit", "SPS", "Strengthening Pharmaceutical Systems", and "MSH Demo". A "Print this page" link is also present. The main content area displays a message "The password was successfully changed!" in an orange box. Below this, there are four green boxes representing different modules: "Cases" (with an icon of a person writing), "Medicines" (with an icon of medicine bottles), "Management" (with an icon of a computer monitor), and "Administration" (with an icon of a key). Each module box contains a brief description of its functions.

Figure 14

## CHAPTER 4. CASE MANAGEMENT MODULE

The **Cases** module allows you to search, notify, follow up, exclude, close, transfer, and validate cases. Click on **Cases** on the system's main page (highlighted with a red circle and rectangle in figure 15), and the cases module's main page will appear (figure 15).

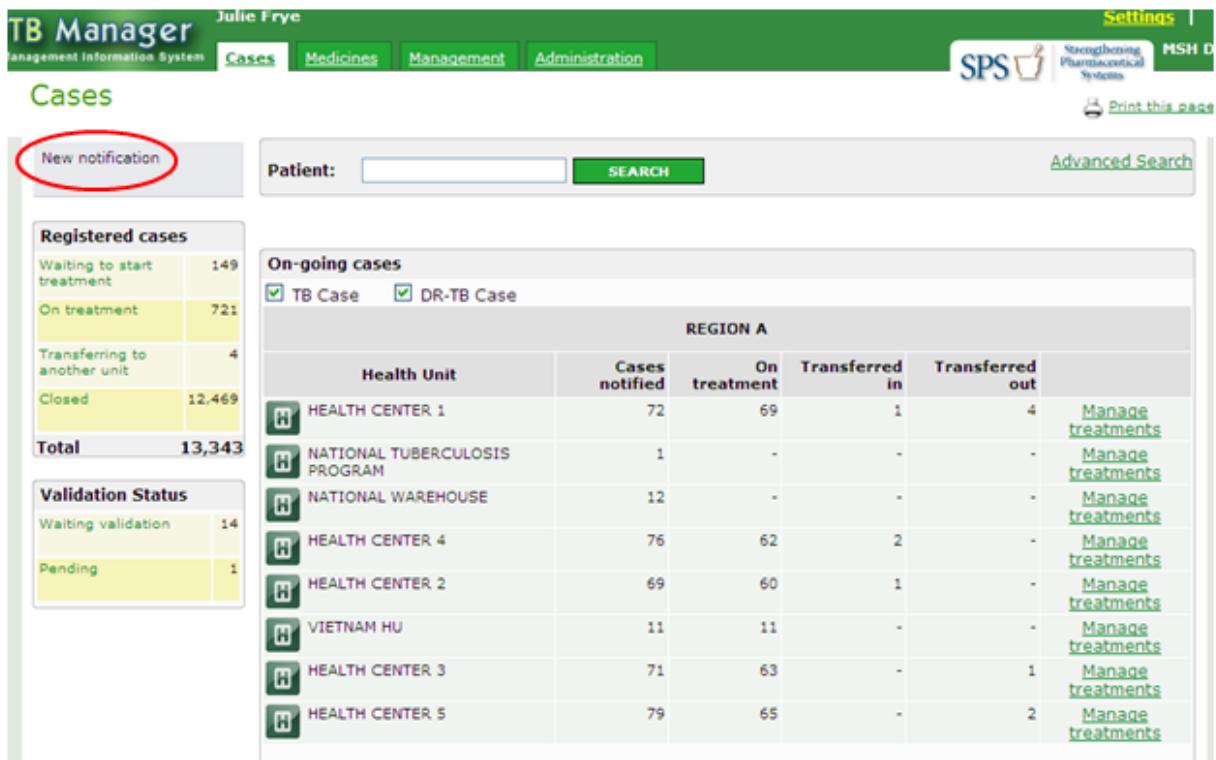


Figure 15

## How to Notify a Case

To notify a case, follow this procedure:

1. Click on the **New notification** link (circled in red on figure 16) to record into the system data on a patient who has diagnosis of TB or DR-TB.



The screenshot shows the 'Cases' section of the e-TB Manager interface. At the top left, there is a red circle around the 'New notification' link. The top navigation bar includes links for 'Management Information System', 'Cases' (which is active), 'Medicines', 'Management', and 'Administration'. On the right side of the header are logos for 'SPS Strengthening Pharmaceutical Systems' and 'MSH D'. Below the header, there is a search bar with 'Patient:' and a 'SEARCH' button, along with a link to 'Advanced Search'. The main content area is divided into two sections: 'Registered cases' and 'On-going cases'. The 'Registered cases' section contains a table with the following data:

Waiting to start treatment	149
On treatment	721
Transferring to another unit	4
Closed	12,469
<b>Total</b>	<b>13,343</b>

The 'On-going cases' section shows data for 'REGION A' across various 'Health Units'. The table includes columns for 'Cases notified', 'On treatment', 'Transferred in', and 'Transferred out'. Each row has a 'Manage treatments' link. The data is as follows:

Health Unit	Cases notified	On treatment	Transferred in	Transferred out	Manage treatments
HEALTH CENTER 1	72	69	1	4	<a href="#">Manage treatments</a>
NATIONAL TUBERCULOSIS PROGRAM	1	-	-	-	<a href="#">Manage treatments</a>
NATIONAL WAREHOUSE	12	-	-	-	<a href="#">Manage treatments</a>
HEALTH CENTER 4	76	62	2	-	<a href="#">Manage treatments</a>
HEALTH CENTER 2	69	60	1	-	<a href="#">Manage treatments</a>
VIETNAM HU	11	11	-	-	<a href="#">Manage treatments</a>
HEALTH CENTER 3	71	63	-	1	<a href="#">Manage treatments</a>
HEALTH CENTER 5	79	65	-	2	<a href="#">Manage treatments</a>

Figure 16

2. In the window, choose the appropriate case classification based on bacteriological results and previous TB treatments, or click on **CANCEL** to cancel the operation (figure 17).

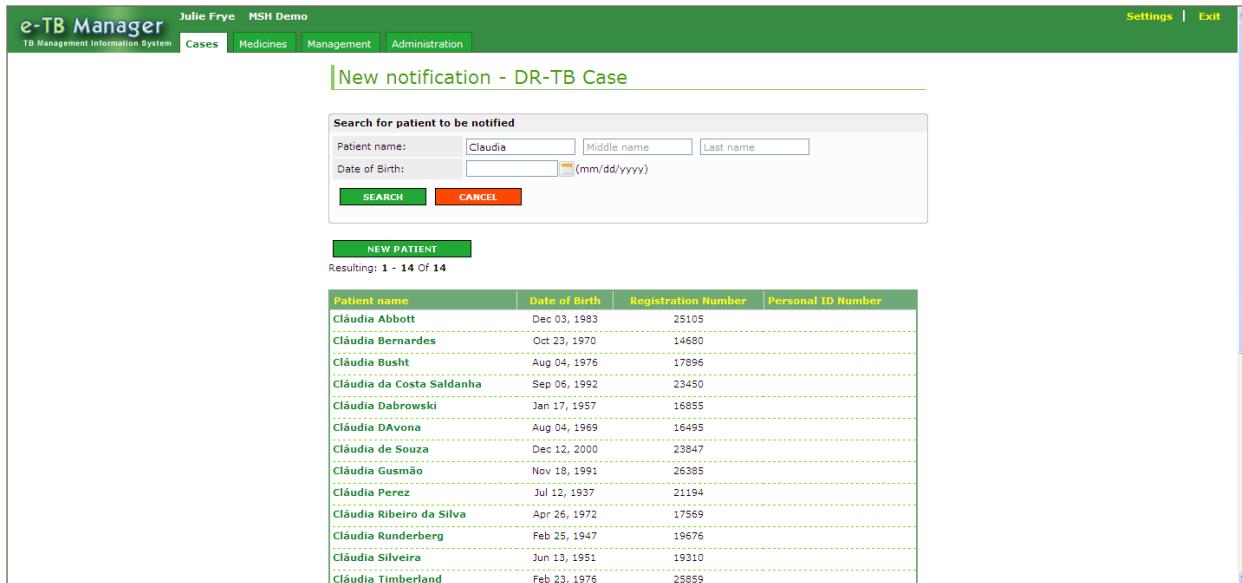
	Transferred in	Transferred out	
1	4	<a href="#">Manage treatments</a>	
-	-	<a href="#">Manage treatments</a>	
-	-	<a href="#">Manage treatments</a>	
2	-	<a href="#">Manage treatments</a>	
1	-	<a href="#">Manage treatments</a>	
11	11	<a href="#">Manage treatments</a>	
71	63	<a href="#">Manage treatments</a>	
79	65	<a href="#">Manage treatments</a>	

Figure 17

3. Before recording a new case, you must check whether the patient is already recorded in the system. Enter the patient's name and birth date, and then click on **SEARCH**. Using both pieces of information, the system will search for the case in the database (figure 18). Click **CANCEL** to return to the previous page.

Figure 18

4. If either or both pieces of information (name and birth date) are already recorded in the database, the system will show all like patients (see the example in figure 19).
5. If you want to notify a new case of a previously recorded patient (i.e., a new TB or DR-TB case), click the link below the **Patient name** column (figure 19).



The screenshot shows a software interface titled "e-TB Manager" with a green header bar containing the title, user name "Julie Frye", and "MSH Demo". Below the header are navigation tabs: "Cases" (which is selected), "Medicines", "Management", and "Administration". On the right side of the header are "Settings" and "Exit" buttons. The main content area has a title "New notification - DR-TB Case". Below it is a search form with fields for "Patient name" (set to "Claudia"), "Middle name", "Last name", and "Date of Birth" (set to an empty field). There are "SEARCH" and "CANCEL" buttons. Below the search form is a table with a green header row labeled "NEW PATIENT". The table contains 14 rows of patient data, each with a green dotted border. The columns are "Patient name", "Date of Birth", "Registration Number", and "Personal ID Number". The data includes names like Cláudia Abbott, Cláudia Bernardes, Cláudia Bushit, etc., with various birth dates and registration numbers.

Patient name	Date of Birth	Registration Number	Personal ID Number
Cláudia Abbott	Dec 03, 1983	25105	
Cláudia Bernardes	Oct 23, 1970	14680	
Cláudia Bushit	Aug 04, 1976	17896	
Cláudia de Costa Saldanha	Sep 05, 1992	23450	
Cláudia Dabrowski	Jan 17, 1957	16855	
Cláudia Davona	Aug 04, 1969	16495	
Cláudia de Souza	Dec 12, 2000	23847	
Cláudia Gusmão	Nov 18, 1991	26385	
Cláudia Perez	Jul 12, 1937	21194	
Cláudia Ribeiro da Silva	Apr 26, 1972	17559	
Cláudia Runderberg	Feb 25, 1947	19676	
Cláudia Silveira	Jun 13, 1951	19310	
Cláudia Timberland	Feb 23, 1976	25859	

**Figure 19**

6. When you select an already recorded patient, the new case notified will be added to the patient list of cases registered. Notice also that when the notification form is displayed, the patient data section is already filled in with the patient data selected. You may update this information if you want (figure 20).
7. Once you enter data about the patient, click **OK** to register a new case or **CANCEL** to undo it (figure 20).
8. If you want to record a new patient, click on **NEW PATIENT** on the **New notification** screen (figure 19).
9. The name and birth date (optional) are shown, and you can complete other information regarding the case. Click on **OK** to generate a new case or **CANCEL** to undo it (figure 20).

### New notification - DR-TB Case

**Patient data**

Patient name:*	Claudia		
Personal ID Number:		Gender:*	-
Date of Birth:	(mm/dd/yyyy)	Age:*	
Mother's name:			
Nationality:	-		

**Patient address at the moment of notification**

Address:*	
Region:*	-
Zip code	
Current address is different from the notification address?: No	
Phone number:	Mobile number:

**Case data**

**Notification TB unit**

Region:*	-
Date of registration:*	(mm/dd/yyyy)
Date of diagnosis:	(mm/dd/yyyy)
Type of diagnostic:	-
Type of drug resistance:	-
Type of patient:	-
Site of Disease:	-

**Previous TB treatments**

Number of previous TB treatments:	0
-----------------------------------	---

**Medical consultation**

Date:*	(mm/dd/yyyy)
Professional responsible for consultation:*	
Height:*	cm
Weight:*	Kg
Comments:	

**OK** **CANCEL**

\* Value is required

Figure 20

## How to Find Notified Cases

To find a notified case, follow this procedure:

1. To search cases already recorded in the system, you may fill in the filters (i.e., different fields with a down arrow) on the case searching form. Click on **SEARCH**, and the system will display all cases that match the criteria you entered. If no filters are filled in, the system will display all cases registered in the database (figure 21).

The screenshot shows the 'e-TB Manager' application interface. At the top, there is a green header bar with the title 'e-TB Manager' and 'TB Management Information System'. It also displays the user information 'Luiz Fernando Avelino Reciolino | MSH Demo' and navigation links for 'Cases', 'Medicines', 'Management', and 'Administration'. Below the header, a sub-header 'Cases' is visible. The main content area is titled 'Case searching'. It contains several input fields grouped under sections: 'Patient address at the moment of notification' (Region dropdown), 'TB Unit' (Region dropdown), 'Case data' (Patient name, Registration Number, Classification dropdown set to 'DR-TB Case', Case status dropdown, Type of patient dropdown, Site of Disease dropdown), and 'Case search by dates' (checkboxes for Date of registration, Date of diagnosis, Start treatment date, Outcome date, with 'Date of registration' checked; dropdowns for Initial month/year and Final month/year). At the bottom right of the form is a green 'SEARCH' button.

Figure 21

2. Based on the information you enter, the recorded cases are listed on the **Case search results** page (figure 22). Click the column titles of the table header to change the ordering of the case search results list (figure 22).

- If you want to perform another case search, click on **NEW SEARCH** above the table on the right side of the page (figure 22). In the new window displayed, notice that you can create a combination of any filters (i.e., different fields with a down arrow such as **Region** or **Classification**) to get the results you want from the searching.

**Case search results**

Resulting: 1 - 50 Of 12980

▶ Next ▶ Last NEW SEARCH

REGISTRATION NUMBER GENDER	CLASSIFICATION PATIENT NAME AGE	NOTIFICATION TB UNIT REGION - CITY (Patient address)	CASE STATUS	DATE OF REGISTRATION TREATMENT DURATION
38816	DR-TB Case Luis Jardim 34 years	HEALTH CENTER 11 Region E - City J On treatment		Jun 18, 2009 4 days
38815	DR-TB Case Bruna Costeau 1 years	HEALTH CENTER 1 Region A - City A Waiting to start treatment		Aug 04, 2009
38814	DR-TB Case Ivan Green 6 years	HEALTH CENTER 9 Region C - City H Waiting to start treatment		Oct 09, 2009
38813	DR-TB Case Esmeralda Hill 28 years	HEALTH CENTER 6 Region B - City E On treatment		Jan 24, 2009 4 Months, 8 days
38812	DR-TB Case Iná de Oliveira 34 years	HEALTH CENTER 1 Region A - City C On treatment		Dec 18, 2008 4 Months, 31 days
38811	DR-TB Case Jonathan da Costa Saldanha 31 years	HEALTH CENTER 10 Region D - City I On treatment		Feb 26, 2009 3 Months, 13 days
38810	DR-TB Case Nádia Moraes 65 years	HEALTH CENTER 11 Region E - City J Waiting to start treatment		Nov 30, 2009
38809	DR-TB Case Noel Noir 51 years	HEALTH CENTER 9 Region C - City G Waiting to start treatment		Sep 28, 2009
38808	DR-TB Case Robson Greece 39 years	HEALTH CENTER 6 Region B - City E Waiting to start treatment		Jun 02, 2009
38807	TB Case Silvester Mc Brain 61 years	HEALTH CENTER 1 Region A - City B Waiting to start treatment		Nov 04, 2009
38806	TB Case Nicholas Visser 21 years	HEALTH CENTER 1 Region A - City B On treatment	→	Apr 24, 2009 25 days
38805	TB Case Clayton Bolivar 63 years	HEALTH CENTER 1 Region A - City C Waiting to start treatment		May 27, 2009
38804	TB Case George Hill 10 years	HEALTH CENTER 1 Region A - City A Waiting to start treatment		Aug 18, 2009
38803	TB Case Joel da Costa Saldanha 27 years	HEALTH CENTER 10 Region D - City I Waiting to start treatment		May 27, 2009
38802	TB Case Caio Araujo 58 years	HEALTH CENTER 9 Region C - City G On treatment		Apr 05, 2009 2 Months, 5 days
38801	TB Case Jair Gusmão 39 years	HEALTH CENTER 6 Region B - City E On treatment		Mar 01, 2009 2 Months, 31 days
38800	TB Case Nuno Runderberg 45 years	HEALTH CENTER 1 Region A - City B Waiting to start treatment		Aug 03, 2009
38799	TB Case Linda Greenhill 59 years	HEALTH CENTER 6 Region B - City E Waiting to start treatment		Sep 01, 2009
38798	TB Case Linda Noir 60 years	HEALTH CENTER 6 Region B - City F Waiting to start treatment		Oct 30, 2009
38797	TB Case Helena Bottino 20 years	HEALTH CENTER 1 Region A - City C Waiting to start treatment		Aug 28, 2009
38796	DR-TB Case Nicholas Bernardes 35 years	HEALTH CENTER 6 Region B - City D On treatment		May 21, 2009 21 days

Figure 22

4. Click on the link of the patient number to show case details for cases already validated or on the link **New case** for cases waiting for validation (highlighted in figure 23).



Case search results				
Resulting: 1 - 50 Of 8103				
TB/MDRTB NUMBER GENDER		CLASSIFICATION PATIENT NAME AGE	NOTIFICATION HEALTH UNIT REGION - CITY (Patient address) CASE STATUS	REGISTRATION DATE TREATMENT DURATION
New case	 4693	TB Case Mario da Silva Gourmet 38 years	HEALTH CENTER 3 Amalthea - Locality 7 Waiting validation	Jan 01, 2008
		TB Case Roosevelt Bush 13 years	TREATMENT CENTER PASIPHAE Pasiphae - Casplo On treatment	Jan 06, 2003 5 Months, 30 days

Figure 23

5. On the **Case details** page, the system shows recorded information concerning **Case data**, **Treatment**, **Exams**, **Medical consultation**, **Additional information**, and **Drugogram**. Click on the respective link to see details for these options (circled in red on figures 24–29).

**e-TB Manager** | Luiz Fernando Avelino Reciolino | MSH Demo | Settings | Exit

TB Management Information System | Cases | Medicines | Management | Administration

Transfer to another health unit | Case search results | Case details

**Case details**

**Case 38702** | Luiz Gustavo Visser | TB Case | On treatment

**Case data** | Treatment | Exams | Medical consultation | Additional information | Drugogram | Edit

**Patient data**

Registration Number:	38702	Gender:	Male
Birth date:	Feb 12, 2006	Age:	3 years
Nationality:	Native		
Mother's name:	Carolina Visser		

**Patient address at the moment of notification**

Address:	XPTO Street
----------	-------------

**Region:** Region B | **City:** City E

**Case data**

Notification health unit:	HEALTH CENTER 6		
Diagnosis date:	Mar 25, 2009	Type of diagnostic:	Confirmed
Start treatment date:	Mar 30, 2009		
Type of drug resistance:	Mono-resistance		
Site of Disease:	Pulmonary		
Type of patient:	Failure re-treatment		

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Figure 24

**e-TB Manager** | Julie Frye | MSH Demo | Settings | Exit

TB Management Information System | Cases | Medicines | Management | Administration

Close case | Case search results | Case details - TB Case

**Dixon Johnson** | 25932 | On treatment

**Validation Status:** Validated

**Treatment** | Case data | Exams | Medical consultation | Additional information | Drugogram | Print this page

**Treatment Regimen:** Category I | Options

Period	Jun 22, 2009	8 Months, 1 day	Feb 22, 2010
Treatment health units	HEALTH CENTER 7		
Regimen Phase	Intensive Phase (2 Months)	Continuous Phase (6 Months, 1 day)	
HR 75/150mg Tablet	4 (7/7)		
HRZE 75/150/400/275mg Tablet	4 (7/7)		

**Medicine intake during intensive phase**

Month/Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Prescribed (days)	Dispensed (days)			
Jun-2009																																			9	0
Jul-2009	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	31	0				
Aug-2009	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	21	0				

Figure 25

Validation Status: <b>Validated</b>									
<a href="#">Case data</a>	<a href="#">Treatment</a>	<a href="#">Exams</a>	<a href="#">Medical consultation</a>	<a href="#">Additional information</a>	<a href="#">Drugogram</a>				
<b>HIV exams</b> <a href="#">New result</a>									
Month	Date collected	Result	Laboratory	Comments	<a href="#">Delete</a>				
Prev TB	Apr 22, 2009	Negative			<a href="#">Delete</a>				
<b>Microscopy</b> <a href="#">New result</a>									
Date collected	Laboratory	Result	Comments	<a href="#">Delete</a>					
Prev TB Jun 08, 2009	LAB 1 District 1	●++		<a href="#">Delete</a>					
1# month of treatment Jul 08, 2009	LAB 1 District 1	●Negative		<a href="#">Delete</a>					
2# month of treatment Aug 06, 2009	LAB 1 District 1	●Negative		<a href="#">Delete</a>					
3# month of treatment Sep 05, 2009	LAB 1 District 1	●Negative		<a href="#">Delete</a>					
4# month of treatment Oct 04, 2009	LAB 1 District 1	●Negative		<a href="#">Delete</a>					
<b>Culture</b> <a href="#">New result</a>									
Date collected	Laboratory	Result	Comments	<a href="#">Delete</a>					
Prev TB May 14, 2009	LAB 3 City C	●++		<a href="#">Delete</a>					
1# month of treatment Jul 13, 2009	LAB 3 City C	●++		<a href="#">Delete</a>					
3# month of treatment Sep 14, 2009	LAB 3 City C	●Negative		<a href="#">Delete</a>					
<b>Drug susceptibility testing</b> <a href="#">New result</a>									
Date collected	Method applied	Laboratory	H	Z	S	Km	Cm	Cs	
Prev TB Apr 05, 2009	Hearing loss and vestibular disturbances	LAB 1	●	●	●	●	●	●	<a href="#">Delete</a>
<b>X-Ray</b> <a href="#">New result</a>									
No result found									

Figure 26

Transfer to another health unit	<a href="#">Cases</a> <a href="#">Case search results</a>
Delete	<b>Case details</b>
Close case	<b>38702</b> Luiz Gustavo Visser <span style="float: right;">TB Case On treatment</span>
	<a href="#">Case data</a> <a href="#">Treatment</a> <a href="#">Exams</a> <a href="#">Medical consultation</a> <a href="#">Additional information</a> <a href="#">Drugogram</a>
	<a href="#">New result</a> <a href="#">Edit</a> <a href="#">Delete</a>
	Date: Mar 22, 2009
	Weight: 18.0 Kg
	Height: cm
	Medical appointment: Scheduled

Figure 27

**Case details**

**13354**  
Clayton Perrin

**TB Case**  
Treatment completed

**Case data** **Treatment** **Exams** **Medical consultation** **Additional information** (highlighted with a red circle) **Drugogram**

**Comorbidities and associated factors**

- Alcohol Abuse
- Detained/Imprisoned

TB contact from focus: No

**Contacts Evaluation**  
No result found

**Adverse reactions of medicines**  
No result found

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Figure 28

**e-TB Manager**  
TB Management Information System

**Cases** **Medicines** **Management** **Administration**

**Julie Frye**

**Case details - TB Case**

**Dixon Johnson**  
25932

**On treatment**

**Validation Status:**  
**Validated**

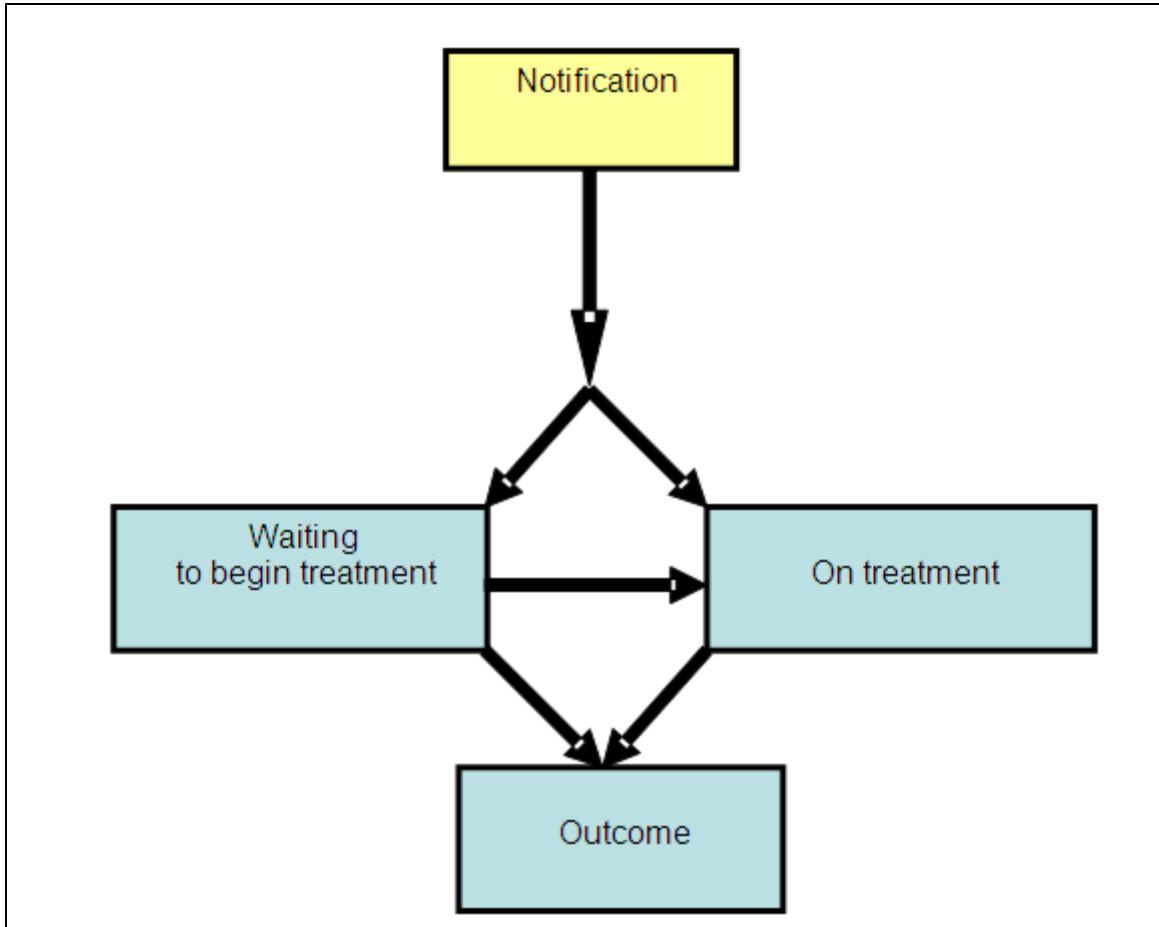
**Drugogram** (highlighted with a red circle)

Month	Date	Sample ID	Microscopy	Culture	Cm	Cs	E	H	Km	R	S	Z
Prev TB	May 14, 2009		++	++	●	●		●	●	●	●	●
1	Jul 08, 2009		Negative	++								
2	Aug 06, 2009		Negative									
3	Sep 05, 2009		Negative	Negative								
4	Oct 04, 2009		Negative									
5												
6												

Figure 29

## Case Management Workflow

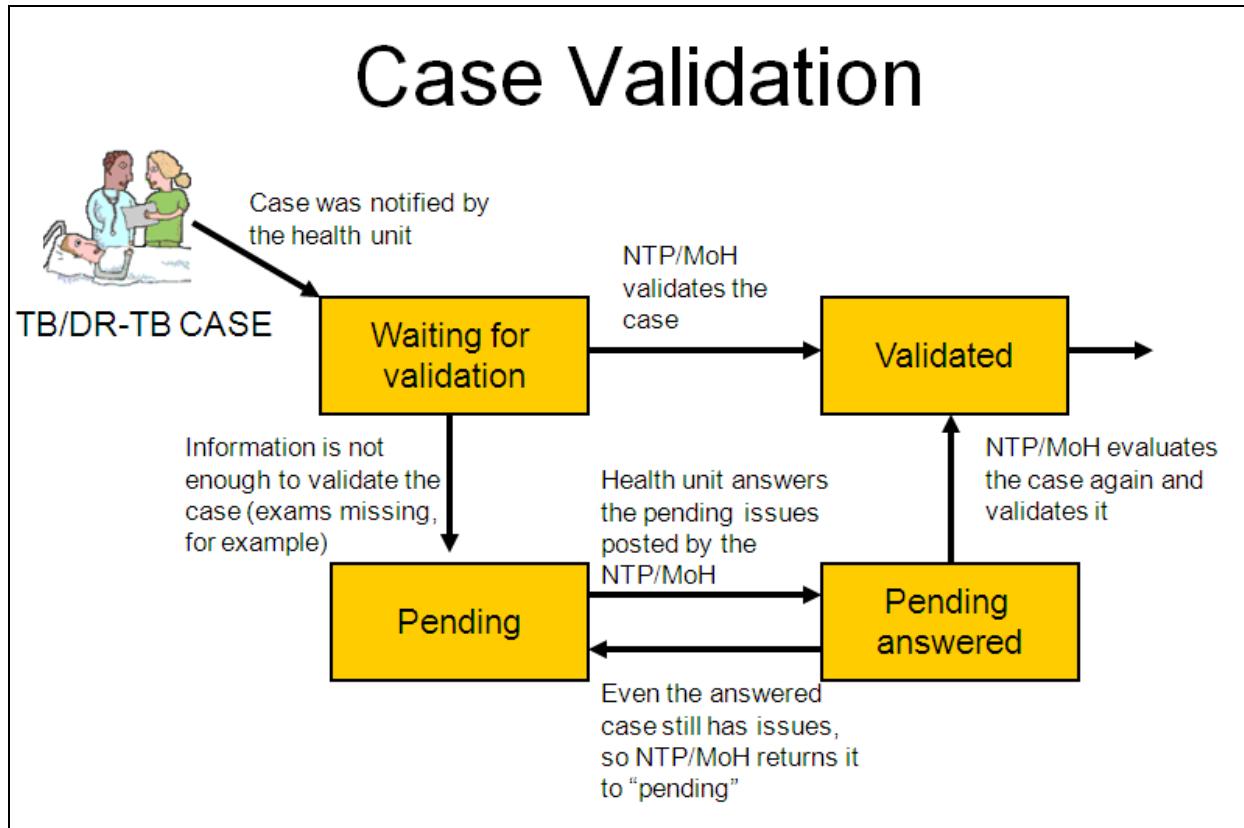
The case management workflow is composed of several steps. Figure 30 displays the status of a case.



**Figure 30. The status of a case**

At the moment you notify a new case, this case is registered in the system and assigned “Waiting to begin treatment” and “Waiting validation” statuses. Because a patient may begin treatment before all of the information can be validated in the system, the software has two workflows: the case management flow and the validation flow.

- The case management flow follows these steps: notification, awaiting treatment, on treatment, and outcome.
- The validation flow is intended to ensure that the information in the system corresponds to the diagnosis of the case. The flow is described in figure 31. This flow may be more useful for DR-TB cases.



**Figure 31. Case validation flow**

If for some reason information is still missing and the case cannot be validated, the case will move to “pending” status, with annex information describing why the case could not be validated (e.g., exam results missing at the moment of validation). As soon as the pending issues are resolved, the case can move again to “Waiting validation” status, allowing it to be validated again.

It may happen that, during analysis of the case, it is considered neither a TB nor a DR-TB case, so it can be moved to the final status of “Not TB/not DR-TB case.” The information about this case remains in the database just for registration purposes, but it will never be included in statistics or management of cases.

## How to Validate New Cases

To validate a new case, follow this procedure:

1. Enter the **Case details** page by selecting a specific **New case** at the **Case search results** page (figure 23). The system displays the case with the **Waiting validation** status. Click on the **Validate case** link (figure 32) to enter the relevant details.

Patient data	
Registration Number:	0001
Birth date:	Jul 28, 1979
Nationality:	Native
Mother's name:	Hoa

Patient address at the moment of notification	
Address:	Quy Nhon Binh Dinh
Region:	Region A
City:	City A
Village:	Village A
District:	District 1

**Figure 32**

2. A new window appears (figure 33). Check all the fields required, click on **VALIDATE CASE**, and a confirmation message appears to confirm that the new information was recorded into the system. If a field is incomplete, click **CANCEL** to return to the **Case details** page (figure 34).

**Validate case**

**New case**  
Tom Smith

TB Case  
Waiting validation

Please confirm the information below before validate the case

Date of registration: \* 01/04/2010 (mm/dd/yyyy)

Type of diagnostic: \* Suspect

Type of patient: \* New

Site of Disease: \* Pulmonary

Pulmonary forms: Unilateral Cavitary

\* Fields with this symbol beside are required

**VALIDATE CASE** **CANCEL**

Figure 33

- After validation, the case receives a unique identification number that is automatically generated by the system (red circle in figure 34), and the case status changes to **Waiting to start treatment** (blue rectangle in figure 34).

**Case details**

**38819** Thomas Smith

TB Case  
Waiting to start treatment

**Case data** **Treatment** **Exams** **Medical consultation** **Additional information** **Drugogram**

**Patient data**

Registration Number:	Gender:	Male
Birth date:	Age:	19 years

**Patient address at the moment of notification**

Address:	410 Nash St.
Region:	Region A

**Case data**

Notification health unit:	HEALTH CENTER 1
Diagnosis date:	Aug 02, 2009
Site of Disease:	Pulmonary
Type of patient:	New

Figure 34

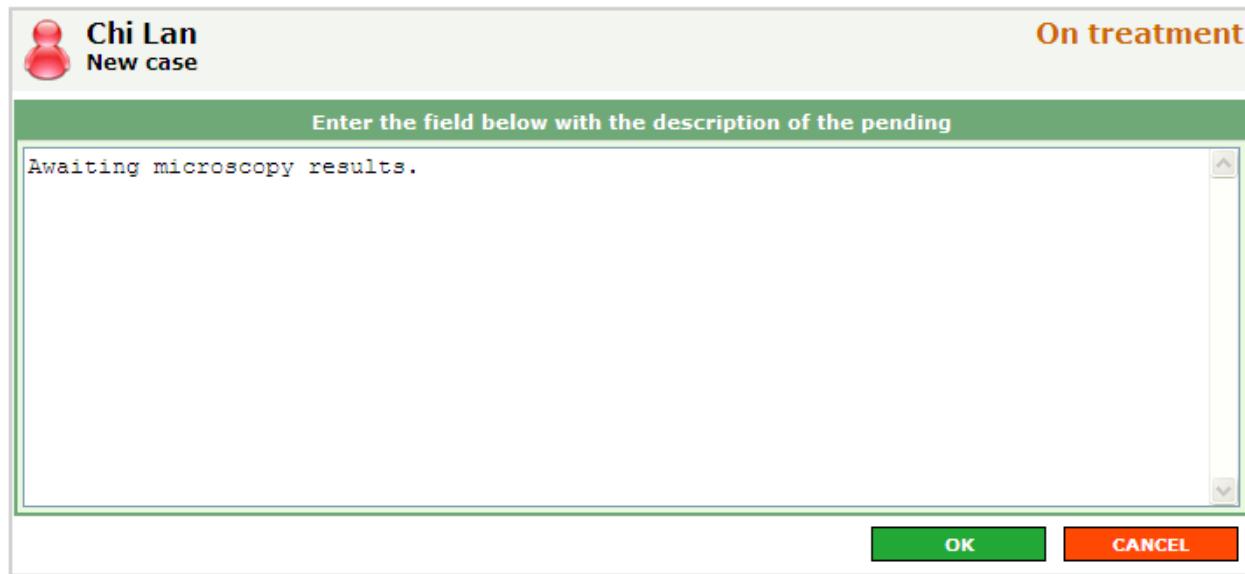
4. If an additional case is validated for a patient previously recorded in the system, this case receives the same number generated for the first validated case complete with the digit corresponding to the number of notifications that have occurred. For example, showing the **Case search results** page, the second notification for RaDonna Johnson received the digit number -2 at the end of the case number (figure 35).

The screenshot shows the e-TB Manager Case search results page. The interface includes a header with the title 'e-TB Manager' and 'Julie Frye', a navigation menu with 'Cases' selected, and a footer with 'SPS Strengthening Pharmaceutical Systems' and 'MSH Demo'. The main content area displays a table of case search results.

TB/DR-TB NUMBER	CLASSIFICATION	NOTIFICATION HEALTH UNIT	REGISTRATION DATE
GENDER	PATIENT NAME	REGION - CITY (Patient address)	TREATMENT DURATION
	AGE	CASE STATUS	VALIDATION STATUS
<a href="#">13443</a> 	TB Case RaDonna Johnson 58 years	HEALTH CENTER 4 Region A - Village C Cured	Jun 25, 2000 8 Months, 1 day Validated
<a href="#">13443-2</a> 	TB Case RaDonna Johnson 58 years	HEALTH CENTER 2 Region A - Village A Cured	Feb 22, 2001 8 Months, 1 day Validated
<a href="#">13765</a> 	TB Case Jonathan Johnson 34 years	HEALTH CENTER 2 Region A - Village A Cured	Mar 10, 2000 8 Months, 1 day Validated
<a href="#">13884</a> 	TB Case John Jordan 73 years	HEALTH CENTER 1 Region A - City A Cured	Aug 09, 2000 8 Months, 1 day Validated
<a href="#">14059</a> 	TB Case Grover Johnson 22 years	HEALTH CENTER 8 Region B - Village F Treatment completed	Jul 04, 2000 2 Months, 1 day Validated

Figure 35

5. Figure 32 shows the link to **Post Pending**. Click it to enter issues about the case (e.g., that the microscopy results have not been received). See figure 36.



**Figure 36**

6. If a case has pending issues, you may view them by clicking the **Show details** link (which is replaced by the **Hide details** link when clicked), so that they display on the screen (circled in red on figure 37). For the selected period, the system generates a table with the distribution of cases by incidence of adverse reactions (with a percentage of the total) and a related chart. The health unit can reply to the pending issue by clicking **Answer Pending** (circled in blue on figure 37). The validation status changes to **Pending answered** when a reply to the issue has been posted (circled in red on figure 37). At this point, the case can be validated or new issues can be entered. The program tracks the case's status.

**Chi Lan**  
New case

Validation Status: **Pending** Hide details Post pending

**ANSWER PENDING**

Julie Frye  
Nov 4, 2010 2:58:08 AM

Awaiting microscopy results.

NATIONAL WAREHOUSE  
Region A City A

Case data Treatment Exams Medical consultation Additional information Drugogram

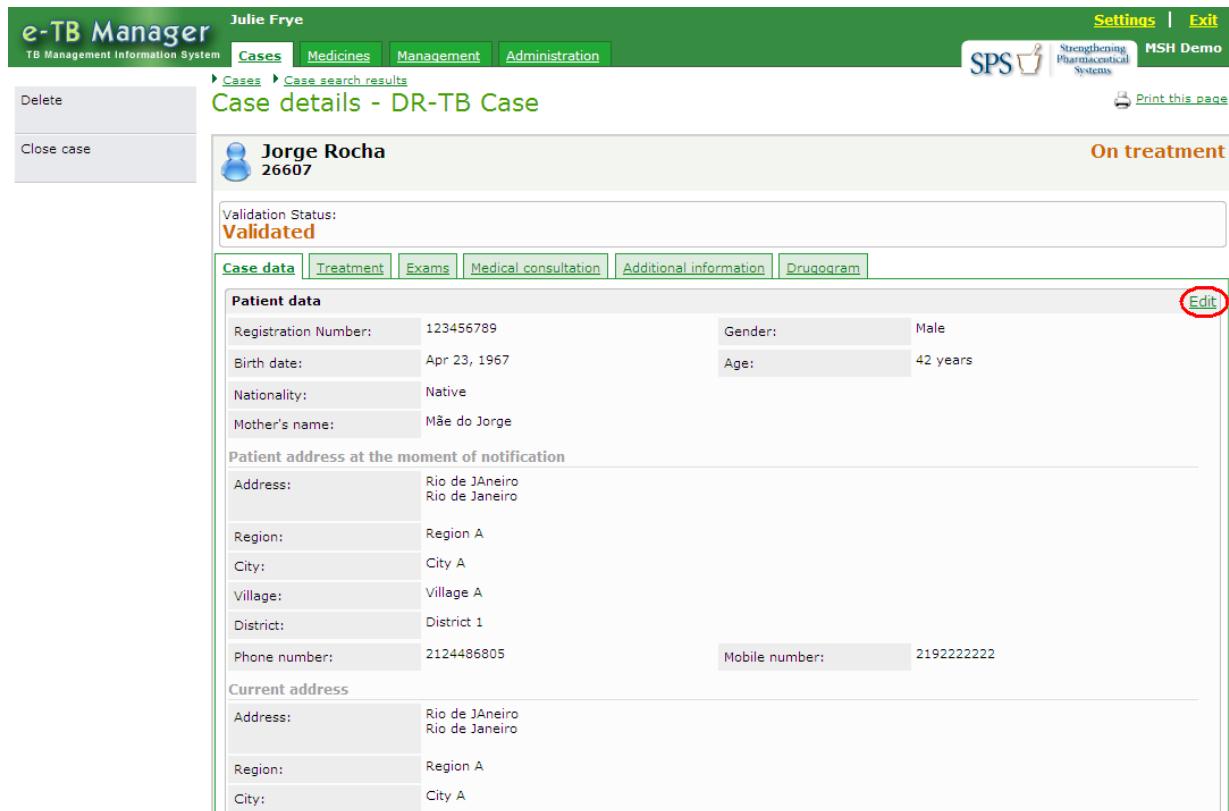
Patient data		Edit	
Registration Number:	0001	Gender:	Female
Birth date:	Jul 28, 1979	Age:	30 years
Nationality:	Native		
Mother's name:	Hoa		

Figure 37

## How to Change Case Data

Once you have a registered case, it is common to want the data to be updated (e.g., data that were not available at the moment of the notification). To do so, follow these instructions:

1. Click on the **Edit** link on the **Case details** page (circled in red on figure 38).



The screenshot shows the 'e-TB Manager TB Management Information System' interface. The top navigation bar includes links for Julie Frye, Settings, Exit, SPS Strengthening Pharmaceutical Systems, and MSH Demo. The main title is 'Case details - DR-TB Case'. On the left, there are buttons for Delete and Close case. The main content area displays a patient record for Jorge Rocha, ID 26607. The validation status is 'Validated'. Below this, there are tabs for Case data, Treatment, Exams, Medical consultation, Additional information, and Drugogram. The 'Patient data' section contains fields for Registration Number (123456789), Gender (Male), Birth date (Apr 23, 1967), Age (42 years), Nationality (Native), and Mother's name (Mãe do Jorge). The 'Patient address at the moment of notification' section lists Address (Rio de Janeiro, Rio de Janeiro), Region (Region A), City (City A), Village (Village A), and District (District 1). The 'Current address' section also lists the same information. An 'Edit' link is located in the top right corner of the Patient data section, which is highlighted with a red circle.

Figure 38

2. On the **Edit case** page, you can change any recorded information and complete or insert new information in specific fields (figure 39). Click **OK** to save the changes you made or **CANCEL** to undo them.

**Patient data**

Patient name: \* Thomas Smith   Middle name:   Last name:

Registration Number:   Gender: \* Male

Birth date:   Age: \* 19

Mother's name:

Nationality:

**Patient address at the moment of notification**

Address: \* 410 Nash St.

Region: \* Region A

City:

Zip code:

Current address is different from the notification address?: No

Phone number:   Mobile number:

**Case data**

Notification health unit

Region: \* Region A

Name: \* HEALTH CENTER 1

Registration date: \* 06/09/2009   (mm/dd/yyyy)

Diagnosis date: \* 08/02/2009   (mm/dd/yyyy)

Type of diagnostic: \* Confirmed

Type of patient: \* New

Site of Disease: \* Pulmonary

Form: Unilateral Infiltrate

**Previous TB treatments**

Number of previous TB treatments: 0

\* Value is required

**OK**   **CANCEL**

Figure 39

### Box 2. Important Note

On all **Case details** pages, after editing some information and clicking **OK**, a confirmation message appears to confirm that the new information was recorded into the system. If, however, after clicking **OK**, you remain at the edit page, check the message displayed by the system. It will ask you for more information that perhaps you forgot to enter into a required field or

**Successfully updated**

indicate that you entered invalid data. Modify the data as needed, check it, and click **OK** once again to save the changes you made.

### How to Start a Treatment Regimen

Normally, only validated cases (i.e., displayed with the status **Waiting to start treatment**) will be able to start treatment. If you have configured e-TB Manager to allow it, unvalidated cases may also begin treatment.

To start the treatment of a case, follow this procedure:

1. Go to the **Case details** page for that case, click the **Treatment** tab (red circle in figure 40), and in the window displayed, click **START TREATMENT** (blue rectangle in figure 40).

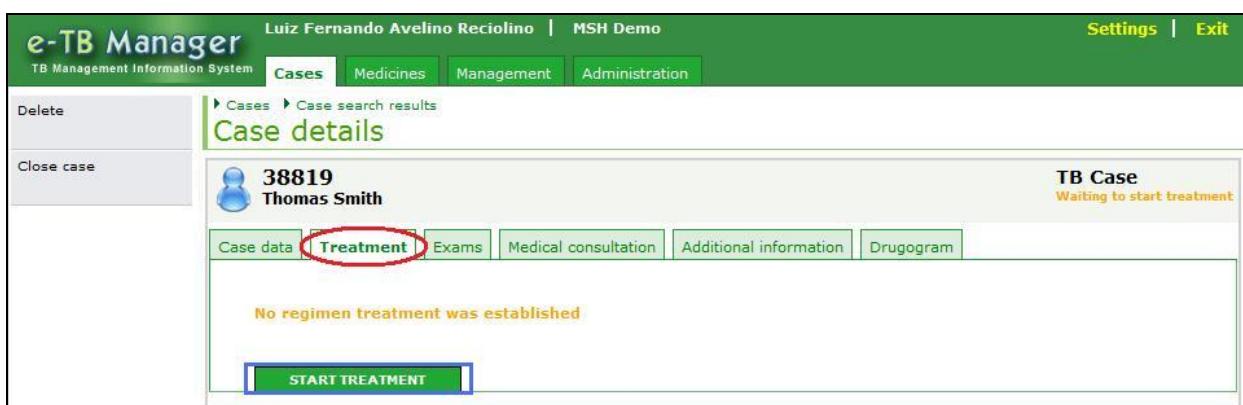


Figure 40

2. A window will be displayed asking for the type of treatment regimen—a **Standardized regimen** or an **Individualized regimen** (figure 41).



**Figure 41**

3. If you choose **Standardized regimen**, a form with information about the regimen will be displayed (figure 42). For an **Individualized regimen**, skip to step 6.

**Figure 42**

4. Select the **Region** by clicking the down arrow and selecting from the drop-down menu. After a region is selected, the **Name** field will display. Using the down arrow, select the name of the health unit where the case will be treated. Next, enter the date the treatment started (**Start treatment date**). Using the down arrow, select the correct **Standardized regimen** (only those regimens already set in the administration module will be available in the drop-down menu for your selection). Use the down arrows to select the appropriate dose unit, frequency, and medicine source for each medicine in the regimen.
5. Click **OK** to confirm the operation. The case will move to the **On treatment** status showing the medicines prescribed according to the regimen selected. Click on **CANCEL** to undo it (figure 42).

6. If you choose **Individualized regimen**, the system will display a page to enter the **Region** and then the **Name of treatment health unit** as well as a link to define the initial individualized regimen for the case (figure 43Error! Reference source not found.).

Individualized regimen

The screenshot shows a dialog box titled 'Individualized regimen'. At the top right are icons for zooming, minimizing, maximizing, and closing the window, along with a 'Print this page' link. The main area displays the patient's name, 'Bernard Madison', and ID, '25879'. To the right, the status 'Waiting to start treatment' is shown in orange. Below this, the 'Diagnosis date' is listed as 'Dec 03, 2009'. A 'Health Unit' section contains a 'Region:' dropdown menu and a 'Start treatment date:' field with a calendar icon. Two sections for medication selection are shown: 'Intensive Phase' and 'Continuous Phase', both currently displaying 'No medicine selected'. Each phase has an 'Add Medicine...' link. At the bottom right are 'OK' and 'CANCEL' buttons.

Figure 43

7. Select the health unit by first selecting its **Region**. The system will display a list of health units of the region selected in a drop-down menu, so you just have to pick the one you want.
8. Enter the **Start treatment date** of the case.

9. For each phase (**Intensive** and **Continuous**), click the link **Add Medicine...** and select the medicines prescribed in the phase, clicking on the checkbox to the left of the medicine name; click on **OK** to confirm the operation, as displayed in figure 44 or **CANCEL** to undo it.

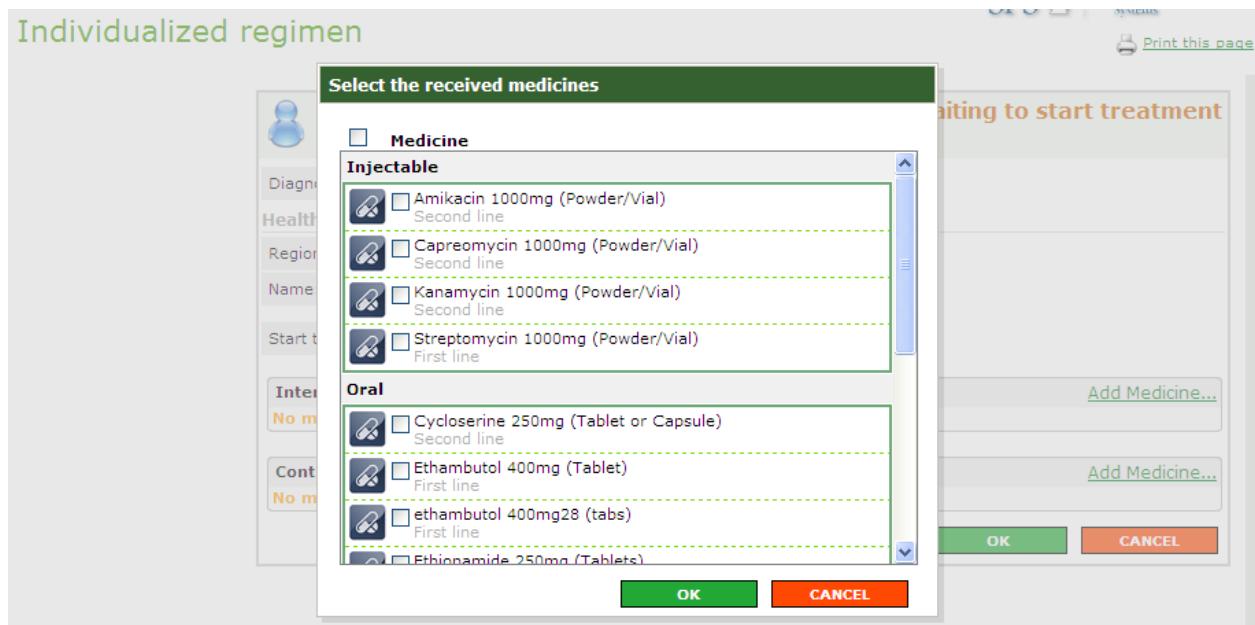


Figure 44

10. For each medicine selected, enter the number of **Months of prescription**, the **Dose unit**, the **Frequency**, and the **Medicine Source**, as shown in figure 45.


**Bernard Madison**  
**25879**

Waiting to start treatment

---

Diagnosis date:
Dec 03, 2009

Health Unit

Region:\*
Region A

Name:\*
HEALTH CENTER 1

Start treatment date:\*
11/03/2010
(mm/dd/yyyy)

<b>Intensive Phase</b>					<a href="#">Add Medicine...</a>
Medicine	Months of prescription	Dose unit	Frequency	Medicine Source	
 Capreomycin 1000mg (Powder/Vial)	3	-	7/7	Green Light Committee	<a href="#">Add Medicine...</a>
 Cycloserine 250mg (Tablet or Capsule)	3	-	7/7	Green Light Committee	<a href="#">Add Medicine...</a>
 Ethambutol 400mg (Tablet)	3	-	7/7	Global Drug Facility	<a href="#">Add Medicine...</a>

<b>Continuous Phase</b>					<a href="#">Add Medicine...</a>
Medicine	Months of prescription	Dose unit	Frequency	Medicine Source	
 Capreomycin 1000mg (Powder/Vial)	6	-	7/7	Green Light Committee	<a href="#">Add Medicine...</a>
 Cycloserine 250mg (Tablet or Capsule)	6	-	7/7	Green Light Committee	<a href="#">Add Medicine...</a>
 Ethambutol 400mg (Tablet)	6	-	7/7	Global Drug Facility	<a href="#">Add Medicine...</a>

OK
CANCEL

Figure 45

11. Once you enter all medicines and their data, click on **OK** to start an individualized regimen for this case. The system will display the treatment regimen as shown in figure 46.

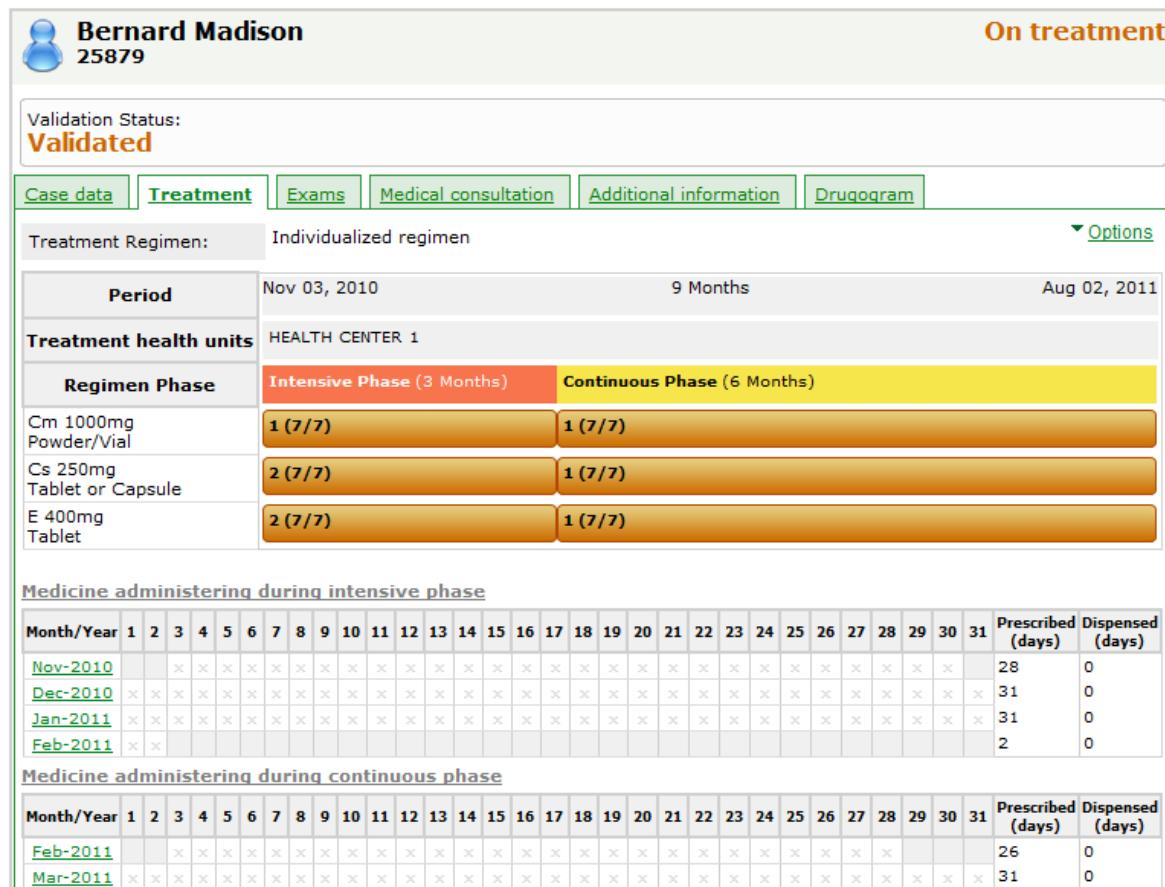


Figure 46

12. To get more information about a prescription, click on the colored bar next to the medicine's name, and the system will display a pop-up window about the prescription (figure 47).

The screenshot shows a medical software interface for a patient named Bernard Madison (ID 25879). The top right corner displays the status "On treatment". The main menu tabs include Case data, Treatment (which is selected), Exams, Medical consultation, Additional information, and Drugogram.

**Treatment Regimen:**

Period	Cm 1000mg Nov 03, 2010	Feb 02, 2011	Options
Treatment health units	3 Months	3 Months	Aug 02, 2011
Regimen Phase	Phase (6 Months)		
Cm 1000mg Powder/Vial	1 (7/7)	1 (7/7)	
Cs 250mg Tablet or Capsule	2 (7/7)	1 (7/7)	
E 400mg Tablet	2 (7/7)	1 (7/7)	

**Medicine administering during intensive phase**

Month/Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Prescribed (days)	Dispensed (days)
Nov-2010	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	28	0		
Dec-2010	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	31	0		
Jan-2011	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	31	0		
Feb-2011	x	x																														2	0

**Medicine administering during continuous phase**

Month/Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Prescribed (days)	Dispensed (days)
Feb-2011	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	26	0		
Mar-2011	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	21	0		

Figure 47

## How to Modify a Treatment Regimen

To modify a treatment regimen, follow this procedure:

1. Click on the **Options** link at the right side of the treatment panel (figure 47), and select **Edit**. The system will display a page to change the treatment regimen, as shown in figure 48.

Treatment regimens

The screenshot shows the 'Treatment regimens' page for a patient named Bernard Madison (ID 25879). The status is 'On treatment'. At the top, there are links for 'Change period...' and 'Add Medicine...'. Below that, it says 'Treatment Regimen:' and 'Individualized regimen' with a 'Change regimen...' link. Under 'Treatment health unit', 'Region:' is set to 'Region A' and 'Name:' is 'HEALTH CENTER 1'. The main area displays a grid of medication doses across three phases: Intensive Phase (3 Months) and Continuous Phase (6 Months). The grid includes rows for Cm 1000mg Powder/Vial, Cs 250mg Tablet or Capsule, and E 400mg Tablet. Each row shows a start date, duration, and end date. At the bottom are 'SAVE' and 'CANCEL' buttons.

Figure 48

2. To change the treatment period (**Intensive Phase** and **Continuous Phase**), click on the link **Change period...** located at the upper left side of the page. The system will display the form shown in figure 49.

The screenshot shows the 'Treatment period' dialog box. It has two sections: 'Intensive Phase' and 'Continuous Phase'. In the 'Intensive Phase' section, 'Start date:' is set to 11/03/2010. In the 'Continuous Phase' section, 'Start date:' is 02/03/2011 and 'Finish date:' is 08/02/2011. At the bottom are 'OK' and 'CANCEL' buttons.

Figure 49

3. Change the dates of the treatment phases. When finished, confirm the operation by clicking **OK** or click **CANCEL** to undo. The system will update the treatment regimen based on the new periods informed.
4. To include a new medicine, click on **Add medicine...** located at the upper right side of the panel (figure 48). The system will display the form shown in figure 50.

The screenshot shows a dialog box titled "Prescribed medicine". It contains the following fields:

- Medicine: \* dropdown menu showing "-"
- Start date: \* date input field with a calendar icon and placeholder "(mm/dd/yyyy)"
- Finish date: \* date input field with a calendar icon and placeholder "(mm/dd/yyyy)"
- Dose unit: \* dropdown menu showing "-"
- Frequency: \* dropdown menu showing "-"
- Medicine Source: \* dropdown menu showing "-"
- Comments: text area for entering comments

At the bottom are two buttons: a green "OK" button and an orange "CANCEL" button.

**Figure 50**

5. Select the **Medicine**, enter the **Start date** and **Finish date** of the prescription period, daily **Dose unit**, weekly **Frequency**, and the **Medicine Source**. Optionally you may enter **Comments** about this prescription. When done, click on **OK**, and the medicine will be included in the treatment panel, or click **CANCEL** to undo.

6. To change an already prescribed medicine, click on the colored bar next to the medicine name (figure 48). A pop-up window will be displayed with information about the prescription (figure 51).

The screenshot shows a treatment regimen for patient Bernard Madison. The regimen consists of several phases, each with a different color-coded background. The first phase for E 400mg has a yellow background and is currently selected. It displays the following details:

- Medicine:** E 400mg
- Start Date:** Nov 03, 2010
- End Date:** Feb 02, 2011
- Dose unit:** 2 (7/7)
- Frequency:** 7/7
- Medicine Source:** GDF

Below the table, there are two buttons: **SAVE** and **CANCEL**.

**Figure 51**

7. In the pop-up window, you have two commands available: **Edit...** and **Delete** (figure 51). Click on the **Edit...** link to change information about the prescription. The system will display a form with all prescription information (figure 52).

This is a dialog box titled "Prescribed medicine". It contains the following fields:

- Medicine:** Ethambutol 400mg (Tablet)
- Start date:** 11/03/2010
- Finish date:** 02/02/2011
- Dose unit:** 2
- Frequency:** 7/7
- Medicine Source:** GDF - Global Drug Facility
- Comments:** (empty text area)

At the bottom, there are two buttons: **OK** and **CANCEL**.

**Figure 52**

8. Change the prescription data, and when you're finished, click on **OK** (or **Cancel** to undo). The system will update the changes to the prescription panel.
9. To remove a prescription, click on the prescription bar, and click on the **Delete** command (figure 51). The system will ask you to confirm the operation, and once confirmed, the prescription will be removed from the treatment panel.
10. If the start or finish date is modified, and the field **Preserve previous period for this medicine** is checked (figure 52), the past prescription that is outside of the new period will be preserved.
11. To confirm all changes you made to the prescription, click on **OK** at the bottom of the treatment panel (figure 52). If you want to cancel all changes you did, simply click on **CANCEL**.

## How to Register Medicine Dispensing

Only cases on treatment can register medicine dispensing. Follow this procedure:

- At the **Case details** page (figure 38), click the **Treatment** tab (red circle in figure 53), and click on the link for the month and year for which you want to register dispensing (blue circle in figure 53).

The screenshot shows the 'Case details' page for a case named 'Gene Noir' (ID 19696-3). The status is 'On treatment'. The 'Treatment' tab is highlighted with a red circle. Below it, a calendar shows months from Feb-2008 to May-2008. The 'Feb-2008' link is highlighted with a blue circle. The main table displays treatment regimen details and medicine administration counts for various drugs over a period of 1 Year, 9 Months, 1 day, from Feb 17, 2008, to Nov 17, 2009.

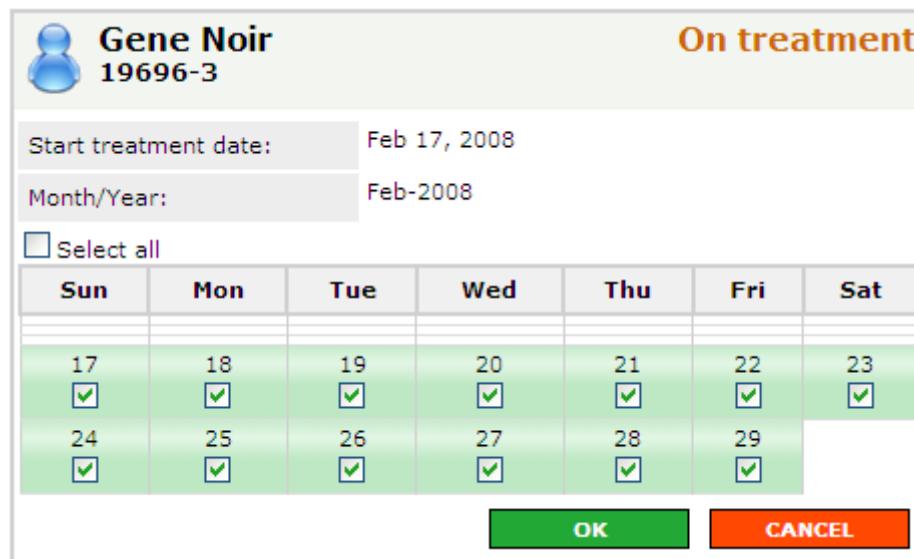
Period	Feb 17, 2008	1 Year, 9 Months, 1 day	Nov 17, 2009
Treatment health units	HEALTH CENTER 6		
Treatment Regimen	Category IV - 3	Category IV - 3	
Regimen Phase	Intensive Phase		
Cs 250mg Tablet or Capsule	3 (7/7)	3 (7/7)	
E 400mg Tablet	3 (7/7)	3 (7/7)	
Lfx 500mg Tablet	2 (7/7)	2 (7/7)	
Z 500mg Tablet	3 (7/7)		
S 1000mg Powder/Vial	1 (5/7)		

**Medicine administering during intensive phase**

Month/Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Prescribed (days)	Dispensed (days)
Feb-2008	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	13	0			
Mar-2008	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	31	0			
Apr-2008	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	30	0			
May-2008	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	31	0			

Figure 53

2. In the window that appears, mark the box or boxes according to daily medicine dispensing (figure 54); click **OK** to confirm or **CANCEL** to undo it.



**Figure 54**

- After dispensing, the system displays in the rows the days marked for dispensing (dark gray) and, in the last columns, the number of days prescribed and number of days dispensed (figure 55).

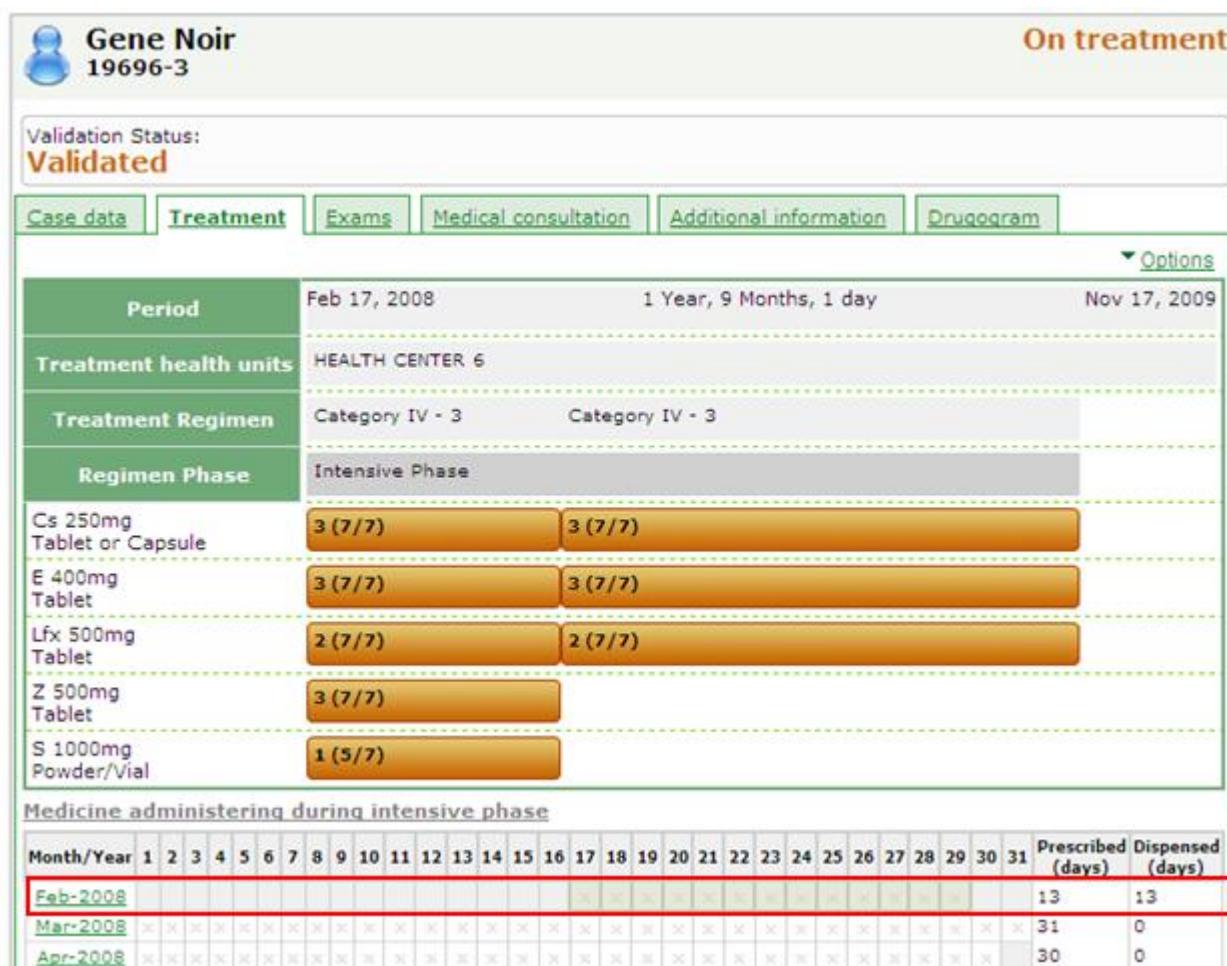


Figure 55

### How to Update Exam Results

By clicking on the **Exams** tab of the **Case details** page (figure 38), you will find the results of the selected case for the following five laboratory exams: **HIV exams**, **Microscopy**, **Culture**, **Drug susceptibility testing**, and **X-Ray**. Follow the instructions below on how to register laboratory exam results:

- For the correct laboratory exam, click on the link **New result** (circled in red on figure 56) to insert a new exam result, or click on the links below **Month** (circled in red on figure 56) to change registered information. The months assigned as **Prev TB** (circled in red on figure 54) means the exam was performed before the diagnosis date. Click on **OK** to confirm or **CANCEL** to undo it, for each exam you add or change (figures 57–61).

**HIV exams**

Month	Date collected	Result	Laboratory	Comments	
<a href="#">Prev TB</a>	Nov 25, 2007	Negative			<a href="#">New result</a> <a href="#">Delete</a>

**Microscopy**

Date collected	Laboratory	Result	Comments	
Prev TB Jan 31, 2008	LAB 2 City B	Scanty		<a href="#">Delete</a>
1# month of treatment Mar 01, 2008	LAB 2 City B	Negative		<a href="#">Delete</a>
2# month of treatment Apr 01, 2008	LAB 2 City B	Negative		<a href="#">Delete</a>
3# month of treatment May 01, 2008	LAB 2 City B	Negative		<a href="#">Delete</a>

Figure 56

**HIV exams**

**6073-2**  
Garcia Smith DR-TB Case  
On treatment

Date collected:*	<input type="text"/> (mm/dd/yyyy)
Result:*	<input type="text"/>
Laboratory:*	<input type="text"/>
Comments:	<input type="text"/>

\* Value is required **OK** **CANCEL**

Figure 57

## Microscopy

 Print this page

 Gene Noir  
19696-3

**On treatment**

Collected sample identification

Date collected: \*   (mm/dd/yyyy)

Sample ID number:

Laboratory: \*  -  - 

Exam result information

Date of release:   (mm/dd/yyyy)

Result: \*  - 

Comments:

\* Value is required

**OK** **CANCEL**

Figure 58

**Culture**

 26207-2  
Jorge Smith

**TB Case**  
**On treatment**

Collected sample identification

Date collected: \*   (mm/dd/yyyy)

Lab ID number:

Laboratory: \*  - 

Exam result information

Date of release:   (mm/dd/yyyy)

Result: \*  - 

Report number of colonies:  - 

Method:  - 

Comments:

\* Value is required

**Select available sample**

**OK** **CANCEL**

Figure 59

**Drug susceptibility testing**

<b>26207-2</b>	<b>TB Case</b>																																									
<b>Jorge Smith</b>	<b>On treatment</b>																																									
<b>Collected sample identification</b>																																										
Date collected: <sup>*</sup>	(mm/dd/yyyy)	<a href="#">Select available sample</a>																																								
Lab ID number:																																										
Laboratory: <sup>*</sup>	-	<input type="button" value=""/>																																								
<b>Exam result information</b>																																										
Date of release:	(mm/dd/yyyy)	<input type="button" value=""/>																																								
Method:	-	<input type="button" value=""/>																																								
Comments:																																										
<table border="1"> <thead> <tr> <th>Medicine</th> <th>Result</th> </tr> </thead> <tbody> <tr><td>Isoniazid (H)</td><td>-</td></tr> <tr><td>Rifampicin (R)</td><td>-</td></tr> <tr><td>Ethambutol (E)</td><td>-</td></tr> <tr><td>Pyrazinamide (Z)</td><td>-</td></tr> <tr><td>Streptomycin (S)</td><td>-</td></tr> <tr><td>Rifabutin (Rfb)</td><td>-</td></tr> <tr><td>Kanamycin (Km)</td><td>-</td></tr> <tr><td>Amikacin (Am)</td><td>-</td></tr> <tr><td>Capreomycin (Cm)</td><td>-</td></tr> <tr><td>Levofloxacin (Lfx)</td><td>-</td></tr> <tr><td>Moxifloxacin (Mfx)</td><td>-</td></tr> <tr><td>Ofloxacin (Ofx)</td><td>-</td></tr> <tr><td>Ciprofloxacin (Cfx)</td><td>-</td></tr> <tr><td>Gatifloxacin (Gati)</td><td>-</td></tr> <tr><td>Ethionamide (Eto)</td><td>-</td></tr> <tr><td>Protonamide (Pto)</td><td>-</td></tr> <tr><td>Cycloserine (Cs)</td><td>-</td></tr> <tr><td>Terizidone (Trd)</td><td>-</td></tr> <tr><td>P-Aminosalicylic Acid (PAS)</td><td>-</td></tr> </tbody> </table>			Medicine	Result	Isoniazid (H)	-	Rifampicin (R)	-	Ethambutol (E)	-	Pyrazinamide (Z)	-	Streptomycin (S)	-	Rifabutin (Rfb)	-	Kanamycin (Km)	-	Amikacin (Am)	-	Capreomycin (Cm)	-	Levofloxacin (Lfx)	-	Moxifloxacin (Mfx)	-	Ofloxacin (Ofx)	-	Ciprofloxacin (Cfx)	-	Gatifloxacin (Gati)	-	Ethionamide (Eto)	-	Protonamide (Pto)	-	Cycloserine (Cs)	-	Terizidone (Trd)	-	P-Aminosalicylic Acid (PAS)	-
Medicine	Result																																									
Isoniazid (H)	-																																									
Rifampicin (R)	-																																									
Ethambutol (E)	-																																									
Pyrazinamide (Z)	-																																									
Streptomycin (S)	-																																									
Rifabutin (Rfb)	-																																									
Kanamycin (Km)	-																																									
Amikacin (Am)	-																																									
Capreomycin (Cm)	-																																									
Levofloxacin (Lfx)	-																																									
Moxifloxacin (Mfx)	-																																									
Ofloxacin (Ofx)	-																																									
Ciprofloxacin (Cfx)	-																																									
Gatifloxacin (Gati)	-																																									
Ethionamide (Eto)	-																																									
Protonamide (Pto)	-																																									
Cycloserine (Cs)	-																																									
Terizidone (Trd)	-																																									
P-Aminosalicylic Acid (PAS)	-																																									
<small>* Value is required</small>																																										
<input type="button" value="OK"/>		<input type="button" value="CANCEL"/>																																								

**Figure 60**

**X-Ray**

**TB Case  
On treatment**

Date: \*  (mm/dd/yyyy)

X-Ray Presentation: \*

Evolution: \*

Comments:

\* Value is required

OK CANCEL

Figure 61

- Click on **Delete** (circled in red on figure 56) to exclude a specific exam. In the confirmation window displayed, click on **OK** button to confirm or **CANCEL** to undo it.

### How to Change Medical Consultation Data

Follow this procedure to change the medical consultation data:

- On the **Case details** page, click on the **Medical consultation** tab and then on the link for **New result** (black arrow in figure 62) to insert new information, or click on **Edit** (red circle in figure 62) to change registered information in specific fields (figure 62). Click the **OK** button to confirm or **CANCEL** to undo it (figure 63).

**Case details**

**DR-TB Case  
On treatment**

**New result**

**Edit** **Delete**

Date:	Dec 02, 2006
Weight:	71.0 Kg
Height:	0.0 cm
Medical appointment:	Scheduled

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Figure 62

**Medical consultation**

**6073-2**  
Garcia Smith

Date: \* 12/02/2006 (mm/dd/yyyy)

Medical appointment: \* Scheduled

Weight: 71.0 Kg

Height: 0.0 cm

Patient is taking the prescribed medicines correctly? \* Yes

Professional responsible for patient examination: Dr. Benjamin Bastos

Comments:

\* Value is required

OK CANCEL

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Figure 63

- Click on **Delete** (blue circle in figure 62) to exclude related information concerning a medical consultation. In the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it (figure 64).

Transfer to another health unit

Cases Case search results

**Case details**

**6073-2**  
Garcia Smith

DR-TB Case  
On treatment

Case data Treatment Exams Medical consultation

Date: Dec 02, 2006

Weight: 71.0 Kg

Height: 0.0 cm

Medical appointment: Scheduled

Windows Internet Explorer

Confirm delete?

OK Cancelar

New result Edit Delete

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Figure 64

## How to Change Additional Information Data

At the **Case details** page (figure 65), click on the **Additional information** tab and then the **Edit** links (blue circles in figure 65) to select the boxes to insert new information or to change registered information regarding **Comorbidities and associated factors** (figure 66), **Contacts evaluation** (figure 67), and **Adverse reactions of medicines** (figure 68).

The screenshot shows the 'Case details' page for patient 'Reciolino' (ID 38818). The 'Validation Status' is 'Validated'. The 'On treatment' status is indicated. The 'Additional information' tab is selected, highlighted with a red circle. Three 'Edit' links are circled in blue: one in the 'Comorbidities and associated factors' section, one in the 'Contacts Evaluation' section, and one in the 'Adverse Reactions to Medicines' section.

Figure 65

The screenshot shows the 'Comorbidities and associated factors' edit screen for patient 'Reciolino' (ID 38818). The 'DR-TB Case' status is 'On treatment'. The list of conditions includes: AIDS (checked), Alcohol Abuse (unchecked), Cancer Disease (checked), Detained/Imprisoned (unchecked), Diabetes Mellitus (unchecked), Health Care Worker (unchecked), Homeless (checked), Ilicit Drug Use (unchecked), Liver Dysfunction (unchecked), Organ transplant (unchecked), Prolonged cortisone therapy (unchecked), Refugee/Immigrant (unchecked), Renal Dysfunction (unchecked), and Smoking (checked). A 'TB contact from focus:' field is present at the bottom left, and 'OK' and 'CANCEL' buttons are at the bottom right.

Figure 66

## Contacts Evaluation

**DR-TB Case**  
On treatment

Contact's name:*	<input type="text"/>
Gender:	<input type="button" value="-"/>
Age:	<input type="text"/>
Type of contact:	<input type="button" value="-"/>
Examined:	<input type="button" value="No"/>
Conduct:	<input type="button" value="-"/>

\* Value is required

**OK** **CANCEL**

Figure 67

**Adverse Reactions to Medicines**

**On treatment**

Adverse effect	Presented, to...	Month of treatment	Resolved?
<input type="checkbox"/> Seizures			
<input type="checkbox"/> Peripheral Neuropathy			
<input type="checkbox"/> Hearing loss and vestibular disturbances			
<input type="checkbox"/> Mental disorder			
<input type="checkbox"/> Hypothyroidism			
<input type="checkbox"/> Other			
<input type="checkbox"/> Gastro-intestinal intolerance			
<input type="checkbox"/> Headache			
<input type="checkbox"/> Visual disturbances			
<input type="checkbox"/> Insomnia			
<input type="checkbox"/> Joint pain			
<input checked="" type="checkbox"/> Renal insufficiency	<input type="button" value="-"/>	<input type="button" value="1"/>	<input type="button" value="Yes"/>
<input type="checkbox"/> Dizziness			

**OK** **CANCEL**

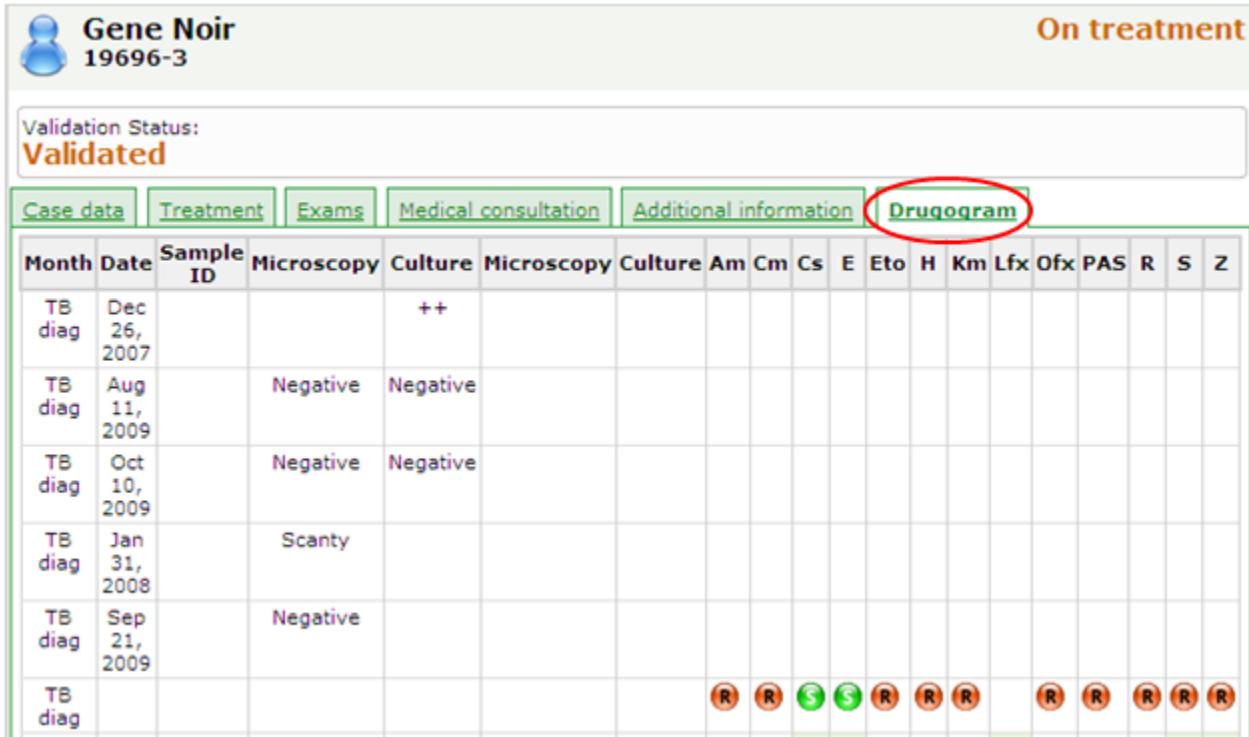
Figure 68

## How to Read the Drugogram

Click on the **Drugogram** tab (red circle in figure 69) to show a window that displays all susceptibility tests done during patient treatment and the respective test results. This page is for information only, and no data can be entered or changed at this window.

The medicines are listed in abbreviated form across the top of the screen. They are selected and defined in the **Administration** tab under the **Medicine Generic Names** option (see figure 197.) The test results are shown in circles below the medicines, as follows:

- C: contaminated
- R: resistant
- S: susceptible



The screenshot shows a patient profile for "Gene Noir" (ID 19696-3) marked as "On treatment". The "Drugogram" tab is highlighted with a red circle. Below it is a table of drug susceptibility test results over time.

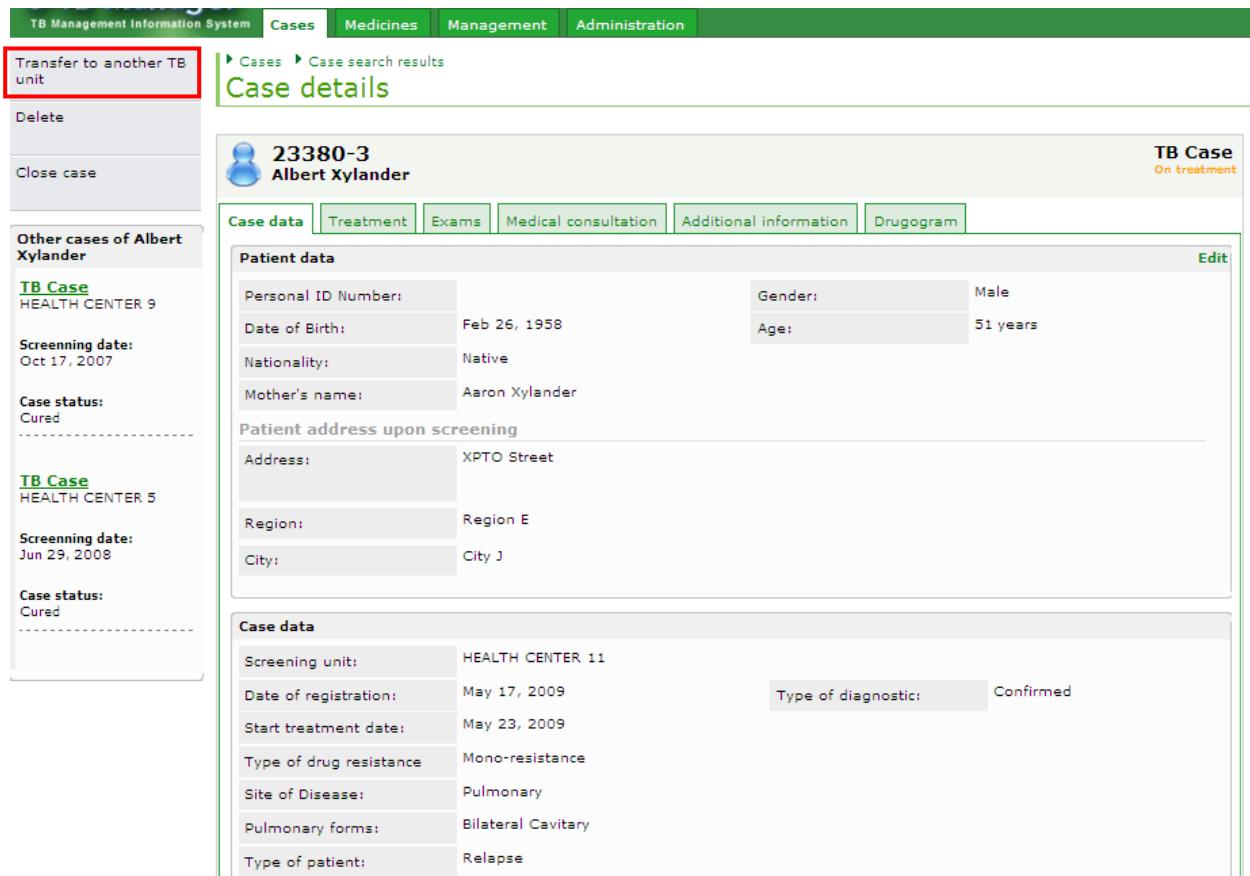
Month	Date	Sample ID	Microscopy	Culture	Microscopy	Culture	Am	Cm	Cs	E	Eto	H	Km	Lfx	Ofx	PAS	R	S	Z
TB diag	Dec 26, 2007			++															
TB diag	Aug 11, 2009		Negative	Negative															
TB diag	Oct 10, 2009		Negative	Negative															
TB diag	Jan 31, 2008		Scanty																
TB diag	Sep 21, 2009		Negative																
TB diag							<span style="color: orange;">R</span>	<span style="color: orange;">R</span>	<span style="color: green;">S</span>	<span style="color: green;">S</span>	<span style="color: orange;">R</span>								

Figure 69

## How to Transfer a Case to Another TB Unit

To transfer a case to a different TB unit, follow this procedure:

1. Go to the **Case details** page, and click on **Transfer to another TB unit** (highlighted with red rectangle in figure 70) to record the patient's transfer to a different health unit registered in the system to continue the treatment.



The screenshot shows the 'Case details' page of the TB Management Information System. The top navigation bar includes 'TB Management Information System', 'Cases' (which is selected), 'Medicines', 'Management', and 'Administration'. The left sidebar lists 'Other cases of Albert Xylander' with two entries: 'TB Case HEALTH CENTER 9' (Screening date: Oct 17, 2007, Case status: Cured) and 'TB Case HEALTH CENTER 5' (Screening date: Jun 29, 2008, Case status: Cured). The main content area displays case details for patient 23380-3, Albert Xylander, with a 'TB Case On treatment' status. The 'Patient data' section shows personal information: Personal ID Number (23380-3), Date of Birth (Feb 26, 1958), Gender (Male), Nationality (Native), Mother's name (Aaron Xylander), Age (51 years). The 'Patient address upon screening' section shows Address (XPTO Street), Region (Region E), and City (City J). The 'Case data' section includes fields for Screening unit (HEALTH CENTER 11), Date of registration (May 17, 2009), Start treatment date (May 23, 2009), Type of drug resistance (Mono-resistance), Site of Disease (Pulmonary), Pulmonary forms (Bilateral Cavitary), and Type of patient (Relapse). A 'Type of diagnostic' field is set to 'Confirmed'. The 'Edit' link is located at the top right of the 'Patient data' section.

Figure 70

2. Enter the required information in specific fields, and click **OK** to confirm or **CANCEL** to undo it (figure 71).

### Transfer to another TB unit

TB Unit	Start date	Finish date
HEALTH CENTER 11	May 23, 2009	Mar 23, 2010

**Figure 71**

3. A new status, **Transferring to another unit**, appears. To complete the transfer, when the patient starts treatment at the new unit, you must “transfer in” the patient. To do this, click the **Register transfer in** link (circled in red on figure 72).

**Figure 72**

4. Clicking the **Register transfer in** link leads to a screen where you enter the date that the patient transferred in to the new health unit (figure 73). After entering the date, click **OK** to complete the transfer of the patient or **CANCEL** to undo it.

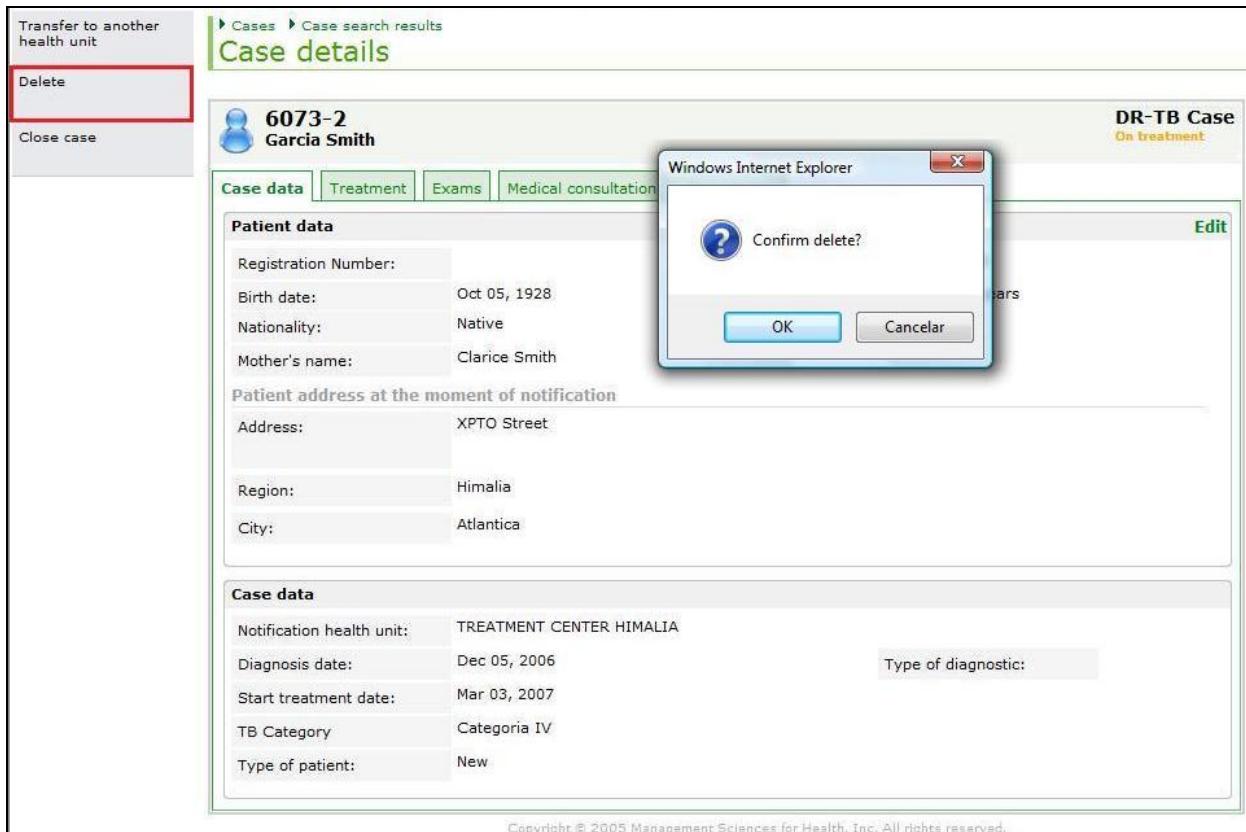
**Register transfer in**

The screenshot shows a dialog box titled "Transferring to another unit". At the top left is a patient icon and the text "Gordon Edwards 24552". On the right is a "Print this page" button. The main area has two sections: "Treatment health units" and "Transferring information". In "Treatment health units", there is a table with three columns: "Health Unit", "Start date", and "Finish Date". A single row is shown for "HEALTH CENTER 10" with dates "Nov 30, 2007" and "Nov 30, 2009". In "Transferring information", the "Destination Unit" dropdown is set to "HEALTH CENTER 9". The "Date of transfer in:" field contains "11/30/2009" with a calendar icon. Below the fields is a note: "\* Fields with this symbol beside are required fields". At the bottom are "OK" and "CANCEL" buttons.

**Figure 73**

## How to Delete Cases

Go to the **Case details** page, and click on **Delete** (highlighted with a red rectangle on figure 74) to exclude a specific case from the database. In the pop-up window that appears, click **OK** to confirm or **CANCEL** to undo it.



**Figure 74**

## How to Close Notified Cases

To close a notified case, follow this procedure:

1. Go to the “case details” page (figure 75), and click on **Close case** (highlighted with a red rectangle) to record the situation of a specific case related to treatment outcome or follow-up during treatment.



The screenshot shows the 'Case details' page for case number 23380-3, Albert Xylander. The left sidebar lists other cases of Albert Xylander, including TB Case HEALTH CENTER 9 (Screening date: Oct 17, 2007, Case status: Cured) and TB Case HEALTH CENTER 5 (Screening date: Jun 29, 2008, Case status: Cured). The main panel displays patient data (Personal ID Number: 23380-3, Date of Birth: Feb 26, 1958, Gender: Male, Age: 51 years, Nationality: Native, Mother's name: Aaron Xylander) and screening information (Address: XPTO Street, Region: Region E, City: City J). Below this is the 'Case data' section, which includes fields for Screening unit (HEALTH CENTER 11), Date of registration (May 17, 2009), Start treatment date (May 23, 2009), Type of drug resistance (Mono-resistance), Site of Disease (Pulmonary), Pulmonary forms (Bilateral Cavitory), and Type of patient (Relapse). A note indicates 'Type of diagnostic: Confirmed'. The 'Case data' section has an 'Edit' link in the top right corner. The 'Close case' button in the sidebar is highlighted with a red rectangle.

Figure 75

2. On the **Close case** page displayed, enter the specific date, mark the outcome or situation observed, and click **OK** to confirm or **CANCEL** to undo it (figure 76).

**Close case**

 **23380-3**  
**Albert Xylander**

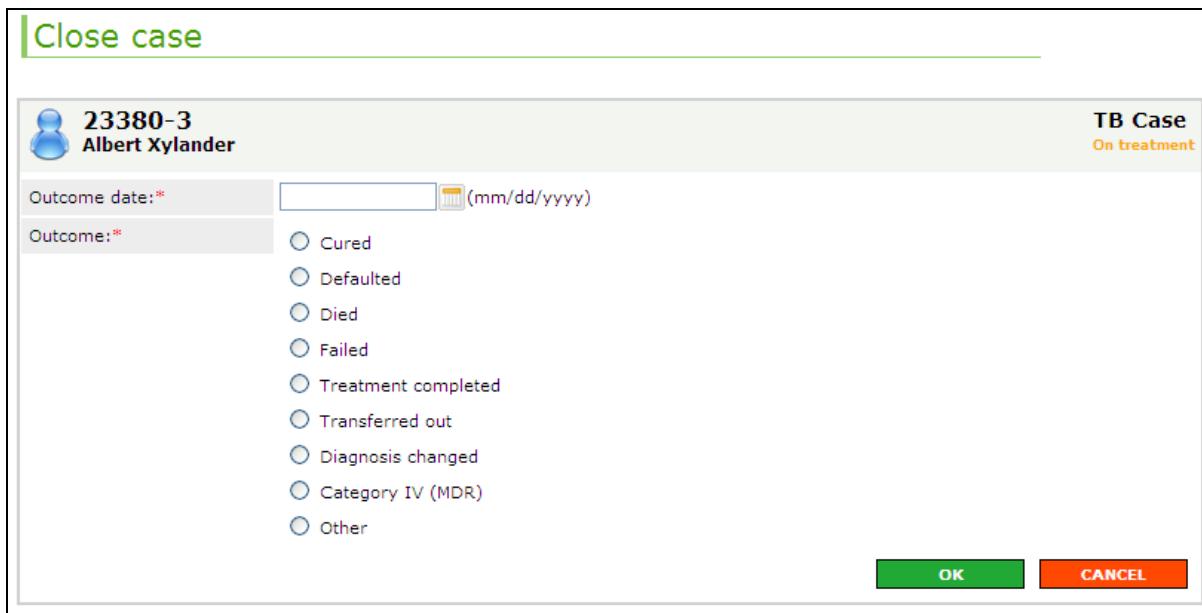
**TB Case**  
On treatment

Outcome date: \*   (mm/dd/yyyy)

Outcome: \*

Cured  
 Defaulted  
 Died  
 Failed  
 Treatment completed  
 Transferred out  
 Diagnosis changed  
 Category IV (MDR)  
 Other

**OK** **CANCEL**



**Figure 76**

## CHAPTER 5. MEDICINES MODULE

The **Medicines** module allows you to record, search, follow, and authorize the receiving, ordering, transferring, dispensing, movements, and stock positions of medicines.

### Elements of the Medicines Module

Each of the elements below takes place during management of first- and second-line TB medicines:

- **Medicine receiving**—Registers medicine received from sources (such as GDF or MoH)
- **Medicine order**—Registers regular medicine distribution from one TB unit to another where the order is based on the number of patients, treatment regimens, and the quantity consumed
- **Medicine transfer**—Registers medicine transfers from one TB unit to another. A transfer differs from an order in that the transfer is not tied to the number of patients or the quantity necessary for the TB unit. A transfer simply registers a medicine transaction between two units.
- **Stock position**—Generates a report indicating the current quantity of each medicine in stock of a selected TB unit, separated by source
- **Medicine movements**—Generates a report of medicine transactions into and out of a specific TB unit occurring during a certain period
- **Estimated stock position**—Generates a report of the current, estimated stock position at the time the report is generated, after subtracting quantities consumed by patients currently under treatment
- **Stock evolution**—Generates a report of the current, estimated stock quantities showing quantities received minus quantities issued for each medicine during a selected period for a particular health unit. These elements can be reported by medicine source or for all sources.
- **Treatment cost by patient**—Generates a report of the total medicine treatment cost for a patient

## How to Access the Medicines Module

Click on **Medicines** on the system's main page (circled in red on figure 77), and the **Medicines** module's main page will be displayed (figure 78).

The screenshot shows the e-TB Manager interface. At the top, there is a navigation bar with tabs: Cases, Medicines (which is circled in red), Management, and Administration. Below the navigation bar, the title "TB Management Information System" is displayed. On the left, there is a sidebar titled "Information" containing user details: Name (Julie Frye), TB Unit (NATIONAL WAREHOUSE), User profile (Central Administrator), User View (Whole country), Local time (24-Mar-2011 14:48:48), Language (English), and Time zone (Fuso horário padrão oriental). The main content area contains four cards: "Cases" (Allows to search, notify, follow, close, transfer and validate cases), "Medicines" (Allows to record, search, follow and authorize medicines receiving, orders, transfers, dispensing, movements and stock position, this card is also circled in red), "Management" (Allows to generate, search and print reports, indicators, medicine forecasting and data exportation), and "Administration" (Allows to manage the system in order to add, remove and change users, health system structure, medicines, treatment regimens and other features). At the bottom right, there are links for "Print this page" and "Settings | Exit".

Figure 77

The screenshot shows the Medicines module main page. On the left, there is a sidebar with links: Medicine receiving, Medicine orders, Medicine transfer, Reports, Stock position, Medicine movements, Estimated stock position, Stock evolution, and Treatment cost by patient. The main content area displays details for the "NATIONAL WAREHOUSE" unit: City A - Region A. It includes fields for Health System (Ministry of Health), Address (London Street, 26), Region (Region A), and City (City A). Below this, under "Medicine management", there are two green star icons: "Unit stores medicines" and "Unit receives medicines from medicine sources". There is also a link to "Remove unit from medicine management". On the far right, there is a "Select another unit" button.

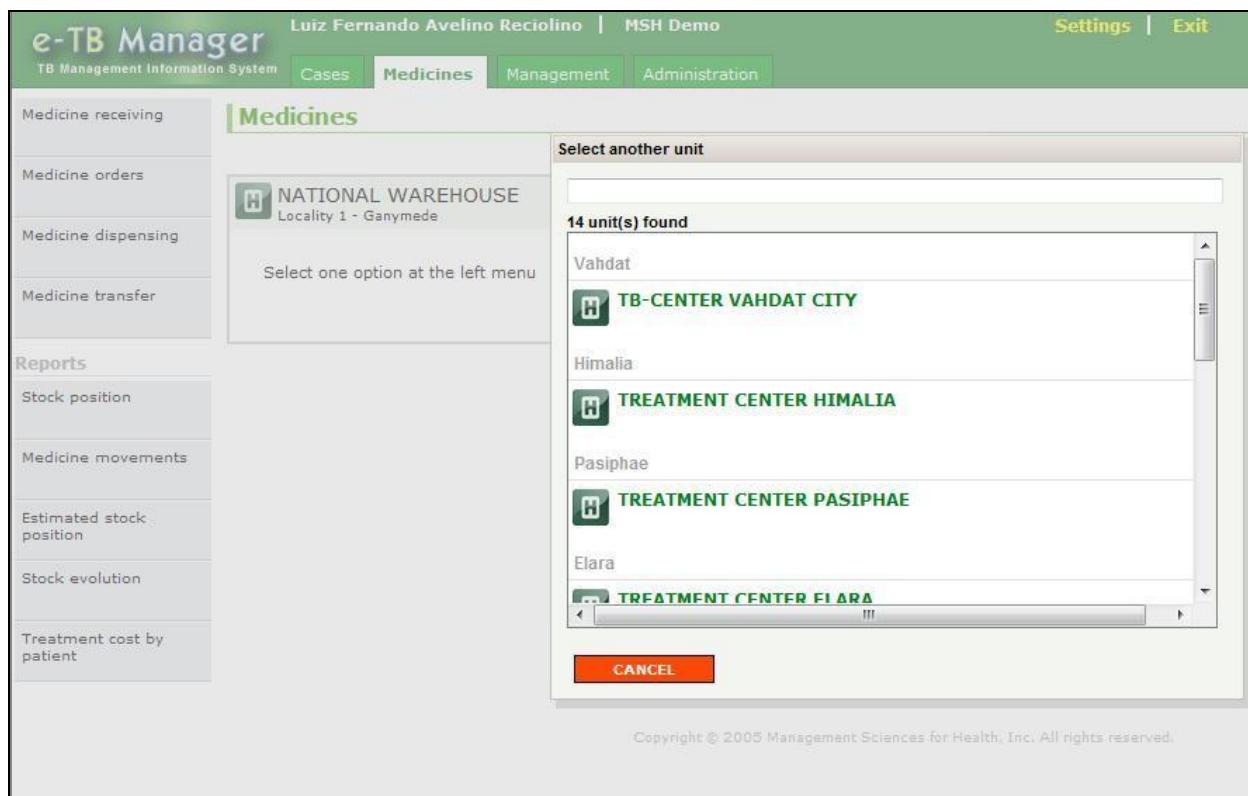
Figure 78

The options shown in the left menu (red rectangle in figure 78) are related to the health unit displayed (blue rectangle in figure 78). These options appear according to the health units' configuration previously registered in the system's **Administration** module (see chapter 7). When working in the **Medicines** module, you will always be working with a TB unit. Initially, the TB unit selected is the one assigned to you based on your user login, but at any time you can select another unit by clicking on **Select another unit** (green rectangle in figure 78). The selected unit is displayed at the top of the rectangle in the central area of the page (blue rectangle in figure 78).

## How to Change the Health Unit Displayed

Follow this procedure to change the health unit:

1. Click on **Select another unit** (green rectangle in figure 78).
2. A window containing the list of available units is displayed (figure 79). Choose a unit from the list by clicking on its name. Click on **CANCEL** to undo the operation.



**Figure 79**

## Medicine Management Initialization

The two primary purposes of the **Medicines** module are (a) to register the transactions (e.g., orders, transfers, and dispensing) of medicines handled in a TB unit and (b) to generate reports about those transactions. Before starting this tracking, you must initialize the TB unit in the **Medicines** module, (i.e., tell e-TB Manager the quantity of medicines that the TB unit is storing at the moment the stock management information is entered in the system).

To start the medicine management of a TB unit, click on the **Medicines** module, and select the TB unit with which you want to work. Notice that TB units that haven't started medicines management yet are displayed with a yellow icon to the left of their names (figure 80).

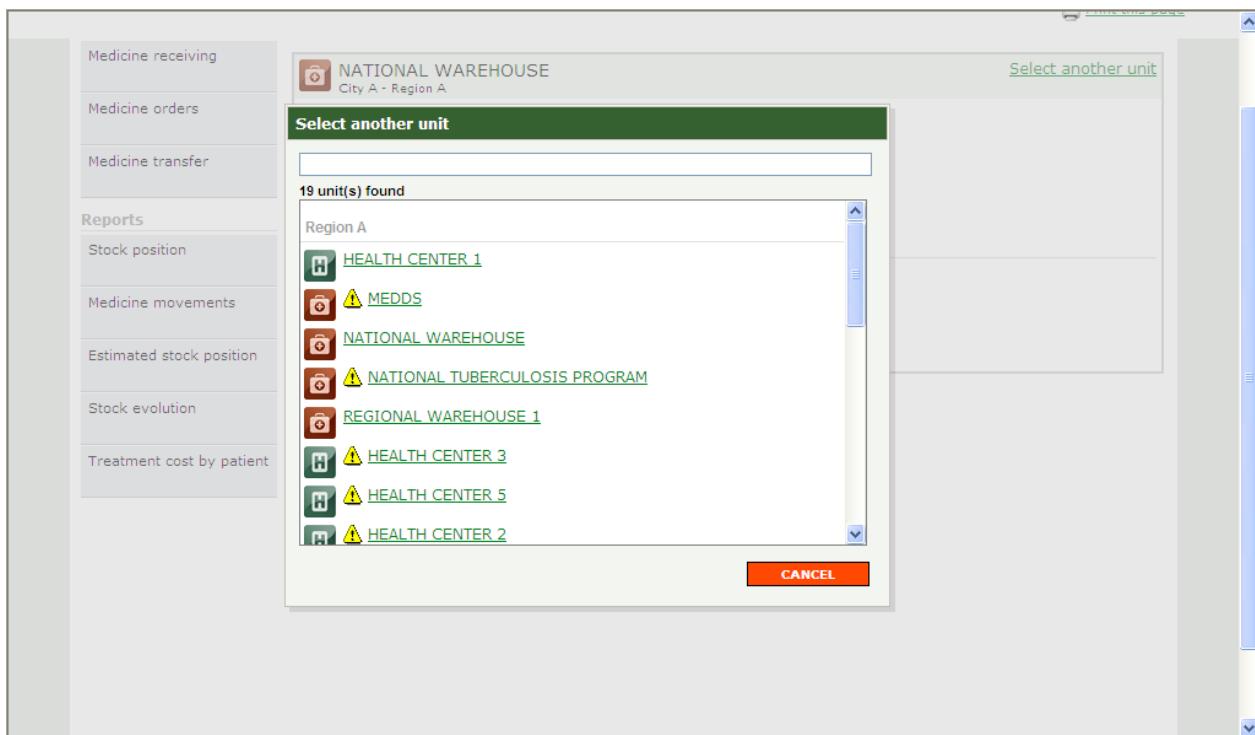


Figure 80

Until medicine management has been initialized for the unit, all commands are disabled, and a warning message is displayed below the unit data (figure 81).

**HEALTH CENTER 3**  
District 3 - Village B

Health System: Ministry of Health  
Address: Rainbow Street, 360  
Region: Region A  
City: City B  
Village: Village B  
District: District 3

**⚠ This unit didn't start the medicine management.**

[▶ Start medicine management](#)

Figure 81

To start the management of the TB unit selected, click **Start medicine management** (bottom of figure 81). The system will display a new page containing a form to enter the quantity of each medicine stored in the TB unit (figure 82).

**Start medicine management**

Print this page

HEALTH CENTER 3  
District 3 - Village B

Starting date of medicine management:  (mm/dd/yyyy)

Provide the amount of each medicine batch on the start date

Global Drug Facility						
Medicine	Expiration date	Number of boxes	Available quantity	Unit price	Total price	Action
Amikacin 1000mg (Powder/Vial)			0	0.00	0.00	<a href="#">▶ New batch</a>
Capreomycin 1000mg (Powder/Vial)			0	0.00	0.00	<a href="#">▶ New batch</a>
Cycloserine 250mg (Tablet or Capsule)			0	0.00	0.00	<a href="#">▶ New batch</a>
Ethambutol 400mg (Tablet)			0	0.00	0.00	<a href="#">▶ New batch</a>
Ethambutol 400mg28 (tabs)			0	0.00	0.00	<a href="#">▶ New batch</a>
Ethionamide 250mg (Tablets)			0	0.00	0.00	<a href="#">▶ New batch</a>
Isoniazid 100mg (Tablet)			0	0.00	0.00	<a href="#">▶ New batch</a>
Isoniazid + Rifampicin 75/150mg (Tablet)			0	0.00	0.00	<a href="#">▶ New batch</a>

Figure 82

The field **Starting date of medicine management** tells the system when the medicine inventory was done. It may be either a present date or a past date (depending on whether the inventory was done in the current day or if it is older information). This date also tells the system the starting date of the medicine control, meaning that the system won't accept medicine transactions (i.e., orders, transfers, dispensing) before this date.

The e-TB Manager controls medicine transactions by source of medicines (e.g., GDF, GLC) and batches, so for every medicine in the inventory, you must enter the batches, the source of the medicine, and the quantity available for this batch. To register a new batch, under the appropriate source of medicine, select the medicine, and click on **New batch** to the right of the medicine row. The window displayed in figure 83 will appear.

**Figure 83**

Fields marked with a red asterisk are required fields. When you finish entering batch data, click on **OK** (figure 83), and the system will save the information (figure 84), or click **Cancel** (figure 83) to undo it.

The screenshot shows a software interface for managing medicine batches. At the top, there is a header with a logo and the text "HEALTH CENTER 3" and "District 3 - Village B". Below the header, there is a field labeled "Starting date of medicine management:" with a value of "11/04/2010" and a calendar icon. A section titled "Provide the amount of each medicine batch on the start date" contains a table with the following data:

Global Drug Facility						
Medicine	Expiration date	Number of boxes	Available quantity	Unit price	Total price	Action
Amikacin 1000mg (Powder/Vial)			50	0.2849	175.50	<a href="#">New batch</a>
Batch number: 4568761	Jan 31, 2012	2 (25)	50	3.5100	175.50	<a href="#">Edit</a> <a href="#">Delete</a>
Capreomycin 1000mg (Powder/Vial)			0		0.00	<a href="#">New batch</a>

**Figure 84**

Once a batch is entered, you may edit the data entered or remove a batch wrongly entered. Use the **Edit** and **Delete** links located at the right side of the row for that batch (figure 84).

After you have registered all batches of the medicines available in the TB unit selected, go to the bottom of the page and click on **OK**; the TB unit will be initialized in the medicine management module, as displayed in figure 85.

The screenshot shows the 'HEALTH CENTER 3' section of the e-TB Manager. At the top right is a link to 'Select another unit'. Below it, a table lists unit details: Health System (Ministry of Health), Address (Rainbow Street, 360), Region (Region A), City (City B), Village (Village B), and District (District 3). To the right of these fields are four icons with labels: Treatment health unit, Notification health unit, TB treatment center, and DR-TB treatment center. Below this is a 'Medicine management' section containing a single item: 'Unit stores medicines'. At the bottom left is a link to 'Remove unit from medicine management'.

Figure 85

If you later need to stop managing medicine for this unit, you can click on **Remove unit from medicine management**. A confirmation box will appear (figure 86).

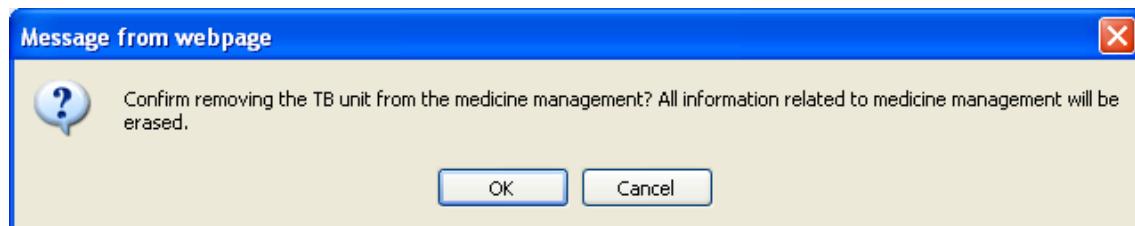


Figure 86

Click on **OK** to confirm that this is what you want to do or on **Cancel** to undo it.

## Medicine Receiving

Every time a new medicine order is received from a medicine source (e.g., GLC, GDF, or central or district warehouse), it must be registered in the system. Medicine receiving is registered by the TB unit that received the medicines, and it contains information about the medicine source, the receiving date, and the medicines and batches received. Once medicine receiving registration is completed, the system will increase the stock position for the new quantities in the TB unit.

### How to Access Medicine Receiving

Click on **Medicine receiving** in the left menu of the medicines main page (red rectangle on figure 87), and all previous receipts registered in the system that were received by the displayed health unit and related to the selected medicine source are shown (blue rectangle on figure 87).

ID	Receiving Date	Medicine Source
<a href="#">941826</a>	Jan 13, 2011	Global Drug Facility
<a href="#">941825</a>	Jan 12, 2011	Ministry of Health
<a href="#">941816</a>	Dec 10, 2010	Open Supplier
<a href="#">941813</a>	Dec 02, 2010	Global Drug Facility
<a href="#">941812</a>	Dec 01, 2010	Green Light Committee
<a href="#">941811</a>	Dec 01, 2010	Open Supplier
<a href="#">941810</a>	Dec 01, 2010	Open Supplier
<a href="#">941815</a>	Nov 25, 2010	Open Supplier
<a href="#">941791</a>	Sep 15, 2010	Green Light Committee
<a href="#">941790</a>	Sep 15, 2010	Global Drug Facility

Figure 87

### How to Record New Medicine Receiving

Follow this procedure to record new medicines received:

1. Click on **New medicine receiving** (blue circle on figure 87).
2. At the **New medicine receiving** page, enter the **Medicine Source** and **Receiving Date** (figure 88).
3. Click on **Add medicines** (figure 88) to select the medicines received.

New medicine receiving

NATIONAL WAREHOUSE  
City A - Region A

Medicine Source: \* -

Receiving Date: \* (mm/dd/yyyy)

Received medicines  
No medicine selected

Add Medicines

OK CANCEL

\* Value is required

**Figure 88**

4. In the window displayed, click the boxes beside each medicine you want to select (figure 89). Click on **OK** to confirm or **CANCEL** to undo it.

New medicine receiving

NATIONAL WAREHOUSE  
Locality 1 - Ganymede

Medicine Source: \* Receiving date: \*

Received medicines  
No medicine selected

\* Value is required

Select the received medicines

Medicine

Injectable

- Amikacin 1000mg (Powder/Vial)  
Second line
- Capreomycin 1000mg (Powder/Vial)  
Second line
- Kanamycin 1000mg (Powder/Vial)
- Streptomycin 1000mg (Powder/Vial)

Oral

- Ciprofloxacin 500mg (Tablet)  
Second line
- Cycloserine 250mg (Tablet or Capsule)
- Ethambutol 400mg (Tablet)

Add Medicines

OK CANCEL

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**Figure 89**

- At the **Edit medicine receiving** page, click on **New batch** (red circle on figure 90), and the window **Edit – batch** is displayed.

Received medicines								Add Medicines
Medicine	Expiration date	Number of boxes	Quantity	Unit price	Total price	Action		
Capreomycin 1000mg (Powder/Vial)			32	30.0000	960.00			
Batch number: Test Manufacturer: Test Brand name: Test	May 26, 2009	4 (8)	32	30.0000	960.00			
Kanamycin 1000mg (Powder/Vial)			0	0.0000	0.00			

\* Value is required

**Edit - Batch**

Medicine:	Capreomycin 1000mg (Powder/Vial)
Brand name:*	<input type="text"/>
Batch number:*	<input type="text"/>
Expiration date:*	<input type="text"/> (mm/dd/yyyy)
Manufacturer:*	<input type="text"/>
Received qty:*	0 (Powder/Vial)
Number of boxes:*	0
Quantity per box:*	0 (Powder/Vial)
Unit price:*	0.00
Total price:*	0.00

\* Value is required

OK CANCEL

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Figure 90

- Enter batch information for every medicine listed in the displayed window, and click on **OK** to confirm or **CANCEL** to undo it (figure 90).
- The registered information regarding the batches is displayed at the **New medicine receiving** page (blue rectangle on figure 90).

8. Click on **Delete** (blue circle on figure 90) in the **Action** column to the right of the medicine name to exclude a specific medicine and all related batch information (if, for example, you chose a medicine by mistake). At the confirmation window that appears click on **OK** to confirm or **CANCEL** to undo it.
9. Click on **Edit** (black circle on figure 90) in the **Action** column to the right of the batch number to change information regarding a specific batch.
10. Click on **Delete** (green circle on figure 90) in the **Action** column to the right of the batch number to exclude information regarding a specific batch, and at the confirmation window that appears click on **OK** to confirm or **CANCEL** to undo it.
11. To conclude the new medicine receiving activity, click **OK** to confirm the operation or **CANCEL** to undo it.

### **How to Change Already Recorded Medicines Received**

Follow this procedure the change information about medicines that have already been received:

1. At the **Medicine receiving** page, click on **ID** (red circle on figure 87) to see the specific medicine receiving details for that order (figure 91).

Medicine	Expiration date	Number of boxes	Received qty	Unit price	Total price
Cycloserine 250mg (Tablet or Capsule)			10,000	2.0000	20,000.00
Batch number: 33 Manufacturer: cc Brand name: c1	Jan 01, 2012	100 (100)	10,000	2.0000	20,000.00
Ethambutol 400mg (Tablet)			30,000	1.0000	30,000.00
Batch number: 123 Manufacturer: m1 Brand name: e1	Jan 01, 2012	100 (300)	30,000	1.0000	30,000.00
Open Drug 1 100 mg (tab)			30,000	1.6667	50,000.00
Batch number: 0001 Manufacturer: o1 Brand name: o1	Jan 01, 2012	100 (100)	10,000	1.0000	10,000.00
Batch number: 1234 Manufacturer: 3455 Brand name: g2	Jan 02, 2012	100 (200)	20,000	2.0000	40,000.00
<b>Total price</b>					<b>100,000.00</b>

**Figure 91**

2. Click on **Delete** (in the red rectangle in figure 91) to delete the receiving transaction. In the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it. You cannot delete a medicine receiving entry if any of its stock is already in use.
3. Click on **Edit** (in the red rectangle in figure 91) to complete or change information regarding receiving transactions for the displayed medicine.
4. At the **Edit medicine receiving** page (figure 92) you can choose another medicine to be edited by entering information in the **Medicine Source** and **Receiving Date** fields (red rectangle on figure 92).
5. Click on **Add Medicines** (blue rectangle on figure 92). In the **Medicine** window displayed, select other medicines to be included in the existing medicine receiving transaction by clicking the box to the left of the medicine name; click on **OK** to confirm or **CANCEL** to undo it (figure 93).

**Edit medicine receiving**

NATIONAL WAREHOUSE  
City A - Region A

ID:	941816																																																								
Medicine Source:*	Open Supplier																																																								
Receiving Date:*	12/10/2010 (mm/dd/yyyy)																																																								
<b>Received medicines</b> <table border="1"> <thead> <tr> <th>Medicine</th> <th>Expiration date</th> <th>Number of boxes</th> <th>Quantity</th> <th>Unit price</th> <th>Total price</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Cycloserine 250mg (Tablet or Capsule)</td> <td></td> <td></td> <td>10,000</td> <td>2.0000</td> <td>20,000.00</td> <td>New batch <a href="#">Delete</a></td> </tr> <tr> <td>Batch number: 33 Manufacturer: cc Brand name: c1</td> <td>Jan 01, 2012</td> <td>100 (100)</td> <td>10,000</td> <td>2.0000</td> <td>20,000.00</td> <td><a href="#">Edit</a> <a href="#">Delete</a></td> </tr> <tr> <td>Ethambutol 400mg (Tablet)</td> <td></td> <td></td> <td>30,000</td> <td>1.0000</td> <td>30,000.00</td> <td>New batch <a href="#">Delete</a></td> </tr> <tr> <td>Batch number: 123 Manufacturer: m1 Brand name: e1</td> <td>Jan 01, 2012</td> <td>100 (300)</td> <td>30,000</td> <td>1.0000</td> <td>30,000.00</td> <td><a href="#">Edit</a> <a href="#">Delete</a></td> </tr> <tr> <td>Open Drug 1 100 mg (tab)</td> <td></td> <td></td> <td>30,000</td> <td>1.6667</td> <td>50,000.00</td> <td>New batch <a href="#">Delete</a></td> </tr> <tr> <td>Batch number: 0001 Manufacturer: o1 Brand name: o1</td> <td>Jan 01, 2012</td> <td>100 (100)</td> <td>10,000</td> <td>1.0000</td> <td>10,000.00</td> <td><a href="#">Edit</a> <a href="#">Delete</a></td> </tr> <tr> <td>Batch number: 1234 Manufacturer: 3455 Brand name: g2</td> <td>Jan 02, 2012</td> <td>100 (200)</td> <td>20,000</td> <td>2.0000</td> <td>40,000.00</td> <td><a href="#">Edit</a> <a href="#">Delete</a></td> </tr> </tbody> </table>		Medicine	Expiration date	Number of boxes	Quantity	Unit price	Total price	Action	Cycloserine 250mg (Tablet or Capsule)			10,000	2.0000	20,000.00	New batch <a href="#">Delete</a>	Batch number: 33 Manufacturer: cc Brand name: c1	Jan 01, 2012	100 (100)	10,000	2.0000	20,000.00	<a href="#">Edit</a> <a href="#">Delete</a>	Ethambutol 400mg (Tablet)			30,000	1.0000	30,000.00	New batch <a href="#">Delete</a>	Batch number: 123 Manufacturer: m1 Brand name: e1	Jan 01, 2012	100 (300)	30,000	1.0000	30,000.00	<a href="#">Edit</a> <a href="#">Delete</a>	Open Drug 1 100 mg (tab)			30,000	1.6667	50,000.00	New batch <a href="#">Delete</a>	Batch number: 0001 Manufacturer: o1 Brand name: o1	Jan 01, 2012	100 (100)	10,000	1.0000	10,000.00	<a href="#">Edit</a> <a href="#">Delete</a>	Batch number: 1234 Manufacturer: 3455 Brand name: g2	Jan 02, 2012	100 (200)	20,000	2.0000	40,000.00	<a href="#">Edit</a> <a href="#">Delete</a>
Medicine	Expiration date	Number of boxes	Quantity	Unit price	Total price	Action																																																			
Cycloserine 250mg (Tablet or Capsule)			10,000	2.0000	20,000.00	New batch <a href="#">Delete</a>																																																			
Batch number: 33 Manufacturer: cc Brand name: c1	Jan 01, 2012	100 (100)	10,000	2.0000	20,000.00	<a href="#">Edit</a> <a href="#">Delete</a>																																																			
Ethambutol 400mg (Tablet)			30,000	1.0000	30,000.00	New batch <a href="#">Delete</a>																																																			
Batch number: 123 Manufacturer: m1 Brand name: e1	Jan 01, 2012	100 (300)	30,000	1.0000	30,000.00	<a href="#">Edit</a> <a href="#">Delete</a>																																																			
Open Drug 1 100 mg (tab)			30,000	1.6667	50,000.00	New batch <a href="#">Delete</a>																																																			
Batch number: 0001 Manufacturer: o1 Brand name: o1	Jan 01, 2012	100 (100)	10,000	1.0000	10,000.00	<a href="#">Edit</a> <a href="#">Delete</a>																																																			
Batch number: 1234 Manufacturer: 3455 Brand name: g2	Jan 02, 2012	100 (200)	20,000	2.0000	40,000.00	<a href="#">Edit</a> <a href="#">Delete</a>																																																			
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>																																																									

\* Value is required

Figure 92

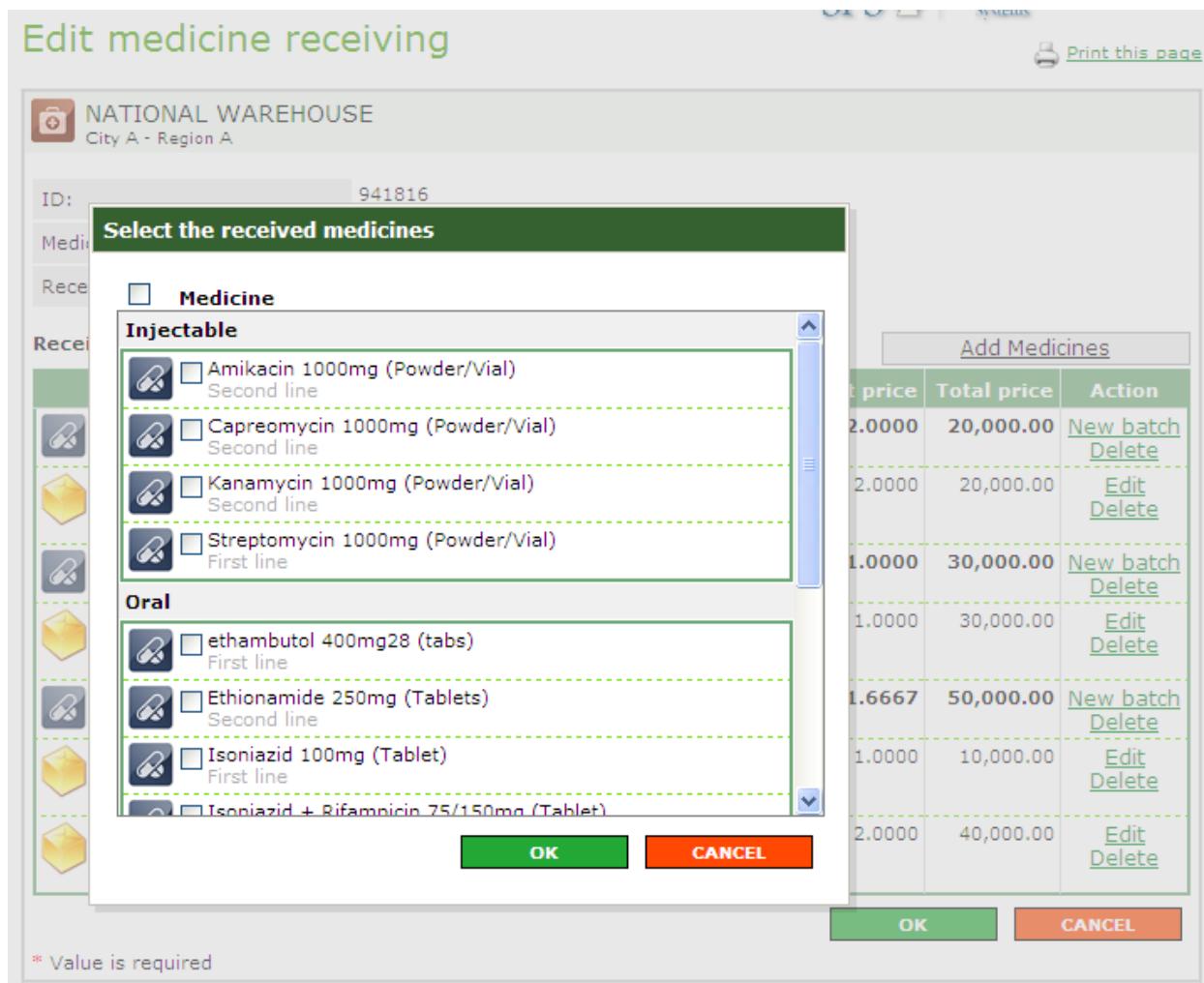


Figure 93

6. Click on **New batch** (black rectangle on figure 92). In the **Edit – batch** window displayed, enter information regarding other received batches related to a specific medicine (figure 94). Click on **OK** to confirm or **CANCEL** to undo it.

Edit medicine receiving

[Print this page](#)

Edit - Batch	
Medicine:	Cycloserine 250mg (Tablet or Capsule)
Brand name:*	<input type="text"/>
Batch number:*	<input type="text"/>
Expiration date:*	<input type="text"/> (mm/dd/yyyy)
Manufacturer:*	<input type="text"/>
Received qty:*	0 (Tablet or Capsule)
Number of boxes:*	0
Quantity per box:*	0 (Tablet or Capsule)
Unit price:*	0.00
Total price:*	0.00
* Value is required	
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

Add Medicines	
Total price	Action
20,000.00	<a href="#">New batch</a> <a href="#">Delete</a>
20,000.00	<a href="#">Edit</a> <a href="#">Delete</a>
30,000.00	<a href="#">New batch</a> <a href="#">Delete</a>
30,000.00	<a href="#">Edit</a> <a href="#">Delete</a>
50,000.00	<a href="#">New batch</a> <a href="#">Delete</a>
Batch number: 0001 Manufacturer: o1 Brand name: o1	100 (100) 10,000 1.0000 10,000.00 <a href="#">Edit</a> <a href="#">Delete</a>
Batch number: 1234 Manufacturer: 3455 Brand name: g2	100 (200) 20,000 2.0000 40,000.00 <a href="#">Edit</a> <a href="#">Delete</a>

\* Value is required

Figure 94

7. Click on **Delete** (green rectangle on figure 92) in the **Action** column to the right of the medicine name to exclude a specific medicine and all related batches. In the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.
8. Click on **Edit** (red circle on figure 92) in the **Action** column to the right of the batch number. In the **Edit – batch** window that appears, change recorded information regarding a specific batch related to a specific medicine (figure 95). Click on **OK** to confirm or **CANCEL** to undo it.

**Edit medicine receiving**

[Print this page](#)

Edit - Batch	
Medicine:	Cycloserine 250mg (Tablet or Capsule)
Brand name:*	c1
Batch number:*	33
Expiration date:*	01/01/2012 <input type="button" value="Calendar"/>
Manufacturer:*	cc
Received qty:*	10000 <small>(Tablet or Capsule)</small>
Number of boxes:*	100
Quantity per box:*	100 <small>(Tablet or Capsule)</small>
Unit price:*	2.00
Total price:*	20,000.00

\* Value is required

**OK**    **CANCEL**

		Total price	Action				
		20,000.00	<a href="#">New batch</a> <a href="#">Delete</a>				
		20,000.00	<a href="#">Edit</a> <a href="#">Delete</a>				
		30,000.00	<a href="#">New batch</a> <a href="#">Delete</a>				
		30,000.00	<a href="#">Edit</a> <a href="#">Delete</a>				
<input type="button" value="Open Drug 1 100 mg (tab)"/>		30,000	1.6667				
Batch number: 0001 Manufacturer: o1 Brand name: o1		Jan 01, 2012	100 (100)	10,000	1.0000	10,000.00	<a href="#">Edit</a> <a href="#">Delete</a>
Batch number: 1234 Manufacturer: 3455 Brand name: g2		Jan 02, 2012	100 (200)	20,000	2.0000	40,000.00	<a href="#">Edit</a> <a href="#">Delete</a>

\* Value is required

**OK**    **CANCEL**

Figure 95

- Click on **Delete** (green box or circle on figure 92) in the **Action** column to the right of the batch number to exclude a specific batch related to a specific medicine. In the **Edit – batch** confirmation window that appears click on **OK** to confirm or **CANCEL** to undo it.

## Medicine Orders

A medicine order is a regular distribution of medicines sent from one TB unit to another. The relationship between the two units is strong: one unit plays the role of medicine supplier, and the other unit places new orders to its supplier. An order is considered to occur on a regular basis (e.g., quarterly) and is based on the number of patients enrolled by the unit (directly or indirectly) and the regimen prescribed for each one. This relationship between supplier and receiver is set in the TB unit menu of the **Administration** module.

The workflow of a medicine order is composed of four steps:

- *Waiting authorization*—The order has been placed by the unit that needs medicines, but before the order advances to the unit supplier, it must be authorized by another unit responsible for this task (usually the NTP). This step has been programmed into the system, but it may be changed in the **Administration** module.
- *Waiting delivery*—The order was approved and forwarded to the supplier unit. The supplier unit will package the medicines and deliver the order quantities to the destination unit.
- *Delivered*—The order was filled by the supplier and is on its way to the destination unit.
- *Received*—The order has arrived at the destination unit. This step is the final one of the order.

### How to Access Medicine Orders

Click on **Medicine orders** at the left menu of the **Medicines** module main page (refer back to red rectangle in figure 78) and the existing orders from and to a specific health unit are shown by date and order status (figure 96). You can check orders for this unit or choose another unit by clicking on **Select another unit**.

ID	Order date	From	To	Order status
941379	Dec 10, 2010	OPEN HEALTH WAREHOUSE	NATIONAL WAREHOUSE	Received
941373	Dec 07, 2010	OPEN HEALTH WAREHOUSE	NATIONAL WAREHOUSE	Received
941367	Dec 02, 2010	REGIONAL WAREHOUSE 1	NATIONAL WAREHOUSE	Shipped
941292	Oct 27, 2010	REGIONAL WAREHOUSE 1	NATIONAL WAREHOUSE	Shipped

Figure 96

## How to Check Details of a Medicine Order

To check the details of an order, follow this procedure:

- At the **Medicines orders** page, click on the **ID** number (figure 96) and information concerning a specific order will be displayed (figure 97).

The screenshot shows a web-based application interface for managing medicine orders. At the top, there is a navigation bar with links for 'Medicines' and 'Medicine orders'. Below this, the text 'Medicine Order # 941776' is displayed. A status message 'Waiting for authorization' and 'Order authorizer: NATIONAL TUBERCULOSIS PROGRAM' are shown. The main content area is divided into sections: 'From: HEALTH CENTER 1' and 'To: REGIONAL WAREHOUSE 1'. It shows the order was created on Mar 14, 2011, by Julie Frye. A note indicates a 'Number of days for medicine consumption estimation: 120'. Below this, there are two tabs: 'Items' (selected) and 'Cases on order' (circled in red). The 'Items' tab displays a table for 'Global Drug Facility' with columns for Medicine, Cases, Estimated Qty, and Requested Qty. The table contains two rows: Ethambutol 400mg (Tablet) with 4 cases, estimated qty 1,200, and requested qty 1,200; and Capreomycin 1000mg (Powder/Vial) with 1 case, estimated qty 120, and requested qty 120. The 'Cases on order' tab displays a table for 'Green Light Committee' with similar columns. The table contains three rows: Pyrazinamide 500mg (Tablet) with 3 cases, estimated qty 360, and requested qty 360; Ethionamide 250mg (Tablets) with 8 cases, estimated qty 1,680, and requested qty 1,680; and P-Aminosalicylic Acid 4000mg (Granules/Packet) with 9 cases, estimated qty 2,640, and requested qty 2,640.

Medicine	Cases	Estimated Qty	Requested Qty
Ethambutol 400mg (Tablet)	4	1,200	1,200
Capreomycin 1000mg (Powder/Vial)	1	120	120

Medicine	Cases	Estimated Qty	Requested Qty
Pyrazinamide 500mg (Tablet)	3	360	360
Ethionamide 250mg (Tablets)	8	1,680	1,680
P-Aminosalicylic Acid 4000mg (Granules/Packet)	9	2,640	2,640

**Figure 97**

- At the **Medicine order** page of a specific ID number (figure 97), click on **Authorize order** (red rectangle on figure 97) to perform this operation.
- For a detailed report, click **Cases on order** (red circle on figure 97), and the number of cases, patient names, and estimated quantities required will be displayed for each medicine (figure 98).

The screenshot shows a medicine order page with the following details:

- From:** HEALTH CENTER 1
- To:** REGIONAL WAREHOUSE 1
- Order created in:** Mar 14, 2011
- By:** Julie Frye
- Number of days for medicine consumption estimation:** 120
- Waiting for authorization:** Order authorizer: NATIONAL TUBERCULOSIS PROGRAM

Global Drug Facility	Medicine	Cases	Estimated Qty
	Ethambutol 400mg (Tablet)	4	1,200
26112	Luiz Gustavo Jackson		840
25941	Beto Galena		120
24917-2	Airton Da neen		120
25879	Bernard Madison		120

Figure 98

### How to Create Medicine Orders

To create medicine orders, follow this procedure:

- At the **Medicine orders** page, click on **New medicine order** (circled in red on figure 99). This link either appears or does not, depending on the selected health unit's configuration as previously defined in the system's **Administration** module (see chapter 7 for details).

The screenshot shows the Medicine orders page with the following interface elements:

- Health Center:** HEALTH CENTER 1 (Locality 3 - Ganymede)
- Month / Year:** dropdown menus
- Order status:** dropdown menu
- Select another unit:** link
- New medicine order:** button (circled in red)
- UPDATE:** button

**Resulting: 1 - 3 Of 3**

ID	Order date	From	To	Order status
941005	May 10, 2009	HEALTH CENTER 1	REGIONAL WAREHOUSE 1	Waiting for delivery
940890	Apr 21, 2009	HEALTH CENTER 1	REGIONAL WAREHOUSE 1	Received
936712	Jan 07, 2009	HEALTH CENTER 1	REGIONAL WAREHOUSE 1	Cancelled

Figure 99

2. At the **New medicine order** page (figure 100), the destination and number of days for consumption are shown. These units were previously defined during configuration of the health unit in the system's **Administration** module. The estimated quantity shown is based on the number of patients under treatment and the treatment regimens in use.

**New medicine order**

<b>HEALTH CENTER 1</b> Locality 3 - Ganymede				
To:	REGIONAL WAREHOUSE 1			
Number of days for medicine consumption estimation:	120			
Comments:				
<b>Green Light Committee</b>				
Item	Available in stock	Cases	Estimated Qty	Requested Qty
Cycloserine 250mg (Tablet or Capsule)	2949	11	3738	789
Ethionamide 250mg (Tablets)	3972	15	5025	1053
Ofloxacin 400mg (Tablets)	3932	11	4984	1052
Pyrazinamide 400mg (Tablet)	6620	15	8375	1755
Ciprofloxacin 500mg (Tablet)	682	4	858	176
Ethambutol 400mg (Tablet)	1342	4	858	0
<b>Ministry of Health</b>				
Item	Available in stock	Cases	Estimated Qty	Requested Qty
Ethambutol 400mg (Tablet)	1120	2	188	0
Isoniazid 300mg (Tablet)	1144	2	122	0
Rifampicin 300mg (Tablet or capsule)	1288	2	244	0
Pyrazinamide 400mg (Tablet)	0	1	180	180
Streptomycin 1000mg (Powder/Vial)	0	1	20	20
<b>OK</b> <b>CANCEL</b>				

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Figure 100

3. Change the **Requested Qty** (quantity) in the specified field if needed, and click on **OK** to confirm or **CANCEL** to undo it (figure 100).

## How to Authorize a Medicine Order

When an order is created, the supplier settings in the **Administration** module may require that the order be authorized by the unit responsible for authorization. When authorizing, the quantity requested can be revised and changed and will then become the quantity approved to be delivered by the supplier. To authorize an order, follow the instructions below:

1. On the main screen of the Medicine Management Module (Figure 78), select the TB unit responsible for authorizing the order.
2. Open the detail page of a specific order (figure 97).
3. Click on **Authorize order** at the left menu (figure 101).

**Medicine Order # 941012**

**Waiting for authorization**

**Order authorizer: NATIONAL TUBERCULOSIS PROGRAM**

From:	HEALTH CENTER 1	To:	REGIONAL WAREHOUSE 1												
Order created in <b>May 27, 2009</b> By <b>Luiz Fernando Avelino Reciolino</b>															
Number of days for medicine consumption estimation: <b>120</b>															
<input type="radio"/> Items <input checked="" type="radio"/> DR-TB Cases															
<b>Green Light Committee</b> <table border="1"> <thead> <tr> <th>Medicine</th> <th>Cases</th> <th>Estimated Qty</th> <th>Requested Qty</th> </tr> </thead> <tbody> <tr> <td>Cycloserine 250mg (Tablet or Capsule)</td> <td>11</td> <td>3,738</td> <td>789</td> </tr> <tr> <td>Ethionamide 250mg (Tablets)</td> <td>15</td> <td>5,025</td> <td>1,053</td> </tr> </tbody> </table>				Medicine	Cases	Estimated Qty	Requested Qty	Cycloserine 250mg (Tablet or Capsule)	11	3,738	789	Ethionamide 250mg (Tablets)	15	5,025	1,053
Medicine	Cases	Estimated Qty	Requested Qty												
Cycloserine 250mg (Tablet or Capsule)	11	3,738	789												
Ethionamide 250mg (Tablets)	15	5,025	1,053												

**Figure 101**

4. The system will display the **Medicine Order – Authorize order** page (figure 102).
5. Change the **Approved Qty** displayed if applicable (figure 102).

**Medicine Order - Authorize order**

**From:** HEALTH CENTER 1      **To:** REGIONAL WAREHOUSE 1

Order date: May 27, 2009

Items

Green Light Committee					
Medicine	Cases	Estimated Qty	Requested Qty	Approved Qty	
Cycloserine 250mg (Tablet or Capsule)	11	3,738	789	789	
Ethionamide 250mg (Tablets)	15	5,025	1,053	1053	
Oflloxacin 400mg (Tablets)	11	4,984	1,052	1052	
Pyrazinamide 400mg (Tablet)	15	8,375	1,755	1755	
Ciprofloxacin 500mg (Tablet)	4	858	176	176	

**OK**      **CANCEL**

**Figure 102**

- Click on **OK** to authorize the order or **CANCEL** to undo it.

#### **How to Cancel a Medicine Order**

Only orders in the **Waiting for authorization** (figure 103) or **Waiting for delivery** (figure 104) status may be canceled from the system by its requester. The supplier of the order can cancel it with a **Waiting for authorization** status, once he or she justifies the reason for cancellation (figure 105). The order will be canceled, but its information will not be erased from the system database.

Cancel order | Print order | Medicines | Medicine orders | Medicine Order # 941023

**Waiting for authorization**

Order authorizer: NATIONAL TUBERCULOSIS PROGRAM

**From:** HEALTH CENTER 1      **To:** REGIONAL WAREHOUSE 1

Order created in Jun 09, 2009  
By Luiz Fernando Avelino Reciolino

Number of days for medicine consumption estimation: 120

Green Light Committee				
Medicine	Cases	Estimated Qty	Requested Qty	
Cycloserine 250mg (Tablet or Capsule)	11	3,660	711	
Ethionamide 250mg (Tablets)	11	3,660	350	
Ofloxacin 400mg (Tablets)	11	4,880	948	
Pyrazinamide 400mg (Tablet)	11	6,100	350	

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Figure 103

Cancel order | Print order | Medicines | Medicine orders | Medicine Order # 941023

**Waiting for delivery**

**From:** HEALTH CENTER 1      **To:** REGIONAL WAREHOUSE 1

Order created in Jun 09, 2009  
By Luiz Fernando Avelino Reciolino

Approval date: Jun 09, 2009      By: NATIONAL TUBERCULOSIS PROGRAM

Number of days for medicine consumption estimation: 120

Green Light Committee				
Medicine	Cases	Estimated Qty	Requested Qty	Approved Qty
Cycloserine 250mg (Tablet or Capsule)	11	3,660	711	
Ethionamide 250mg (Tablets)	11	3,660	350	
Ofloxacin 400mg (Tablets)	11	4,880	948	
Pyrazinamide 400mg (Tablet)	11	6,100	350	

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Figure 104

**Medicine Order - Cancel order**

<b>From:</b> HEALTH CENTER 1	<b>To:</b> REGIONAL WAREHOUSE 1
Order status:	Waiting for delivery
Order date:	Jun 09, 2009
Approval date:	Jun 09, 2009
Cancellation reason:*	<input type="text"/>

**OK**    **CANCEL**

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**Figure 105**

### **How to Notify Delivery of a Medicine Order (and Change Batches)**

When the supplier unit delivers medicines to the unit that ordered them, the supplier unit must enter the medicines into the system and notify the recipient that the delivery will take place. You (or the user doing the notification) must enter the batches selected for each medicine. The system automatically selects medicines for delivery using the FEFO (first expiry, first out) criterion, but you may choose different batches if appropriate. To change batches, follow the instructions below:

1. On the main screen of the Medicine Management Module (figure 78), select the TB unit responsible for delivering the medicines (the supplier unit).
2. At the **Medicine orders** page, select the **ID** number of the order for which you want to notify delivery (figure 96). The system will display a specific **Medicine Order** details page (figure 106).
3. Click on **Notify delivery** at the left menu (red box on figure 106), and the system will display the **Notify delivery** page (figure 107).

**Notify delivery**

Print order

► Medicines ► Medicine orders  
Medicine Order # 941012

**Waiting for delivery**

**From:** HEALTH CENTER 1      **To:** REGIONAL WAREHOUSE 1

Order created in **May 27, 2009**  
By **Luiz Fernando Avelino Reciolino**

Approval date: May 27, 2009      By: NATIONAL TUBERCULOSIS PROGRAM

Number of days for medicine consumption estimation: 120

Items DR-TB Cases

Green Light Committee					
Medicine	Cases	Estimated Qty	Requested Qty	Approved Qty	
Cycloserine 250mg (Tablet or Capsule)	11	3,738	789	789	
Ethionamide 250mg (Tablets)	15	5,025	1,053	1,053	

Figure 106

**Notify delivery**

**From:** HEALTH CENTER 1      **To:** REGIONAL WAREHOUSE 1

Order date: May 27, 2009

Approval date: May 27, 2009

Delivery Date: \*  (mm/dd/yyyy) \* Value is required

Items:

**Green Light Committee**

Medicine	Approved Qty	Delivered Qty	Action
Cycloserine 250mg (Tablet or Capsule)	789	789	Select batches
 Manufacturer : Moon creating Batch number : 71093 Expiration date :Jan 01, 2010 Quantity :789 Unit price :0.5000 Total price :394.50			
Ethionamide 250mg (Tablets)	1,053	1,053	Select batches
 Manufacturer : WWW Laboratories Batch number : 87163 Expiration date :Jan 01, 2010 Quantity :1,053 Unit price :0.7500 Total price :789.75			
 Manufacturer : Lab Test Batch number : 84907 Expiration date :Jan 01, 2010 Quantity :1,052 Unit price :1.5000 Total price :1,578.00			

**OK**      **CANCEL**

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Figure 107

4. Enter the **Delivery date**, and review the selected batches (figure 107). The batches are automatically selected by the system using the FEFO criterion.
5. If you want to select different batches, click on **Select batches** in the **Action** column to the right of the medicine name (figure 107).
6. Confirm the delivery notification by clicking on **OK**; otherwise click on **CANCEL** to undo it.

### **How to Notify Receipt of a Medicine Order**

The last step of the order flow is when the medicines arrive at the unit that initially placed the order. This unit must enter into the system and, thus, notify the system (and the sender) of receipt of the order. To do so, follow the instructions below:

1. On the main screen of the Medicine Management Module (figure 78), select the TB unit that placed the medicine order and is now receiving it.
2. At the **Medicine orders** page, select the order for which you want to notify receiving (figure 99). The system will display the **Medicine order** details page (figure 108).

The screenshot shows a computer interface for managing medicine orders. On the left, there is a sidebar with a red-bordered button labeled "Notify receiving". Below it is a "Print order" button. The main content area has a green header bar with the text "Medicines > Medicine orders" and "Medicine Order # 31788". Below the header, the order details are listed in a table-like format:

From:	UNIDAD DE SALUD 10
Order created in Oct 20, 2008 By Ricardo Memória Lima	
Approval date:	Nov 30, 2008
Delivery Date:	Dec 1, 2008
Number of days for medicine consumption estimation:	120
Total price:	6,000.00

**Figure 108**

3. Click on **Notify receiving** at the left menu (red box on figure 108), and the system will display the **Notify receiving** page (figure 109).

**Notify receiving**

<b>From:</b> UNIDAD DE SALUD 10	<b>To:</b> DPS/DAS 10										
Order date:	Oct 20, 2008										
Order date:	Dec 1, 2008										
Receiving date:*	<input type="text"/> (mm/dd/yyyy)										
* Value is required											
<b>Items:</b>											
<table border="1"> <thead> <tr> <th>GDF</th> <th>Medicine</th> <th>Delivered Qty</th> <th>Total price</th> <th>Received quantity</th> </tr> </thead> <tbody> <tr> <td></td> <td><b>Etambutol 400mg (comprimido)</b></td> <td>100</td> <td>2,000.00</td> <td><input type="text" value="100"/></td> </tr> </tbody> </table>		GDF	Medicine	Delivered Qty	Total price	Received quantity		<b>Etambutol 400mg (comprimido)</b>	100	2,000.00	<input type="text" value="100"/>
GDF	Medicine	Delivered Qty	Total price	Received quantity							
	<b>Etambutol 400mg (comprimido)</b>	100	2,000.00	<input type="text" value="100"/>							
<b>Comments</b> <table border="1"> <tr> <td></td> <td>Batch number: 92129 Manufacturer: WWW Laboratories Expiration date:Nov 1, 2010</td> <td>Delivered quantity: 100 Unit price:20.0000 Total price:2,000.00</td> <td><input type="text" value="100"/></td> </tr> </table>			Batch number: 92129 Manufacturer: WWW Laboratories Expiration date:Nov 1, 2010	Delivered quantity: 100 Unit price:20.0000 Total price:2,000.00	<input type="text" value="100"/>						
	Batch number: 92129 Manufacturer: WWW Laboratories Expiration date:Nov 1, 2010	Delivered quantity: 100 Unit price:20.0000 Total price:2,000.00	<input type="text" value="100"/>								
<table border="1"> <thead> <tr> <th>Medicine</th> <th>Delivered Qty</th> <th>Total price</th> <th>Received quantity</th> </tr> </thead> <tbody> <tr> <td></td> <td><b>Ofloxacin 400mg (comprimido)</b></td> <td>100</td> <td>3,000.00</td> <td><input type="text" value="100"/></td> </tr> </tbody> </table>		Medicine	Delivered Qty	Total price	Received quantity		<b>Ofloxacin 400mg (comprimido)</b>	100	3,000.00	<input type="text" value="100"/>	
Medicine	Delivered Qty	Total price	Received quantity								
	<b>Ofloxacin 400mg (comprimido)</b>	100	3,000.00	<input type="text" value="100"/>							
<b>Comments</b> <table border="1"> <tr> <td></td> <td>Batch number: 13850 Manufacturer: WWW Laboratories Expiration date:Jul 1, 2011</td> <td>Delivered quantity: 100 Unit price:30.0000 Total price:3,000.00</td> <td><input type="text" value="100"/></td> </tr> </table>			Batch number: 13850 Manufacturer: WWW Laboratories Expiration date:Jul 1, 2011	Delivered quantity: 100 Unit price:30.0000 Total price:3,000.00	<input type="text" value="100"/>						
	Batch number: 13850 Manufacturer: WWW Laboratories Expiration date:Jul 1, 2011	Delivered quantity: 100 Unit price:30.0000 Total price:3,000.00	<input type="text" value="100"/>								
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>											

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Figure 109

4. Enter the receiving date, and check whether the quantity received is the same as the quantity delivered by the supplier unit. If the quantity is different, enter the correct quantity (red rectangles in figure 109), and in the **Comments** field, enter a reason for the difference (blue rectangles in figure 109).
5. Confirm the order receipt by clicking **OK**; otherwise click **CANCEL** to undo it.

## Medicine Dispensing

The **Medicine dispensing** menu allows you to check and record medicine dispensing to patients. Dispensing registration is done for a patient for a specific period of the selected month, the quantity dispensed registered (according to the medicine unit), and the number of days of dispensing during the period.

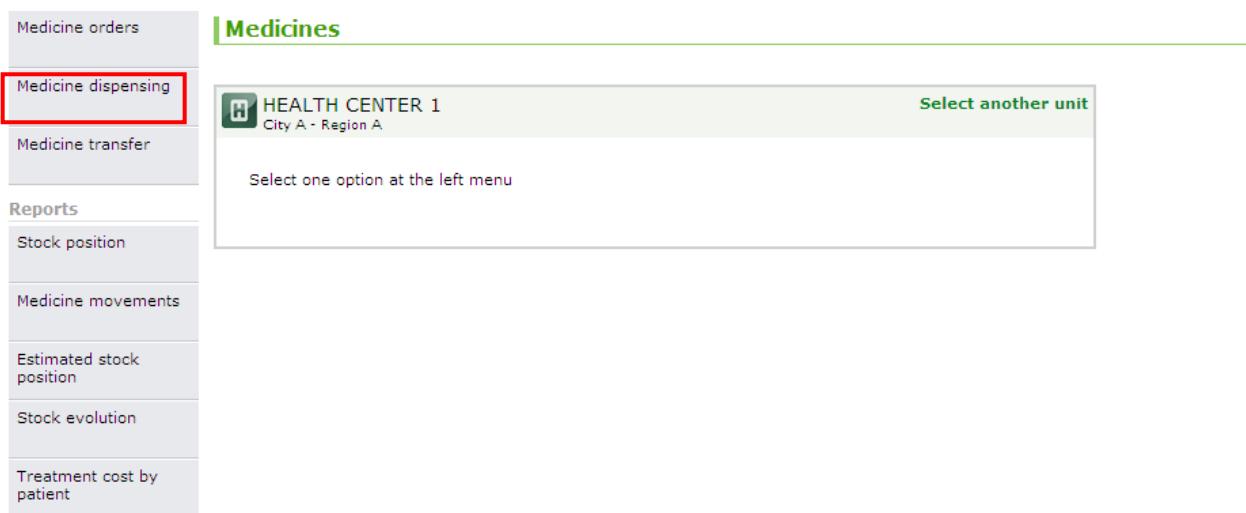
### How to Initiate Batch Reservation

Each time a dispensing event is registered, the system generates a stock dispensing movement for the TB unit, decreasing the dispensed quantity from the current quantity of each medicine. Since every stock movement requires the medicine batches involved, when generating the dispensing movement, the system must somehow find out which batches were used for dispensing; that is the purpose of the **Reserved batches** command.

When reserving batches, you inform the system that these batches will be used just for dispensing and not, for example, for delivery to their health units. When generating dispensing movements, the system will automatically pick a reserved batch (using the FEFO criterion) to be used for the movement transaction.

### How to Record Medicine Dispensing

At the **Medicines** main page, click on **Medicine dispensing** (red rectangle on figure 110).



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**Figure 110**

The **Medicine dispensing** screen shows, for the month indicated, the dispensed quantities of the medicines displayed, grouped by the source of the medicines (see figure 111).

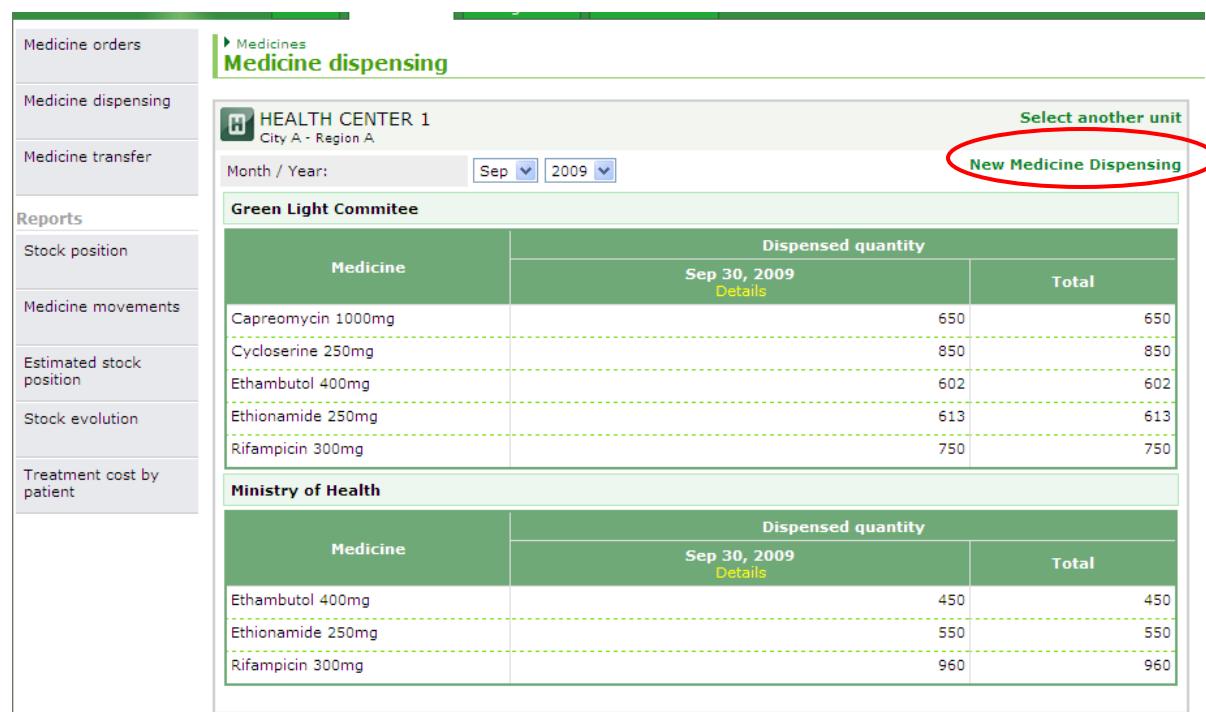


Figure 111

To enter new dispensing information, follow this procedure:

1. Click on **New Medicine Dispensing** (circled in red on figure 111).
2. The **Enter dispensing** window (figure 112) shows the list of medicines for that health unit, grouped by source of medicines.
3. To calculate the quantities to dispense, enter the beginning and end dates of the desired period, and click on **Estimate quantity based on dispensing to patient**. The system will calculate the figure for each medicine.
4. You may click on **Select batches** to specify which batch from which to draw the quantity.

## Enter dispensing

**HEALTH CENTER 1**  
City A - Region A

Initial day:*	1	Jan-2010	Estimate quantity based on dispensing to patient	
Final day:*	31	Jan-2010		
<b>Green Light Committee</b>				
Medicine	Expiration date	Dispensed quantity	Unit price	
Ethambutol 400mg (Tablet)	Jan 01, 2010	300	2.0000	Select batches
Ofloxacin 400mg (Tablets)		0		Select batches
Capreomycin 1000mg (Powder/Vial)		0		Select batches
Cycloserine 250mg (Tablet or Capsule)		0		Select batches
Kanamycin 1000mg (Powder/Vial)		0		Select batches
Streptomycin 1000mg (Powder/Vial)		0		Select batches
Rifampicin 300mg (Tablet or capsule)		0		Select batches
Amikacin 1000mg (Powder/Vial)		0		Select batches
Isoniazid + Rifampicin 75/150mg (Tablet)		0		Select batches
Isoniazid 100mg (Tablet)		0		Select batches

Figure 112

## Medicine Transfer

This option allows a TB unit to register a medicine transfer to another TB unit. The transfer is done in two steps: first, the TB unit that is delivering the medicines registers a new transfer, in which the system creates a new medicine transfer record in the **Wait for receiving** function of the system. Second, when the medicines arrive at the destination TB unit, this unit must complete the **Medicine transfer** function in the system once medicines have arrived, concluding the transfer process.

### How to Access Medicine Transfer

To access a medicine transfer, follow this procedure:

- At the **Medicines** main page in the left menu, click on **Medicine transfer** (red rectangle on figure 113), and information regarding medicine transfer from or to a specified health unit will be shown.

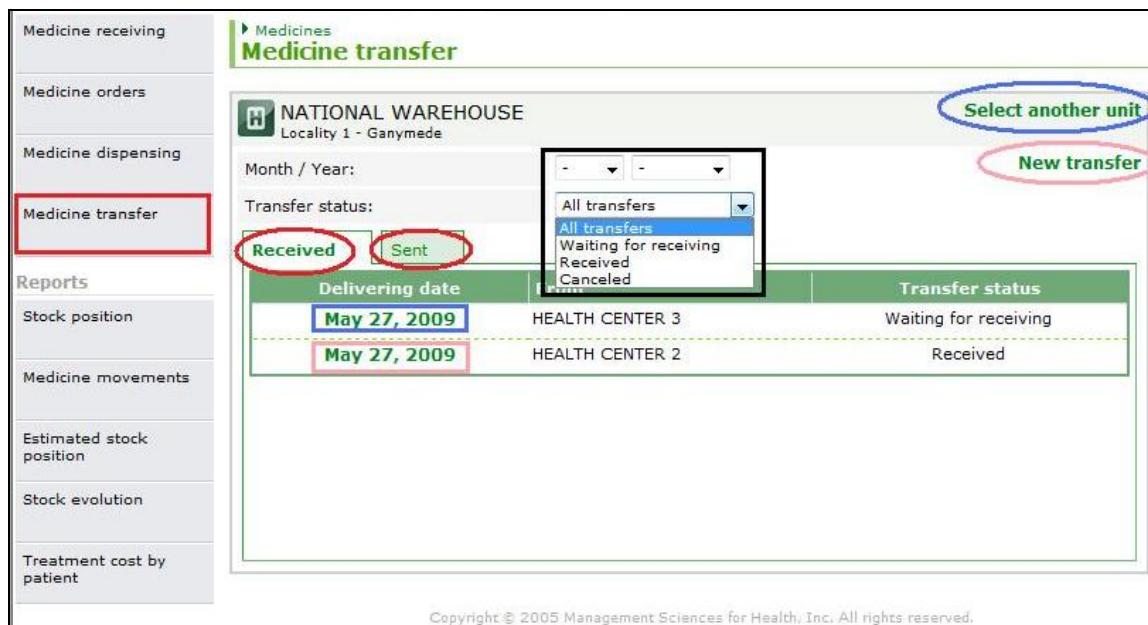


Figure 113

2. At the **Medicine transfer** page, select the specific transfer status option you want (black rectangle in figure 113), and click on **Received** or **Sent** (red circles in figure 113) to change displayed information.
3. You may change the displayed TB unit by clicking on **Select another unit** (blue circle in figure 113).

### How to Access Recorded Medicine Transfers

To access recorded medicine transfers, follow this procedure:

1. Click on the specific link in the **Delivering date** column (figure 113), which calls up the **Transfer status** in the far right column (figure 113) as **Waiting for receiving** (now shown at the blue rectangle on figure 114), and the transfer details are shown (figure 114).
2. On the **Transfer details** page, click on **Notify receiving** at the left menu (red box on figure 114) to record that this transfer was concluded.
3. If you want a printable version of the transfer details report, click on **Print this page** (black rectangle on figure 114).

Notify receiving

► Medicines ► Medicine transfer  
Transfer details

**From:** H HEALTH CENTER 3      **To:** H NATIONAL WAREHOUSE

**Delivering date:** May 27, 2009  
**By:** Luiz Fernando Avelino Reciolino

Transfer status: Waiting for receiving

[Print this page](#)

**Transferred medicines**

**Green Light Committee**

Medicine	Expiration date	Delivered Qty	Unit price	Total price	Received Qty
Capreomycin 1000mg (Powder/Vial)		500	1.3333	666.67	0
61800 WWW Laboratories	Jan 01, 2010	500	1.3333	666.67	
Ethionamide 250mg (Tablets)		500	0.7500	375.00	0
87163 WWW Laboratories	Jan 01, 2010	500	0.7500	375.00	
Ofloxacin 400mg (Tablets)		500	1.5000	750.00	0
84907 Lab Test	Jan 01, 2010	500	1.5000	750.00	
Pyrazinamide 400mg (Tablet)		500	1.5000	750.00	0
52188 Lab Test	Jan 01, 2010	500	1.5000	750.00	

Figure 114

4. Back at the **Medicine transfers** main page (figure 113), click on the specific link for orders where the column **Delivering date** presents as **Received** in the **Transfer status** column (pink rectangle in figure 113), and the **Transfer details** are shown (figure 115).
5. If you want a printable version of the transfer details report, click on **Print this page** (red rectangle in figure 115).

► Medicines ► Medicine transfer  
Transfer details

**From:** H HEALTH CENTER 2      **To:** H NATIONAL WAREHOUSE

**Delivering date:** May 27, 2009  
**By:** Luiz Fernando Avelino Reciolino

**Receiving date:** May 27, 2009  
**By:** Luiz Fernando Avelino Reciolino

Transfer status: Received

[Print this page](#)

**Transferred medicines**

**Green Light Committee**

Medicine	Expiration date	Delivered Qty	Unit price	Total price	Received Qty
Rifampicin 300mg (Tablet or capsule)		150	0.3333	50.00	150
25474 MSH Labs	Jan 01, 2010	150	0.3333	50.00	150

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Figure 115

### How to Record a New Medicine Transfer

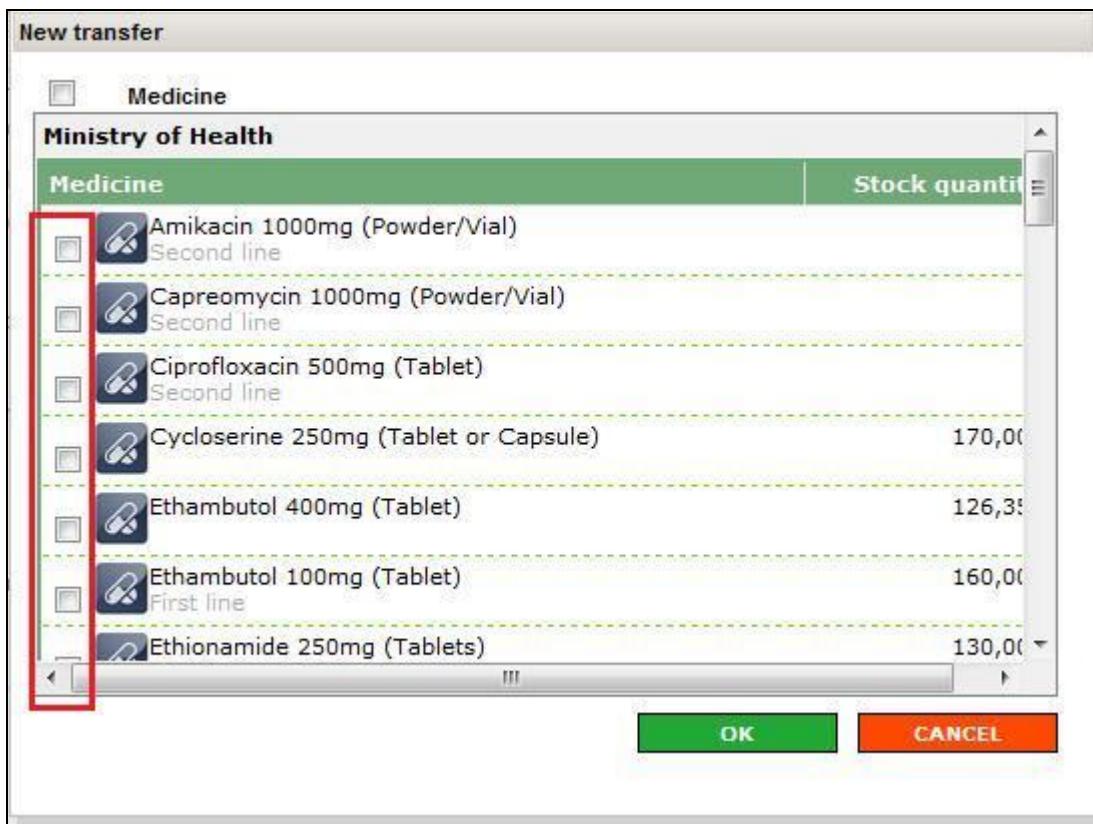
To record a new medicine transfer, follow this procedure:

1. At the **Medicine transfer** main page (figure 113), click on **New transfer** (pink circle on figure 113).
2. At the **New transfer** page go to the **Destination TB Unit** field, and select the region and the health unit that will receive the medicines (red rectangle on figure 116).
3. In the **Reference date** field, enter the specific date related to this transfer (blue rectangle on figure 116).
4. Click on **Select medicines** to include medicines to be transferred (red circle on figure 116).

The screenshot shows a software application window titled 'New transfer'. At the top left is a logo for 'NATIONAL WAREHOUSE' with the subtext 'Locality 1 - Ganymede'. Below the title bar is a section labeled 'Destination TB Unit' containing a dropdown menu for 'Region:' which is highlighted with a red rectangle. Next is a 'Reference date:' field with a date input box and a calendar icon, also highlighted with a blue rectangle. A 'Comments:' text area follows. At the bottom right of the form is a button labeled 'Select medicines' enclosed in a red oval. Below the form, a note states '\* Value is required'.

Figure 116

5. In the displayed window (figure 117), click the medicines (small boxes next to each medicine) to be included in the transfer, and click on **OK** to confirm or **CANCEL** to undo it.



**Figure 117**

6. At the **New transfer** page (figure 118) click on **Delete** to exclude the medicine previously selected for transfer (blue circle on figure 118).
7. Click on **Select batches** to include specific batches to be transferred (red circle on figure 118).

**New transfer**

**NATIONAL WAREHOUSE**  
Locality 1 - Ganymede

**Destination TB Unit**

Region:\*

Name:\*

Reference date:\*  (mm/dd/yyyy)

Comments:

**Transferred medicines**

					Select medicines
Global Drug Facility					
Medicine	Expiration date	Quantity	Unit price	Total price	
Amikacin 1000mg (Powder/Vial)		1,000	0.5000	500.00	<b>Select batches</b> <b>Delete</b>
22333 SPS Lab	Jan 01, 2010	1,000	0.5000	500.00	
Ministry of Health					
Medicine	Expiration date	Quantity	Unit price	Total price	
Amikacin 1000mg (Powder/Vial)		0	0.0000	0.00	<b>Select batches</b> <b>Delete</b>
Ethambutol 400mg (Tablet)		76,356	1.5239	116,356.00	<b>Select batches</b> <b>Delete</b>
17148 Lab Test	Jan 01, 2010	56,356	1.0000	56,356.00	
90493 Lab Test	Jan 01, 2010	20,000	3.0000	60,000.00	
Ethambutol 100mg (Tablet)		0	0.0000	0.00	<b>Select batches</b> <b>Delete</b>

**\* Value is required**

**OK**   **CANCEL**

Figure 118

8. In the **Reserved batches** window displayed (figure 119), click on the batches to be included in the transfer (red rectangle on figure 119), and enter the required medicine unit quantity in the blank box to the right of the **Quantity** displayed for each batch selected (blue rectangle on figure 119). Click on **OK** to confirm or **CANCEL** to undo it.

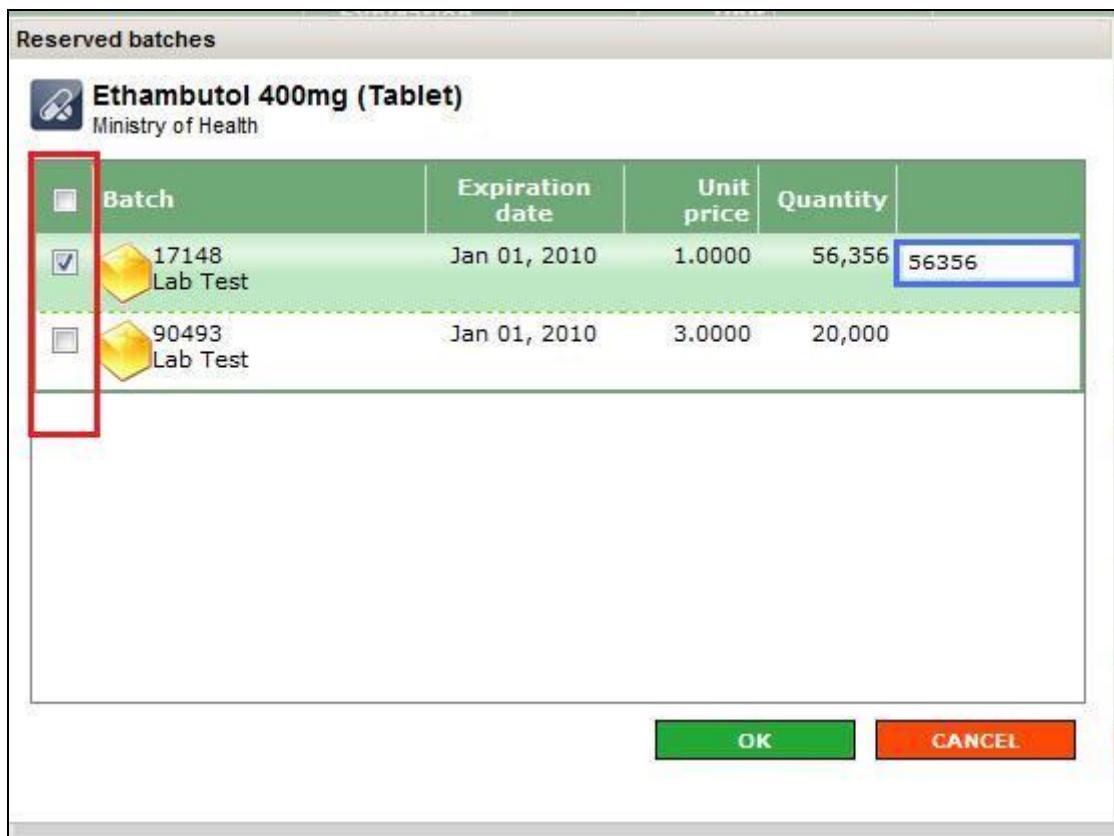


Figure 119

9. At the **New transfer** page (figure 120), the medicines and respective batches previously selected for transfer are displayed.
10. Click on **Select batches** to include additional batches in the transfer (red rectangle on figure 120).
11. Click on **Delete** to exclude the medicine previously selected and all related batches (blue rectangle on figure 120).
12. Click on **OK** to confirm the new transfer or **CANCEL** to undo it.

### New transfer

**NATIONAL WAREHOUSE**  
Locality 1 - Ganymede

**Destination TB Unit**

Region:\*

Name:\*

Reference date:\*  (mm/dd/yyyy)

Comments:

**Transferred medicines** Select medicines

Global Drug Facility				
Medicine	Expiration date	Quantity	Unit price	Total price
Amikacin 1000mg (Powder/Vial)		1,000	0.5000	500.00
22333 SPS Lab	Jan 01, 2010	1,000	0.5000	500.00

Ministry of Health				
Medicine	Expiration date	Quantity	Unit price	Total price
Amikacin 1000mg (Powder/Vial)		0	0.0000	0.00
Ethambutol 400mg (Tablet)		56,356	1.0000	56,356.00
17148 Lab Test	Jan 01, 2010	56,356	1.0000	56,356.00
Ethambutol 100mg (Tablet)		0	0.0000	0.00

**Select batches** Delete

**Select batches** Delete

**Select batches** Delete

**Select batches** Delete

**OK** **CANCEL**

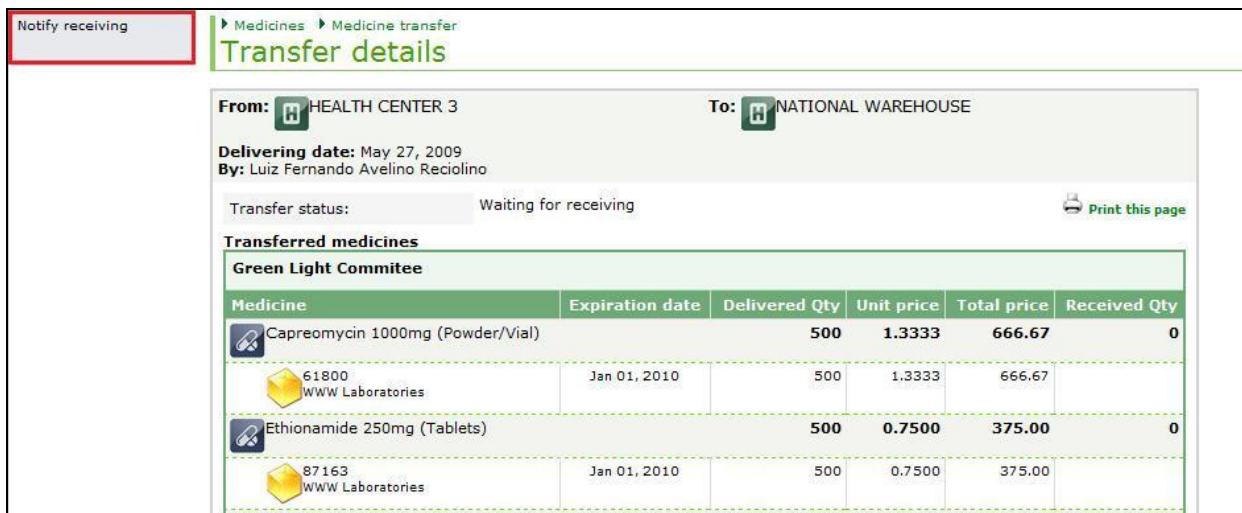
\* Value is required

Figure 120

## How to Record Medicine Receiving from a Transfer

To record medicine receiving from a transfer, follow this procedure:

1. At the **Medicine transfer** page (figure 113), select the transfer record corresponding with the transfer status **Waiting for Receiving**.
2. At the **Transfer details** page of the medicine transfer, click on **Notify receiving** (red rectangle in figure 121).



The screenshot shows the 'Transfer details' page of the e-TB Manager system. At the top left, there is a red box highlighting the 'Notify receiving' button. The page header includes 'Medicines' and 'Medicine transfer'. The main content area is titled 'Transfer details' and shows transfer information between 'HEALTH CENTER 3' and 'NATIONAL WAREHOUSE'. It includes fields for 'Delivering date' (May 27, 2009) and 'By' (Luiz Fernando Avelino Reciolino). The 'Transfer status' is listed as 'Waiting for receiving'. On the right, there is a 'Print this page' link. Below this, under 'Transferred medicines', there is a section titled 'Green Light Committee' containing a table of transferred items.

Medicine	Expiration date	Delivered Qty	Unit price	Total price	Received Qty
Capreomycin 1000mg (Powder/Vial)		500	1.3333	666.67	0
61800 WWW Laboratories	Jan 01, 2010	500	1.3333	666.67	
Ethionamide 250mg (Tablets)		500	0.7500	375.00	0
87163 WWW Laboratories	Jan 01, 2010	500	0.7500	375.00	

**Figure 121**

3. Check if the **Received Qty** (figure 122) is the same as the **Delivered Qty** (figure 121) as registered in the transfer record.

► Medicines ► Medicine transfer

## Transfer details

**From:** HEALTH CENTER 3      **To:** NATIONAL WAREHOUSE

Delivering date: **May 27, 2009**  
By **Luiz Fernando Avelino Reciolino**

Transfer status: Waiting for receiving

Receiving date: \*  (mm/dd/yyyy)

Comments from the receiving unit:

**Transferred medicines**

Green Light Committee						
Medicine	Expiration date	Delivered Qty	Unit price	Total price	Received Qty	
Capreomycin 1000mg (Powder/Vial)		500	1.3333	666.67	<input type="text"/> 500	
61800 WWW Laboratories	Jan 01, 2010	500	1.3333	666.67	<input type="text"/> 500	
Ethionamide 250mg (Tablets)		500	0.7500	375.00	<input type="text"/> 500	
87163 WWW Laboratories	Jan 01, 2010	500	0.7500	375.00	<input type="text"/> 500	
Ofloxacin 400mg (Tablets)		500	1.5000	750.00	<input type="text"/> 500	
84907 Lab Test	Jan 01, 2010	500	1.5000	750.00	<input type="text"/> 500	

Figure 122

4. If the quantities are not identical, adjust the **Received Qty** (red rectangle on figure 122), and record the reason for the difference in the **Comments from the receiving unit** field.
5. Click on **OK** to confirm the operation and the respective transfer will move to **Received** status. Otherwise, click on **CANCEL** to undo it.

## Stock Position

The stock position report displays the quantity of each medicine stocked at the selected TB unit at the time the report is generated by the system. The report is available by medicine source (e.g., GDF or MoH), and for each source, a listing is displayed of medicines in stock with their current quantities, the last time the medicine was issued, and the next batch of the medicine to expire.

The last table of the report displays a consolidated listing of medicines from all sources.

## How to Access Stock Position

To assess stock position, follow this procedure:

1. Click on **Stock position** in the left menu on the **Medicines** main page (red rectangle on figure 123), and the existing stocks of all medicines available in a specific health unit and classified by source will be displayed.

Medicine	Quantity	Total price	Last movement	Next batch to expire
Amikacin 1000mg (Powder/Vial)	110,000	100,000.00	Jan 01, 2009	Jan 01, 2010
Capreomycin 1000mg (Powder/Vial)	140,000	140,000.00	Jan 01, 2009	Jan 01, 2010
Ciprofloxacin 500mg (Tablet)	130,000	170,000.00	Jan 01, 2009	Jan 01, 2010
Cycloserine 250mg (Tablet or Capsule)	170,000	120,000.00	Jan 01, 2009	Jan 01, 2010
Ethambutol 100mg (Tablet)	160,000	150,000.00	Jan 01, 2009	Jan 01, 2010
Ethambutol 400mg (Tablet)	126,356	3,644.00	Apr 21, 2009	Jan 01, 2010
Ethionamide 250mg (Tablets)	130,000	180,000.00	Jan 01, 2009	Jan 01, 2010
Isoniazid 100mg (Tablet)	110,000	130,000.00	Jan 01, 2009	Jan 01, 2010
Isoniazid 300mg (Tablet)	126,102	1,299.33	Apr 21, 2009	Jan 01, 2010
Isoniazid + Ethambutol 150/400mg (Tablet)	130,000	120,000.00	Jan 01, 2009	Jan 01, 2010
Isoniazid + Rifampicin 75/150mg (Tablet)	130,000	130,000.00	Jan 01, 2009	Jan 01, 2010
Isoniazid + Thioacetazone 300/150mg (Tablet)	140,000	90,000.00	Jan 01, 2009	Jan 01, 2010
Kanamycin 1000mg (Powder/Vial)	120,000	140,000.00	Jan 01, 2009	Jan 01, 2010
Oflloxacin 400mg (Tablets)	140,000	100,000.00	Jan 01, 2009	Jan 01, 2010
P-Aminosalicylic Acid 4000mg (Granules/Packet)	130,000	100,000.00	Jan 01, 2009	Jan 01, 2010
Pyrazinamide 400mg (Tablet)	120,000	130,000.00	Jan 01, 2009	Jan 01, 2010

Figure 123

2. To have a report detailed by medicine batch, click the box **Batch** (red arrow on figure 124), and click the **UPDATE** button (red rectangle on figure 124).
3. To print the stock position information, click on **Print this page** above the update button (figure 124).
4. The report is initially sorted by medicine name. To change the sorting (for example, by expiration date), click on the column titles in the table header (blue rectangle on figure 124).

**Stock position**

NATIONAL WAREHOUSE  
Locality 1 - Ganymede

Medicine Source:

Batch:

Select another unit

**Global Drug Facility**

Medicine	Quantity	Total price	Last movement	Next batch to expire
Amikacin 1000mg (Powder/Vial)	1,000	500.00	Apr 20, 2009	Jan 01, 2010
Ethambutol 400mg (Tablet)	2,000	400.00	Apr 20, 2009	Jan 01, 2010

**Green Light Committee**

Medicine	Quantity	Total price	Last movement	Next batch to expire
Amikacin 1000mg (Powder/Vial)	120,000	15,600.00	Mar 02, 2009	Jan 01, 2010
Capreomycin 1000mg (Powder/Vial)	105,383	2,822.67	Apr 21, 2009	Jan 01, 2010
Ciprofloxacin 500mg (Tablet)	90,962	19,515.00	Apr 21, 2009	Jan 01, 2010
Cycloserine 250mg (Tablet or Capsule)	115,056	-1,553.00	Apr 21, 2009	Jan 01, 2010
Ethambutol 100mg (Tablet)	90,000	110,000.00	Jan 01, 2008	Jan 01, 2010
Ethambutol 400mg (Tablet)	126,962	954.00	Apr 21, 2009	Jan 01, 2010

Figure 124

### How to Adjust Stock Quantities

If you discover that the quantity registered in the system is different from the real quantity in stock, you will need to adjust the quantity recorded in the system. Follow the instructions below:

1. At the **Stock position** main page, click on **Adjust quantity** below the **Update** link (figure 123), and the **Adjust quantity** page will be displayed (figure 125).
2. Find the medicine for which you need to adjust the quantity, and click on **Change quantity**, located on the same row as the medicine in the **Action** column (figure 125).

**Adjust quantity**

Medicine	Expiration date	Registered quantity	New quantity	Action
Amikacin 1000mg (Powder/Vial)		120,000		Change quantity
Capreomycin 1000mg (Powder/Vial)		105,383		Change quantity
Cycloserine 250mg (Tablet or Capsule)		115,056		Change quantity
Ethambutol 400mg (Tablet)		126,962		Change quantity
Ethionamide 250mg (Tablets)		133,999		Change quantity
Isoniazid 100mg (Tablet)		170,000		Change quantity
Isoniazid + Rifampicin 75/150mg (Tablet)		100,000		Change quantity
Kanamycin 1000mg (Powder/Vial)		79,987		Change quantity
Ofloxacin 400mg (Tablets)		94,908		Change quantity
P-Aminosalicylic Acid 4000mg (Granules/Packet)		90,000		Change quantity
Pyrazinamide 400mg (Tablet)		53,735		Change quantity
Rifampicin 300mg (Tablet or capsule)		105,150		Change quantity
Streptomycin 1000mg (Powder/Vial)		100,000		Change quantity

**OK**    **CANCEL**

**Figure 125**

- The system will display a list of available batches. Select the batches for which you need to change the quantities by clicking in the box beside the batch number (figure 126).

The screenshot shows a software interface titled 'Adjust quantity'. At the top left is a logo for 'NATIONAL City A - Res' and a 'Medicine Source' section listing various medicines like Amikacin 100, Ethambutol 400, Isoniazid 100, etc. The main area is titled 'Reserved batches' and shows a list for 'Ethambutol 400mg (Tablet)' from 'Global Drug Facility'. The list includes columns: Batch, Expiration date, Unit price, Quantity, and New quantity. One row is selected with a checked checkbox, showing '33222 MSH Lab' with an expiration date of Jan 01, 2010, a unit price of 0.2000, a current quantity of 2,000, and a new quantity of 2000 entered in the input field. Other rows include '22981 MSH Labs' (exp. Jun 01, 2010, unit price 1.2500, quantity 40,000), '38740 WWW Laboratories' (exp. Apr 01, 2011, unit price 1.0000, quantity 40,000), and '64456 Moon creating' (exp. Oct 01, 2011, unit price 1.5000, quantity 40,000). On the right side, there is a vertical column of buttons labeled 'ge quantity' repeated eight times, followed by 'CANCEL' and 'OK' buttons at the bottom.

Batch	Expiration date	Unit price	Quantity	New quantity
33222 MSH Lab	Jan 01, 2010	0.2000	2,000	2000
22981 MSH Labs	Jun 01, 2010	1.2500	40,000	
38740 WWW Laboratories	Apr 01, 2011	1.0000	40,000	
64456 Moon creating	Oct 01, 2011	1.5000	40,000	

Figure 126

- When selecting the batch, the system displays an input field (white box next to the recorded quantity of the batch) with the current quantity. Enter the new quantity to be adjusted, and click on **OK** to confirm or **CANCEL** to undo it (figure 126).
- When all medicine quantities have been adjusted, click on **OK** to confirm the operation or **CANCEL** to undo it (figure 126).
- At the **Adjust quantity** page, the system will display the total **New quantity** and **Registered quantity** for each batch by medicine name (red rectangle on figure 127). You must enter the reason for the observed difference in the **Comments** field (red circle on figure 127) before concluding the adjustment. (A comment inserted here might be, for example, “quantity inventoried” or “lost due to flooding.”) Click on **OK** to confirm the operation or **CANCEL** to undo it.

## Adjust quantity

**HEALTH CENTER 1**  
City A - Region A

Medicine Source: Green Light Committee

Medicine	Expiration date	Registered quantity	New quantity	Action
Capreomycin 1000mg (Powder/Vial)		28,032	27,649	Change quantity
Comments:		20,383	20,000	
61800 WWW Laboratories	Jan 01, 2010			
Cycloserine 250mg (Tablet or Capsule)		43,539		Change quantity
Ethambutol 400mg (Tablet)		37,000		Change quantity
Ethionamide 250mg (Tablets)		27,000		Change quantity
Isoniazid 100mg (Tablet)		48,680		Change quantity
Ofloxacin 400mg (Tablets)		0		Change quantity
Pyrazinamide 500mg (Tablet)		5,000		Change quantity
Rifampicin 300mg (Tablet or capsule)		33,030		Change quantity

**OK**    **CANCEL**

Figure 127

## How to Check Medicine Movements

The **Medicine movements** report allows you to check all stock movements that have occurred in the selected TB unit in chronological order. It is a good way to track every medicine transaction from a specific date back. You also have the option to display this report as movements by specific medicine batches in more detail.

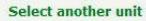
## How to Access Medicine Movements

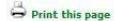
To access medicine movements, follow this procedure:

- At the **Medicines** main page, click on **Medicine movements** (red rectangle on figure 128), and all movements that have occurred up to the reference date are shown in chronological order. You may change the displayed TB unit by clicking on **Select another unit**. The quantities received are displayed in black and the quantities issued are displayed in red as negative numbers.

Medicine receiving  Medicine movements

Medicine orders  NATIONAL WAREHOUSE  
Locality 1 - Ganymede

Medicine dispensing 

Medicine transfer 

Reports  05/27/2009 

Stock position 

\* Value is required

Resulting: 1 - 40 Of 68

Date	Medicine	Medicine Source	Movement type	Movement quantity	Unit price	Total price	Stock quantity
Apr 21, 2009	Ethambutol 400mg (Tablet)	Ministry of Health	Medicine order delivery	-3,644	1.0000	3,644.00	126,356
Apr 21, 2009	Oflloxacin 400mg (Tablets)	Green Light Committee	Medicine order delivery	-9,192	1.5000	13,788.00	94,908
Apr 21, 2009	Pyrazinamide 400mg (Tablet)	Green Light Committee	Medicine order delivery	-15,465	1.3987	21,631.21	53,735
Apr 21, 2009	Ciprofloxacin 500mg (Tablet)	Green Light Committee	Medicine order delivery	-1,590	2.5000	3,975.00	90,962
Apr 21, 2009	Isoniazid 300mg (Tablet)	Ministry of Health	Medicine order delivery	-3,898	0.3333	1,299.33	126,102
Apr 21, 2009	Ethambutol 400mg (Tablet)	Green Light Committee	Medicine order delivery	-1,590	0.6000	954.00	126,962
Apr 21, 2009	Capreomycin 1000mg (Powder/Vial)	Green Light Committee	Medicine order delivery	-3,117	1.3333	4,155.99	105,383
Apr 21, 2009	Ethionamide 250mg (Tablets)	Green Light Committee	Medicine order delivery	-9,279	0.7500	6,959.25	133,999
Apr 21, 2009	Cycloserine 250mg (Tablet or Capsule)	Green Light Committee	Medicine order delivery	-6,894	0.5000	3,447.00	115,056
Apr 20, 2009	Ethambutol 400mg (Tablet)	Global Drug Facility	Medicine receiving from source	2,000	0.2000	400.00	2,000
Apr 20, 2009	Amikacin 1000mg (Powder/Vial)	Global Drug Facility	Medicine receiving from source	1,000	0.5000	500.00	1,000
Mar 22, 2009	Cycloserine 250mg (Tablet or Capsule)	Green Light Committee	Medicine order delivery	-4,050	0.5000	2,025.00	121,950

Figure 128

2. To change the displayed information, each filter option (red rectangles on figure 128) must be selected; click the arrow in each box next to the filters (red circles) to mark the specific information you want displayed, and click on **UPDATE**. The **Reference date** determines which records are displayed, since only the medicine movements before that date are shown.
3. If you want a printable version of the medicine movements report, click on **Print this page** at top right of the page (figure 128).

## How to Check Estimated Stock Position

Click on **Estimated Stock Position** (left menu on figure 129) for the list of available medicines by source. Select a **Medicine Source** (blue rectangle on figure 129), and click the **UPDATE** button to display the information. Change the TB unit by clicking on **Select another unit** (red circle on figure 129) if needed.

Medicine orders	Medicines <b>Estimated stock position</b>																																																																																										
Medicine dispensing																																																																																											
Medicine transfer																																																																																											
Reports																																																																																											
Stock position																																																																																											
Medicine movements																																																																																											
Estimated stock position																																																																																											
Stock evolution																																																																																											
Treatment cost by patient																																																																																											
	<input type="button" value="Print this page"/> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <b>HEALTH CENTER 1</b> City A - Region A           </div> <div style="margin-top: 10px;"> <b>Medicine Source:</b> <input type="button" value="GLC - Green Light Committee"/>  <small>MoH - Ministry of Health GDF - Global Drug Facility</small> </div> <div style="text-align: right; margin-top: 10px;"> <input type="button" value="Select another unit"/> <input type="button" value="UPDATE"/> </div>																																																																																										
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Medicine</th> <th>Stock quantity</th> <th>Last movement</th> <th>Number of days for estimating</th> <th>Number of patients</th> <th>Estimated consumption</th> <th>Estimated quantity in the present day</th> </tr> </thead> <tbody> <tr> <td>Capreomycin 1000mg (Powder/Vial)</td> <td>14,947</td> <td>May 31, 2009</td> <td>22</td> <td>4</td> <td>33</td> <td>14,914</td> </tr> <tr> <td>Cycloserine 250mg (Tablet or Capsule)</td> <td>21,347</td> <td>May 31, 2009</td> <td>22</td> <td>20</td> <td>1,230</td> <td>20,117</td> </tr> <tr> <td>Ethambutol 400mg (Tablet)</td> <td>27,462</td> <td>Apr 30, 2009</td> <td>111</td> <td>170</td> <td>15,330</td> <td>12,132</td> </tr> <tr> <td>Ethionamide 250mg (Tablets)</td> <td>29,256</td> <td>May 31, 2009</td> <td>75</td> <td>68</td> <td>3,732</td> <td>25,524</td> </tr> <tr> <td>Isoniazid 100mg (Tablet)</td> <td>1,144</td> <td>Apr 30, 2009</td> <td>53</td> <td>-</td> <td>0</td> <td>1,144</td> </tr> <tr> <td>Isoniazid + Rifampicin 75/150mg (Tablet)</td> <td>10,000</td> <td>Mar 03, 2009</td> <td>111</td> <td>324</td> <td>62,360</td> <td>0</td> </tr> <tr> <td>Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)</td> <td>10,000</td> <td>Mar 03, 2009</td> <td>111</td> <td>184</td> <td>33,268</td> <td>0</td> </tr> <tr> <td>Ofloxacin 400mg (Tablets)</td> <td>1,352</td> <td>May 31, 2009</td> <td>22</td> <td>54</td> <td>2,028</td> <td>0</td> </tr> <tr> <td>Pyrazinamide 400mg (Tablet)</td> <td>16,620</td> <td>Apr 30, 2009</td> <td>111</td> <td>95</td> <td>13,500</td> <td>3,120</td> </tr> <tr> <td>Rifampicin 300mg (Tablet or capsule)</td> <td>17,918</td> <td>Apr 30, 2009</td> <td>166</td> <td>-</td> <td>0</td> <td>17,918</td> </tr> <tr> <td>Streptomycin 1000mg (Powder/Vial)</td> <td>10,000</td> <td>Mar 03, 2009</td> <td>111</td> <td>42</td> <td>970</td> <td>9,030</td> </tr> </tbody> </table>							Medicine	Stock quantity	Last movement	Number of days for estimating	Number of patients	Estimated consumption	Estimated quantity in the present day	Capreomycin 1000mg (Powder/Vial)	14,947	May 31, 2009	22	4	33	14,914	Cycloserine 250mg (Tablet or Capsule)	21,347	May 31, 2009	22	20	1,230	20,117	Ethambutol 400mg (Tablet)	27,462	Apr 30, 2009	111	170	15,330	12,132	Ethionamide 250mg (Tablets)	29,256	May 31, 2009	75	68	3,732	25,524	Isoniazid 100mg (Tablet)	1,144	Apr 30, 2009	53	-	0	1,144	Isoniazid + Rifampicin 75/150mg (Tablet)	10,000	Mar 03, 2009	111	324	62,360	0	Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)	10,000	Mar 03, 2009	111	184	33,268	0	Ofloxacin 400mg (Tablets)	1,352	May 31, 2009	22	54	2,028	0	Pyrazinamide 400mg (Tablet)	16,620	Apr 30, 2009	111	95	13,500	3,120	Rifampicin 300mg (Tablet or capsule)	17,918	Apr 30, 2009	166	-	0	17,918	Streptomycin 1000mg (Powder/Vial)	10,000	Mar 03, 2009	111	42	970	9,030
Medicine	Stock quantity	Last movement	Number of days for estimating	Number of patients	Estimated consumption	Estimated quantity in the present day																																																																																					
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Streptomycin 1000mg (Powder/Vial)	10,000	Mar 03, 2009	111	42	970	9,030																																																																																					

**Figure 129**

For example (figure 130), the system shows the stock quantity after the last stock movement and, for the patients under treatment, estimates the consumption and the stock position up to the current date for each medicine available at the selected health unit.

At the **Estimated stock position** page (figure 129), click on **Print this page** to send the report to the printer; otherwise, go to another menu item in **Medicines** by clicking on it.

**► Medicines**  
**Estimated stock position**

**HEALTH CENTER 1**  
City A - Region A

Medicine Source: **GDF - Global Drug Facility** \* Value is required

Select another unit

**UPDATE**

**Print this page**

Medicine	Stock quantity	Last movement	Number of days for estimating	Number of patients	Estimated consumption	Estimated quantity in the present day
Ethambutol 400mg (Tablet)	10,000	Mar 03, 2009	111	170	32,655	0
Isoniazid + Rifampicin 75/150mg (Tablet)	10,000	Mar 03, 2009	111	324	62,360	0
Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)	10,000	Mar 03, 2009	111	184	33,268	0
Pirazinamide 400mg (Tablet)	10,000	Mar 03, 2009	111	95	28,392	0
Rifampicin 300mg (Tablet or capsule)	10,000	Mar 03, 2009	111	-	0	10,000
Streptomycin 1000mg (Powder/Vial)	10,000	Mar 03, 2009	111	42	970	9,030

Figure 130

### How to Check Stock Evolution

Click on **Stock Evolution** (left menu on figure 131) for the list of available medicines by source. Select the **Medicine Source** (red rectangle on figure 131), and click on **UPDATE** to show the desired information (figure 131). Change the unit by clicking on **Select another unit** (red circle on figure 131). Change the period to be analyzed by entering the **Initial month/year** and **Final month/year** (blue rectangle on figure 131).

**► Medicines**  
**Stock evolution**

**HEALTH CENTER 1**  
City A - Region A

Medicine Source: **-**

Select another unit

**UPDATE**

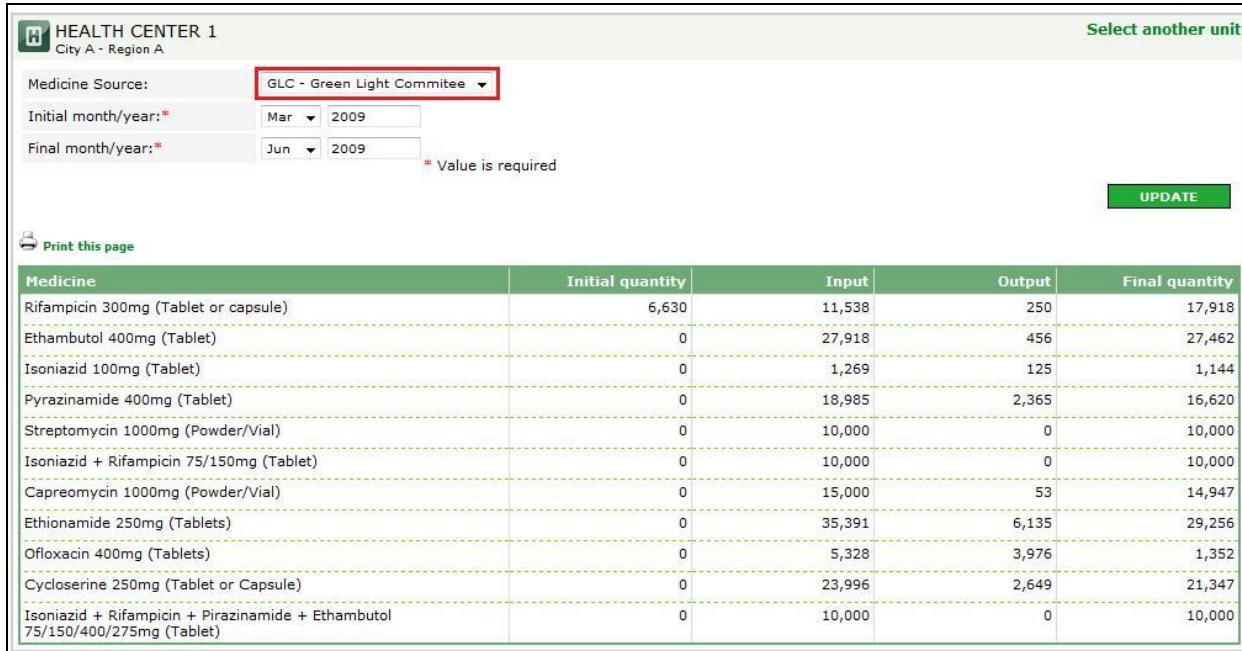
**Print this page**

Medicine	Initial quantity	Input	Output	Final quantity
Rifampicin 300mg (Tablet or capsule)	6,630	11,538	250	17,918
Ethambutol 400mg (Tablet)	0	27,918	456	27,462
Isoniazid 100mg (Tablet)	0	1,269	125	1,144
Pirazinamide 400mg (Tablet)	0	18,985	2,365	16,620
Streptomycin 1000mg (Powder/Vial)	0	10,000	0	10,000
Isoniazid + Rifampicin 75/150mg (Tablet)	0	10,000	0	10,000
Capreomycin 1000mg (Powder/Vial)	0	15,000	53	14,947
Ethionamide 250mg (Tablets)	0	35,391	6,135	29,256
Ofloxacin 400mg (Tablets)	0	5,328	3,976	1,352
Cycloserine 250mg (Tablet or Capsule)	0	23,996	2,649	21,347
Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)	0	10,000	0	10,000

Figure 131

For example (figure 132) the system shows, in the rows, each medicine available at the selected health unit and, in the columns, the **Initial quantity**, the **Input** (i.e., quantities received), and **Output** (i.e., quantities transferred, delivered, or dispensed during the selected period). The last column shows the **Final quantity**, which is the current existing quantity in stock in the TB unit selected.

At the **Stock evolution** page (figure 131), click on **Print this page** to send the report to the printer; otherwise, go to another menu item in **Medicines** by clicking on it.



**HEALTH CENTER 1**  
City A - Region A

Medicine Source: GLC - Green Light Committee

Initial month/year: Mar 2009

Final month/year: Jun 2009

\* Value is required

UPDATE

Print this page

Medicine	Initial quantity	Input	Output	Final quantity
Rifampicin 300mg (Tablet or capsule)	6,630	11,538	250	17,918
Ethambutol 400mg (Tablet)	0	27,918	456	27,462
Isoniazid 100mg (Tablet)	0	1,269	125	1,144
Pyrazinamide 400mg (Tablet)	0	18,985	2,365	16,620
Streptomycin 1000mg (Powder/Vial)	0	10,000	0	10,000
Isoniazid + Rifampicin 75/150mg (Tablet)	0	10,000	0	10,000
Capreomycin 1000mg (Powder/Vial)	0	15,000	53	14,947
Ethionamide 250mg (Tablets)	0	35,391	6,135	29,256
Ofloxacin 400mg (Tablets)	0	5,328	3,976	1,352
Cycloserine 250mg (Tablet or Capsule)	0	23,996	2,649	21,347
Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)	0	10,000	0	10,000

Figure 132

## Treatment Cost by Patient

To determine treatment cost by patient, follow this procedure:

1. Click on **Treatment cost by patient** (left menu on figure 133).
2. Select the **Medicine Source** (red rectangle on figure 133).
3. For the **Treatment start period**, select the **Initial month/year** and **Final month/year** (blue rectangle on figure 133).
4. Click on **UPDATE** to show the selected information (figure 133).
5. Change the TB unit if needed by clicking on **Select another unit** (red circle on figure 133).

Medicine orders  
Medicine dispensing  
Medicine transfer  
Reports  
Stock position  
Medicine movements  
Estimated stock position  
Stock evolution  
Treatment cost by patient

**Treatment cost by patient**

**HEALTH CENTER 1**  
City A - Region A

Medicine Source:

Treatment start period

Initial month/year: \*  2009

Final month/year: \*  2009 \* Value is required

GLC - Green Light Committee  
MoH - Ministry of Health  
GDF - Global Drug Facility

**UPDATE**

Figure 133

- For example (figure 134) the system shows the patients who had started treatment for the selected period at the selected health unit (in rows), their case status at the current date, the treatment period (start and finish dates), the cost of each medicine used, and the total treatment cost (in columns) for each patient. A sum of total costs for all patients is displayed in the last row of the report.

Patient	Case status	Treatment		Cost of the treatment by medicine				TOTAL
		Start date	Finish date	Cs	Eto	Ofx	Cm	
36166-2 Bruce Kunderberg	On treatment	May 25, 2009	May 25, 2010	18.38	0.00	0.00	0.00	18.38
38328 Fábio Souza da Silva	On treatment	Apr 14, 2009	Apr 14, 2011	0.00	53.47	93.00	0.00	146.47
37801-2 Geonory Bernardes	On treatment	Mar 20, 2009	Jun 20, 2009	81.38	0.00	0.00	0.00	81.38
38756 Iraci Xavier	On treatment	Apr 04, 2009	Apr 04, 2011	0.00	53.47	93.00	0.00	146.47
38585 Janete Speed	On treatment	Apr 13, 2009	Jun 13, 2010	0.00	53.47	93.00	0.00	146.47
36437-2 Kimberly Dutra	On treatment	Apr 02, 2009	Apr 02, 2011	0.00	53.47	0.00	17.33	70.81
34941-3 Nuno Dickinson	On treatment	Mar 22, 2009	Mar 22, 2011	0.00	53.47	93.00	0.00	146.47
35909-2 Paulo Boon	On treatment	Mar 28, 2009	Apr 28, 2010	0.00	53.47	93.00	0.00	146.47
38561 Sergey Bastos	On treatment	May 24, 2009	Apr 24, 2011	0.00	13.80	24.00	0.00	37.80
<b>TOTAL</b>				<b>99.75</b>	<b>334.65</b>	<b>489.00</b>	<b>17.33</b>	<b>940.73</b>

Figure 134

- Click on the **Patient** number (red circle on figure 134) to display the case details, and click on **Print this page** (blue rectangle on figure 134) to print the report data displayed.

## CHAPTER 6. MANAGEMENT MODULE

The **Management** module allows you to generate, search and print reports, indicators, medicine forecasting, and to export data.

### How to Access the Management Module

Click on **Management** on the system's main page (highlighted on figure 135), and the **Management** module's main page will appear (figure 136).

The screenshot shows the e-TB Manager interface. At the top, there is a navigation bar with tabs: Cases, Medicines, Management (which is circled in red), and Administration. Below the navigation bar, there is a section titled "TB Management Information System" with four main modules: "Cases" (Allows to search, notify, follow, close, transfer and validate cases), "Medicines" (Allows to record, search, follow and authorize medicines receiving, orders, transfers, dispensing, movements and stock position), "Management" (Allows to generate, search and print reports, indicators, medicine forecasting and data exportation), and "Administration" (Allows to manage the system in order to add, remove and change users, health system structure, medicines, treatment regimens and other features). On the left side, there is a sidebar with user information: Name (Julie Frye), TB Unit (NATIONAL WAREHOUSE), User profile (Central Administrator), User View (Whole country), Local time (24-Mar-2011 15:22:22), Language (English), and Time zone (Fuso horário padrão oriental). The SPS logo and MSH Demo text are also visible at the top right.

Figure 135

At the **Management** main page you will find **Reports**, **Indicators**, and **Tools** available in the system (figure 136).

### Case Management Indicators and Reports

Figure 136 contains a complete list of the indicators, reports, and tools available in this module. The list is subdivided into three groups: the **Case Management Indicators & Reports** (i.e., DR-TB indicators, nine reports), the **Medicine Management Reports** (two reports), and the **Tools** (two instruments to aid in analysis and forecasting). Just click on the link of the specific report you want, and the system will display a page with options to generate this report.

## Management

### Case Management Indicators & Reports

- [Incidence](#)
- [Prevalence](#)
- [TB Treatment Outcomes Report](#)
- [Resistance profile](#)
- [Adverse Reactions to Medicines](#)
- [DR-TB detection and category IV treatment start - WHO form 5](#)
- [Six month interim outcome assessment of confirmed DR-TB cases - WHO Form 6](#)
- [Treatment result of confirmed DR-TB patients starting 2nd line treatment - WHO form 7](#)
- [TB/DR-TB Consolidated report](#)

### Medicine Management Reports

- [Stock position by region](#)
- [Average lead time of medicine orders](#)

### Tools

- [Export TB/DR-TB case data](#)
- [Medicine forecasting](#)

**Figure 136**

## How to Access the DR-TB Indicators

The e-TB Manager contains nine DR-TB indicators, as shown on figure 136. Each indicator is discussed below.

### Incidence

Click on **Incidence** (figure 136), and the screen shown in figure 137 appears. Select the **Context**, the **Period for case selection**, **Other filters**, and the **Output selection** from the drop-down menus. Click on **UPDATE** to show the information (figure 137).

**Figure 137**

For the selected period, the system generates a table with the distribution according to the output selected (with a percentage of the total) and a related chart (figures 138 and 139). If no region is selected, the system calculates the response for the whole country. If a region is chosen, the system calculates the response by locality.

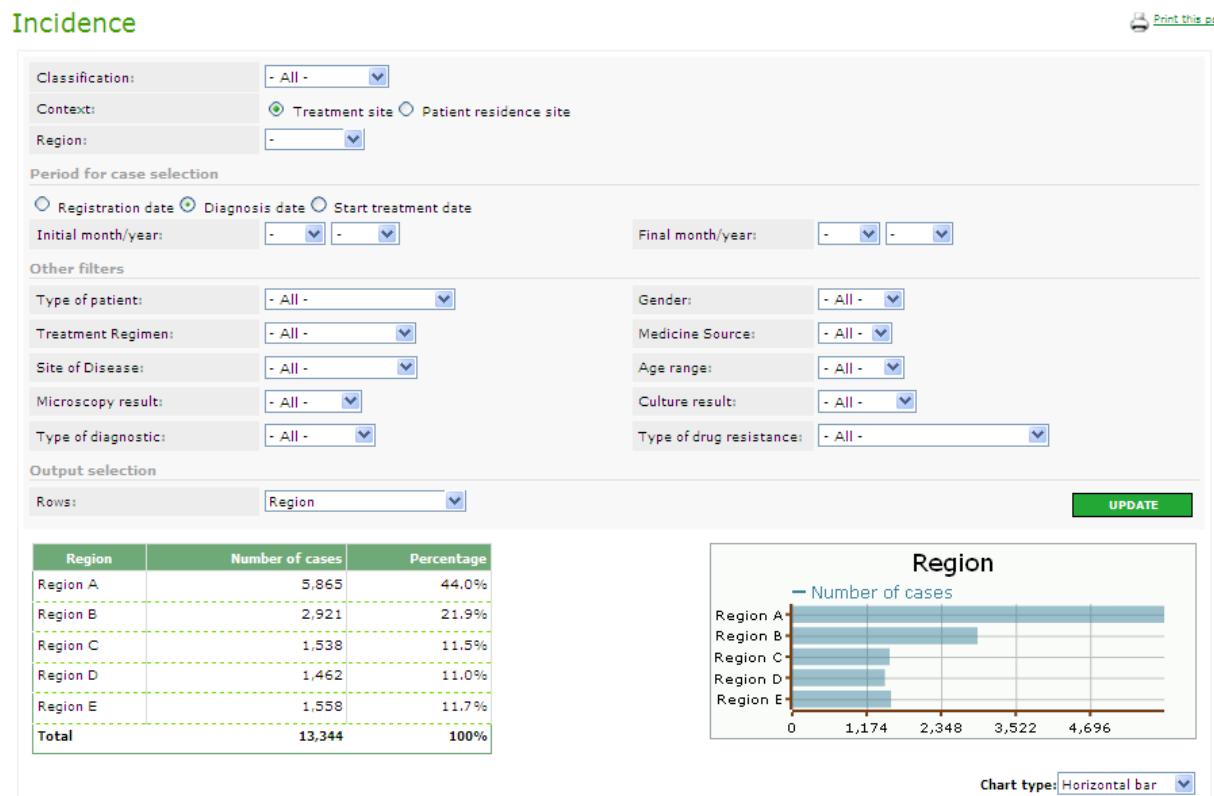


Figure 138

In the **Chart type** field at the bottom of the page (figure 138), select the desired type of chart, and click on **UPDATE**. The data will be exhibited as a horizontal bar chart (figure 139, left) or a pie chart (figure 139, right).

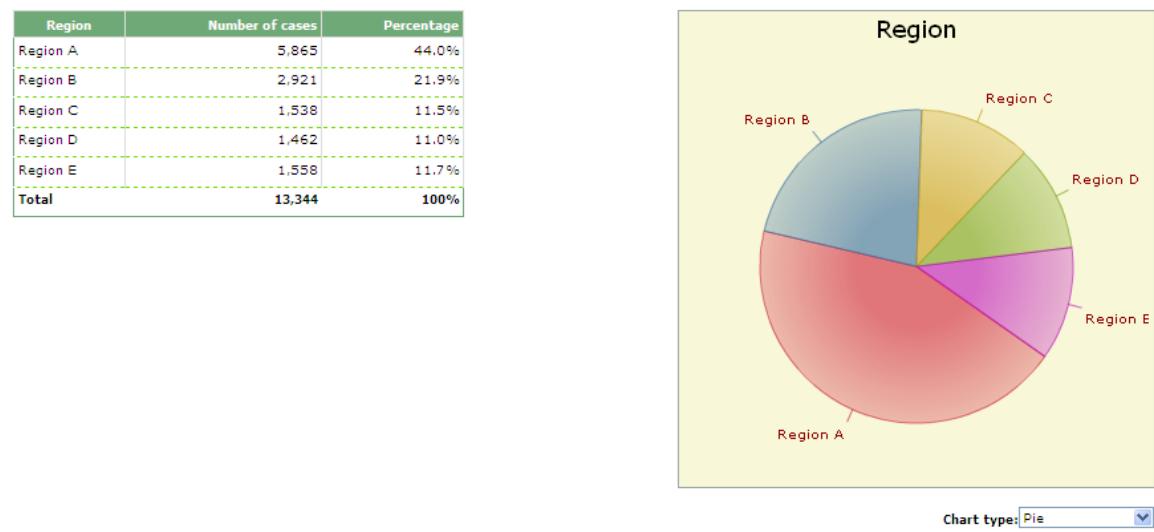


Figure 139

## Prevalence

Click on **Prevalence** (figure 136), and the screen in figure 140 appears. Select the **Context**, the **Period for case selection**, **Other filters** as needed, and the **Output selection** from the drop-down menus. Click on **UPDATE** to show the information (figure 140).

**Prevalence**

 [Print this page](#)

Classification:	- All -		
Context:	<input checked="" type="radio"/> Treatment site <input type="radio"/> Patient residence site		
Region:	-		
<b>Period for case selection</b>			
<input type="radio"/> Registration date <input checked="" type="radio"/> Diagnosis date <input type="radio"/> Start treatment date	Initial month/year: - - -	Final month/year: - - -	
<b>Other filters</b>			
Type of patient:	- All -	Gender:	- All -
Treatment Regimen:	- All -	Medicine Source:	- All -
Site of Disease:	- All -	Age range:	- All -
Microscopy result:	- All -	Culture result:	- All -
Type of diagnostic:	- All -	Type of drug resistance:	- All -
<b>Output selection</b>			
Rows:	Region	<b>UPDATE</b>	

**Figure 140**

For the selected period, the system generates a table with the distribution according to the output selected (with a percentage of the total) and a related chart (figures 141 and 142). If no region is selected, the system calculates the response for the whole country. If a region is chosen, the system calculates the response by locality.

## Prevalence

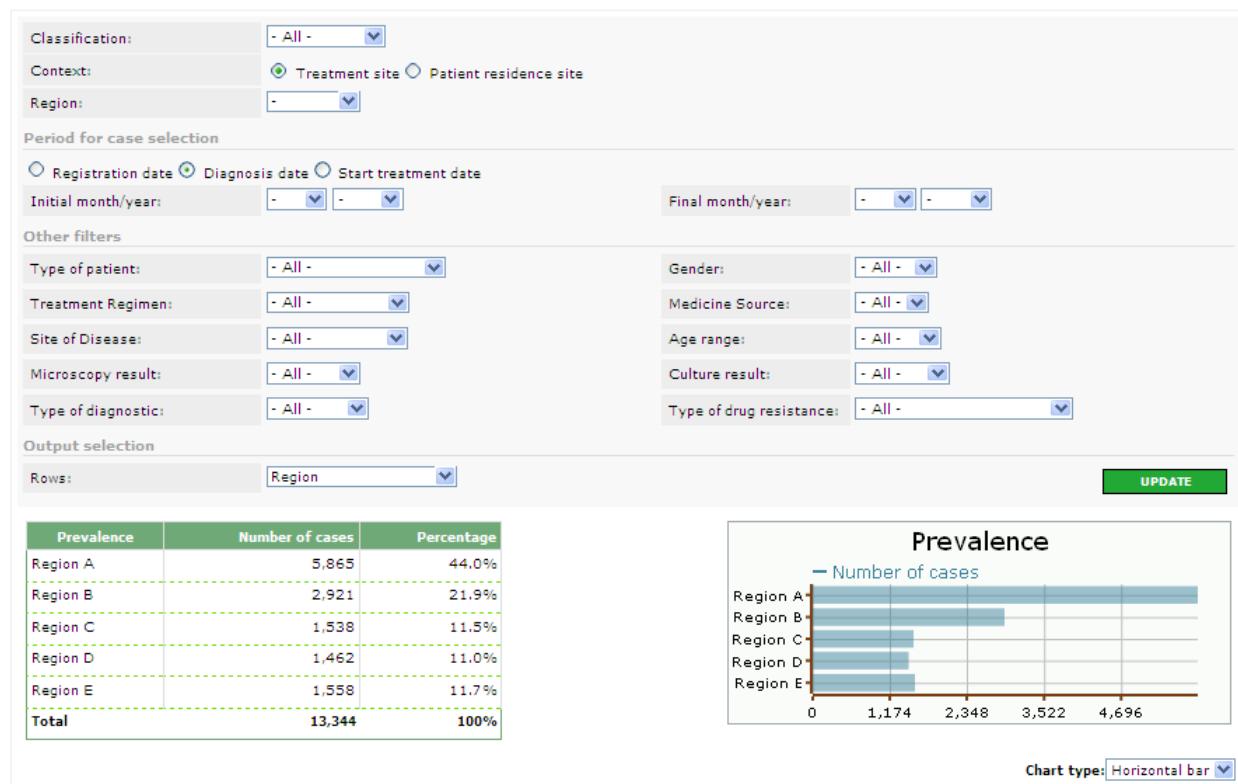
[Print this page](#)


Figure 141

In the **Chart type** field at the bottom of the page (figure 141), select the desired type of chart, and click on **UPDATE**. The data will be exhibited as a horizontal bar chart (figure 142, left) or as a pie chart (figure 142, right).

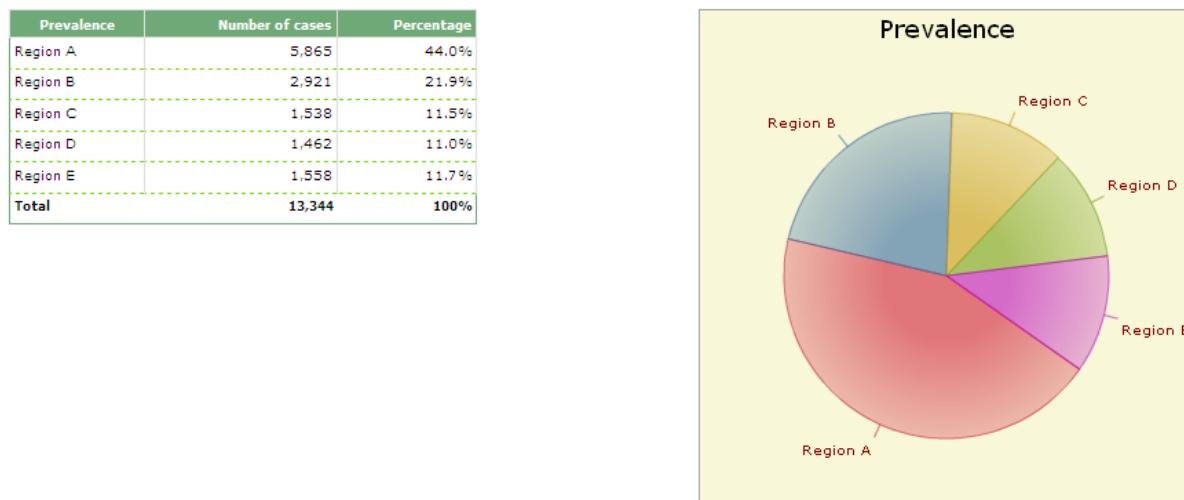


Figure 142

## TB Treatment Outcome Report

Click on **TB Treatment Outcomes Report** (figure 136), and the screen in figure 143 appears. Select the **Context**, the **Period for case selection**, and **Other filters** from the drop-down menus. Click on **UPDATE** to show the information.

**Final treatment outcomes**

 [Print this](#)

Classification:	- All - <input type="button" value="▼"/>	Context:	<input checked="" type="radio"/> Treatment site <input type="radio"/> Patient residence site
Region:	<input type="button" value="▼"/>		
<b>Period for case selection</b>			
<input type="radio"/> Registration date <input checked="" type="radio"/> Diagnosis date <input type="radio"/> Start treatment date Initial month/year: <input type="button" value="▼"/> - <input type="button" value="▼"/>		Final month/year: <input type="button" value="▼"/> - <input type="button" value="▼"/>	
<b>Other filters</b>			
Type of patient:	- All - <input type="button" value="▼"/>	Gender:	- All - <input type="button" value="▼"/>
Treatment Regimen:	- All - <input type="button" value="▼"/>	Medicine Source:	- All - <input type="button" value="▼"/>
Site of Disease:	- All - <input type="button" value="▼"/>	Age range:	- All - <input type="button" value="▼"/>
Microscopy result:	- All - <input type="button" value="▼"/>	Culture result:	- All - <input type="button" value="▼"/>
Type of diagnostic:	- All - <input type="button" value="▼"/>	Type of drug resistance:	- All - <input type="button" value="▼"/>

**Figure 143**

For the selected period the system generates a table with the number of patients who started treatment during the period, a table with the distribution of cases by outcomes (with a percentage of the total), and related charts (figures 144 and 145). The success rate is shown at the bottom of the screen. If no region is selected, the system calculates the response for the whole country.

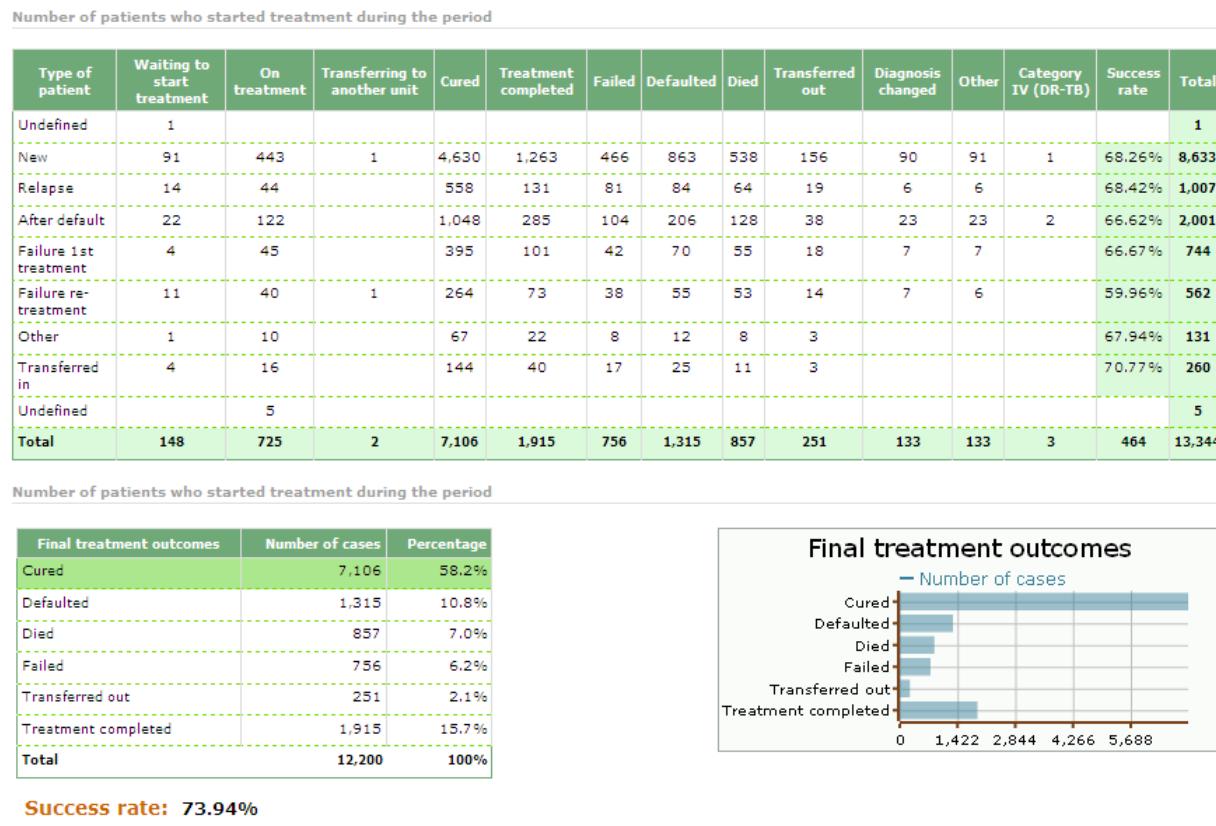
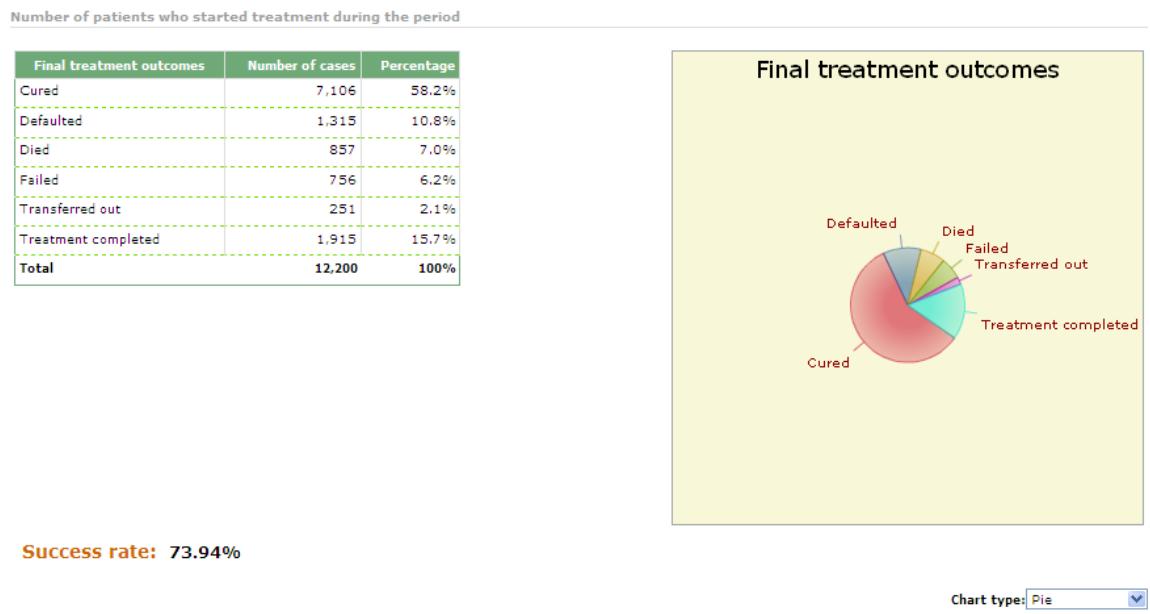


Figure 144

In the **Chart type** field at the bottom of the page (figure 145), select the desired type of chart, and click on **UPDATE**. The data will be exhibited as a bar chart (figure 145, left) or a pie chart (figure 145, right).



**Figure 145**

### Resistance Profile

Click on **Resistance profile** (figure 136), and the screen in figure 146 appears. Select the **Context**, the **Period for case selection**, and **Other filters** from the drop-down menus. Click on **UPDATE** to show the information (figure 147).

**Resistance profile**  Print this page

**Classification:** - All -  

**Context:**  Treatment site  Patient residence site

**Region:**  

**Period for case selection**

Registration date  Diagnosis date  Start treatment date

Initial month/year:   -   Final month/year:   -  

**Other filters**

Type of patient:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>	Gender:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>
Treatment Regimen:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>	Medicine Source:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>
Site of Disease:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>	Age range:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>
Microscopy result:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>	Culture result:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>
Type of diagnostic:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>	Type of drug resistance:	- All - <span style="border: 1px solid #ccc; padding: 2px;"> </span>

**UPDATE**

[Edit resistance profiles](#)

**Figure 146**

For the selected period the system generates a table with the distribution of cases by resistance profile (with a percentage of the total) and a related chart (figures 147 and 148).

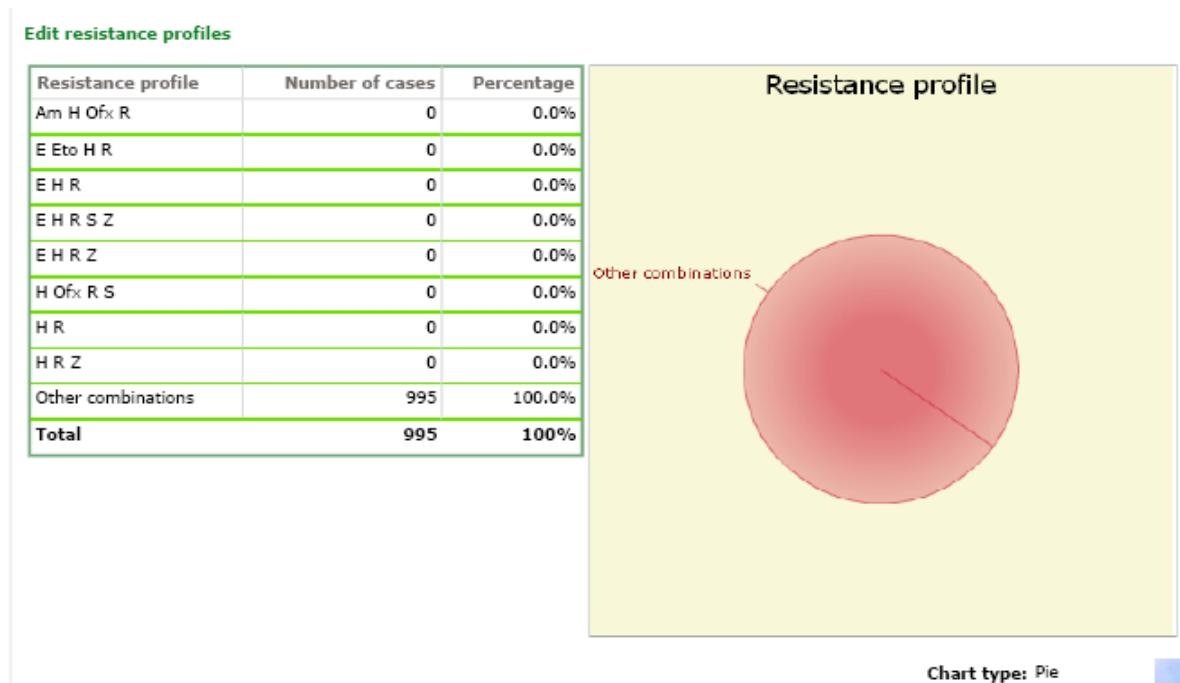


Figure 147

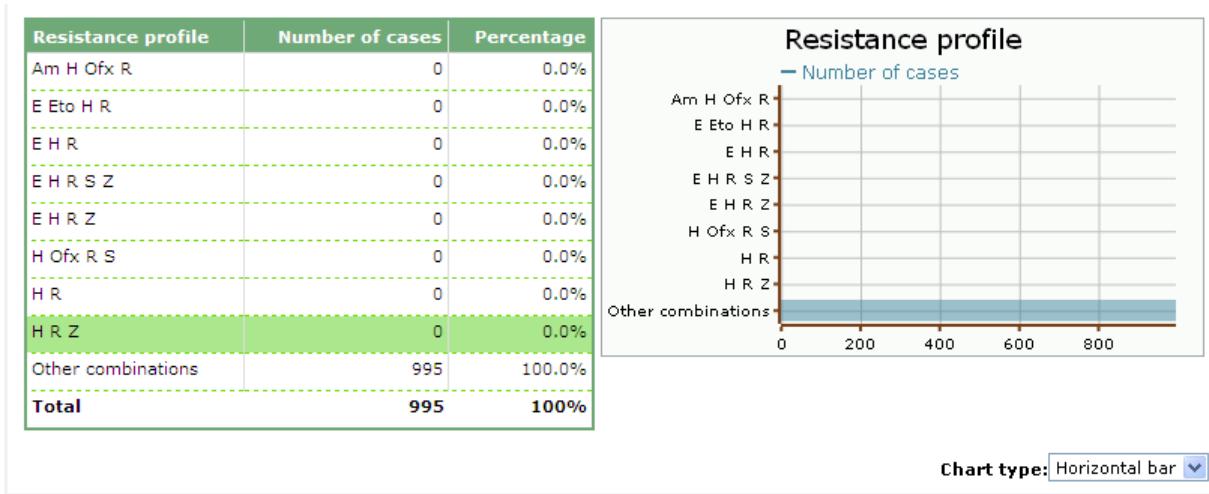


Figure 148

To edit or make a new resistance profile, click on **Edit resistance profiles** (figure 147). Click on **NEW** (figure 149), and the table with the existing resistance profiles appears (figure 150). Check the boxes with the medicines to compose a specific resistance profile. Click on **OK** to accept the changes or **CANCEL** to undo them.

Management ► Resistance profile	
Resistance profile	
NEW	
R Z	Edit Delete
H R	Edit Delete
R S Z	Edit Delete
E H R Z	Edit Delete

Figure 149

New Resistance Profile

Select the medicines to compose the resistance profile:

<input type="checkbox"/> E	Ethambutol
<input type="checkbox"/> Eto	Ethionamide
<input type="checkbox"/> H	Isoniazid
<input type="checkbox"/> Km	Kanamycin
<input type="checkbox"/> Ofx	Ofloxacin
<input type="checkbox"/> PAS	P-Aminosalicylic Acid
<input checked="" type="checkbox"/> R	Rifampicin
<input type="checkbox"/> S	Streptomycin
<input type="checkbox"/> Th	Thioacetazone
<input checked="" type="checkbox"/> Z	Pyrazinamide

OK CANCEL

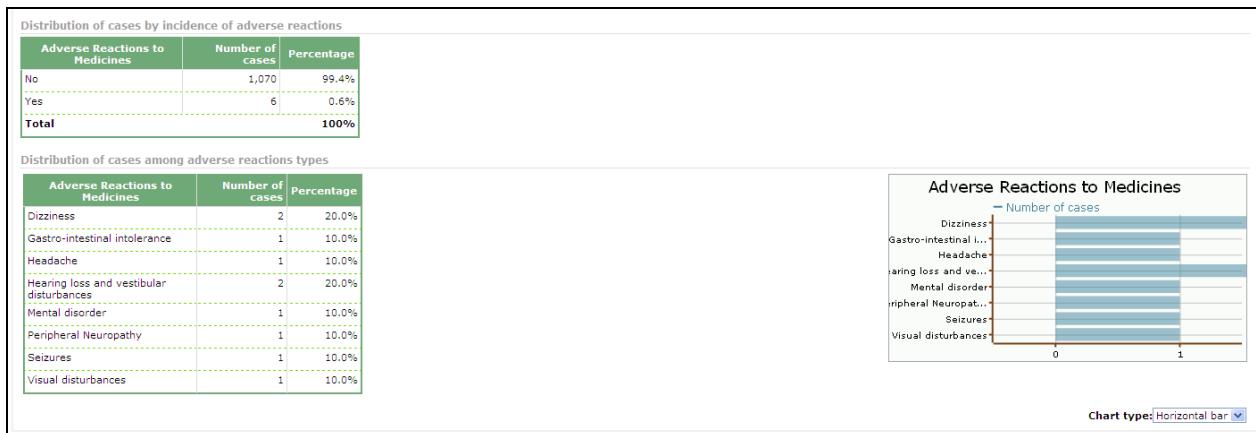
Figure 150

## Adverse Reactions to Medicines

Click on **Adverse Reactions to Medicines** (figure 136), and the screen in figure 151 appears. Select the **Context**, the **Period for case selection**, and **Other filters** from the drop-down menus. Click on **UPDATE** to show the information.

**Figure 151**

For the selected period, the system generates a table with the distribution of cases by incidence of adverse reactions (with a percentage of the total) and a related chart (figures 152 and 153).



**Figure 152**

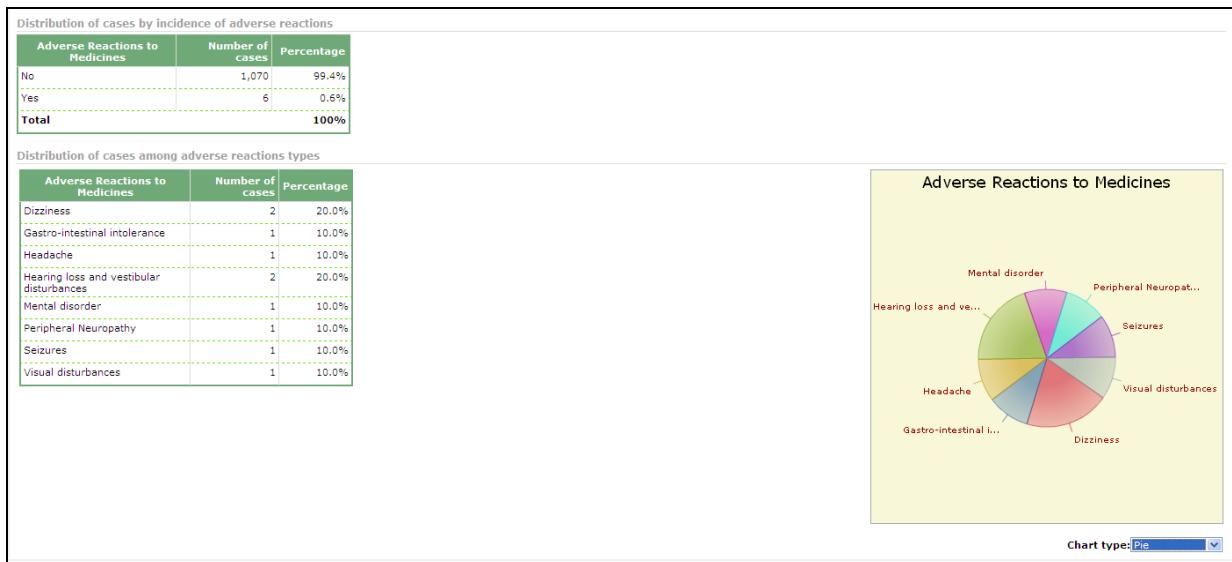


Figure 153

### DR-TB Detection and Category IV Treatment Start—WHO Form 5

Click on **DR-TB detection and category IV treatment start—WHO form 5** (figure 136), and the screen in figure 154 appears. Select the reference period (**Initial month/year** and **Final month/year**) and all the **Other filters** from the drop-down menus. Click on **UPDATE** to generate a table with all information requested (based on the WHO model).

### DR-TB detection and category IV treatment start - WHO form 5

Print this page

**Figure 154**

The results show the type of drug resistance (by number of cases and percentage of total cases) and the number of suspect and confirmed cases previously treated with first- or second-line medicines (figure 155).

#### Number of patients detected during the period

Type of drug resistance	Number of cases	Percentage
Extensive drug-resistance	764	5.7%
Mono-resistance	12,292	92.1%
Multidrug-resistance	244	1.8%
Poly-resistance	2	0.0%
Undefined	42	0.3%
<b>Total</b>	<b>13,344</b>	<b>100%</b>

#### Number of patients who started treatment during the period

	New	Previously treated with first-line drugs	Previously treated with second-line drugs	Total
Suspect	28	2		30
Confirmed	261	15		276
<b>Total</b>	<b>289</b>	<b>17</b>	<b>0</b>	<b>306</b>

**Figure 155**

## Six Month Interim Outcome Assessment of Confirmed DR-TB Cases—WHO Form 6

Click on **Six month interim outcome assessment of confirmed DR-TB cases—WHO Form 6** (figure 136), and the screen in figure 156 appears. Select the reference period (**initial month/year** and **final month/year**) and all the **Other filters** from the drop-down menus. Click on **UPDATE** to generate a table with all information requested (based on the WHO model).

**Six month interim outcome assessment of confirmed DR-TB cases - WHO Form 6**

Classification:

Context:  Treatment site  Patient residence site

Region:

Period for case selection

Registration date  Diagnosis date  Start treatment date

Initial month/year:   Final month/year:

Other filters

Type of patient: <input type="button" value="- All -"/>	Gender: <input type="button" value="- All -"/>
Treatment Regimen: <input type="button" value="- All -"/>	Medicine Source: <input type="button" value="- All -"/>
Site of Disease: <input type="button" value="- All -"/>	Age range: <input type="button" value="- All -"/>
Microscopy result: <input type="button" value="- All -"/>	Culture result: <input type="button" value="- All -"/>
Type of diagnostic: <input type="button" value="- All -"/>	Type of drug resistance: <input type="button" value="- All -"/>

**UPDATE**

**Figure 156**

The results show the number of cases with negative, positive, and unknown bacteriological results at six months of treatment, the number no longer on treatment, and the number transferred out (figure 157).

Cases that started treatment	Bacteriological result at 6 months of treatment			No longer on treatment		Transferred out
	Negative (smear and culture negative)	Positive (smear and/or culture)	Unknown	Died	Defaulted	
1012	289	467	123	133	87	

**Figure 157**

### Treatment Result of Confirmed DR-TB Patients Starting Second-Line Treatment—WHO Form 7

Click on **Treatment result of confirmed DR-TB patients starting 2nd line treatment—WHO form 7** (figure 136), and the screen in figure 158 appears. Select the reference period (**Initial month/year** and **Final month/year**) and all the **Other filters** from the drop-down menus. Click on **UPDATE** to generate a table with all information requested (based on the WHO model).

### Treatment result of confirmed DR-TB patients starting 2nd line treatment - WHO form 7

[Print this page](#)

The screenshot shows a web-based reporting tool for tuberculosis treatment results. At the top, there are dropdown menus for 'Classification', 'Context' (set to 'Treatment site'), and 'Region'. Below these are sections for 'Period for case selection' (with 'Registration date' selected) and 'Other filters' (with various dropdown menus for patient characteristics like gender, age, and treatment history). A prominent green 'UPDATE' button is at the bottom right.

**Figure 158**

The report shows the number of cases that are new, previously treated with both first- and second-line medicines, and previously treated with only first-line medicines, according to the results of their treatment (figure 159).

	Waiting to start treatment	On treatment	Cured	Treatment completed	Failed	Defaulted	Died	Transferred out	Diagnosis changed	Other	Transferring to another unit	Total
New	5	59	92	33	32	25	33	2	5	3		289
Previously treated with both first- and second-line drugs	15	165	354	109	127	87	133	16	12	8	1	1,027
Previously treated with first-line drugs only		1										1
<b>Total</b>	<b>21</b>	<b>224</b>	<b>446</b>	<b>142</b>	<b>159</b>	<b>112</b>	<b>166</b>	<b>18</b>	<b>17</b>	<b>11</b>	<b>1</b>	<b>1,317</b>

**Figure 159**

## TB/DR-TB Consolidated Report

Click on **TB/DR-TB Consolidated report** (figure 136), and the screen in figure 160 appears. Select the **Context**, the **Period for case selection**, **Other filters** as needed, the **Output selection**, and the row data (region or other) from the drop-down menus. Click on **UPDATE** to show the information.

**Figure 160**

The report can analyze the data in multiple ways, since the options for the columns and rows are **Region**, screening unit, **Gender**, type of patient, **Site of Disease**, nationality, **Age range**, pulmonary, and extrapulmonary. The example in figure 161 shows the type of patient by region.

Region	Type of patient										Total
	Undefined	Undefined	New	Relapse	After default	Failure 1st treatment	Failure re-treatment	Other	Transferred in		
Region A	5	1	3,841	433	864	314	245	49	113	5,865	
Region B			1,858	231	441	184	117	25	65	2,921	
Region C			1,008	101	235	87	62	21	24	1,538	
Region D			936	121	211	80	67	18	29	1,462	
Region E			990	121	250	79	71	18	29	1,558	
Total	5	1	8,633	1,007	2,001	744	562	131	260	13,344	

**Figure 161**

## How to Access the Medicine Management Reports

### Stock Position by Region Report

Click on **Stock position by region** (figure 136), and the screen in figure 162 appears. Select the **Medicine Source** and **Region** from the drop-down menus, and click on **GENERATE** to show the information.

**Figure 162**

In the example shown in figure 163, the system shows the selected region with its related health units (in rows) combined with all medicines supplied by the selected medicine source (in columns).

Region / TB Unit	H 100 mg	HRZE 75/150/400/275 mg	Z 500 mg	R 300 mg	E 400 mg	HR 75/150 mg	S 1000 mg	Am 1000 mg
<b>Region A</b>	<b>1,020,000</b>	<b>88,850</b>	<b>154,104</b>	<b>180,000</b>	<b>129,636</b>	<b>115,210</b>	<b>119,882</b>	<b>1,000,000</b>
HEALTH CENTER 1	20,000	9,776	4,104	60,000	49,636	2,874	39,882	0
NATIONAL WAREHOUSE	1,000,000	79,074	150,000	120,000	80,000	112,336	80,000	1,000,000
<b>Total</b>	<b>1,020,000</b>	<b>88,850</b>	<b>154,104</b>	<b>180,000</b>	<b>129,636</b>	<b>115,210</b>	<b>119,882</b>	<b>1,000,000</b>

**Figure 163**

### Average Lead Time of Medicine Orders

Click on **Average lead time of medicine orders** (figure 136), and the screen in figure 164 appears. Select the **Medicine supplier** and reference period (**Initial month/year** and **Final month/year**) from the drop-down menus, and click on **GENERATE** to show the information.

Management

### Average lead time of medicine orders

Medicine supplier: -

Initial month/year: \* Oct 2009

Final month/year: \* Jan 2010

\* Value is required

**GENERATE**

**Figure 164**

In the example shown in figure 165, the system shows, for the selected health unit, the average time spent (in days) and the number of orders for authorizing, delivering, and receiving medicines.

Print this page

Order event	Days (average)	Number of orders
Authorizing	1	12
Delivering	1	3
Receiving	1	3

**Figure 165**

Click on **Print this page** to send the report to the printer.

### How to Access the Tools

#### Export TB/DR-TB Case Data

Click on **Export TB/DR-TB case data** (figure 136), and the screen in figure 166 appears. Select the **Data selection filters**, the **Period for case selection**, and **Other filters** from the drop-down menus, and click on **EXPORT** to show the information.

## Export TB/DR-TB case data

[Print this page](#)

**Data selection filters**

Classification: - All -

Context:  Treatment site  Patient residence site

Region: -

**Period for case selection**

Registration date  Diagnosis date  Start treatment date

Initial month/year: - - Final month/year: - -

**Other filters**

Type of patient:	- All -	Gender:	- All -
Treatment Regimen:	- All -	Medicine Source:	- All -
Site of Disease:	- All -	Age range:	- All -
Microscopy result:	- All -	Culture result:	- All -
Type of diagnostic:	- All -	Type of drug resistance:	- All -

**File format and content**

Destination format: Microsoft Excel file

Content to export:  Case data  Laboratory exam results

**EXPORT**

Figure 166

An Excel® file will be created by the system (figure 167).

	A	B	C	D	E	F	G	H	I
1	Patient name	Birth date	Age	Diagnosis date	TbCase.notificationUnit	City	Region	Type of patient	Case status
2	Arnald Noir	18/12/1972	30	08/05/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
3	Raymond Silva e Souza	27/04/1990	12	19/03/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
4	Jeremias Busht	28/07/1943	59	02/04/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Failed
5	Bruna da Silva	08/10/1979	24	13/12/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
6	Rogéria da Silva	08/01/1982	21	26/01/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec Failure 1st treatment		Cured
7	Benedita Gomes	07/09/1977	26	05/03/2004	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
8	Antony Busht	24/09/1974	28	04/06/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
9	Rogéria Murray	20/12/1979	24	25/12/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec Relapse		Died
10	Ana Maria Nunes	10/01/1967	36	18/07/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
11	Augusto Harris	10/08/1968	34	25/07/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
12	Pedro Busht	06/04/1948	54	08/03/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec Relapse		Cured
13	Renan Gomes	15/08/1959	43	20/05/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
14	Lean Soares Brito	18/07/1955	47	11/01/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
15	Peter da Costa Saldanha	08/02/1968	35	06/04/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
16	Romana Dianno	22/04/1927	76	18/05/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
17	Norberto Gabriell	02/03/1969	34	19/06/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
18	Marcos da Costa Saldanha	04/12/1983	19	02/06/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
19	Josefina da Silva	20/06/1982	21	05/10/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec Failure 1st treatment		Cured
20	Manoel Fernandez	04/04/1967	36	14/12/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Died
21	Robson Gomes	26/05/1962	41	11/10/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
22	Benedito Bolivar	02/01/1970	33	06/01/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec Failure 1st treatment		Cured
23	Solange Antunes	12/12/1989	13	01/06/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Treatment completed
24	Benedito Huston	20/10/1924	78	14/10/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec Failure 1st treatment		Cured
25	Arnold Dianno	28/12/1949	53	07/05/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured
26	Manoel Keravec	07/04/1972	30	16/01/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Defaulted
27	Michele Roque	15/12/1949	53	08/07/2003	NATIONAL WAREHOUSE	Locality 1	Ganymec New		Cured

Figure 167

## Medicine Forecasting

The system quantifies needs of first- and second-line TB pharmaceuticals according to the number of patients under treatment and the estimated number of new cases (categorized by treatment regimen) for the planning period. This tool is a single form to project your future procurement and budget needs, organized by medicine sources.

When starting a new forecasting, the system displays the page to enter the variables divided into four sections (figure 168):

- Options
- Cases under treatment
- New cases
- Medicines

## Medicine forecasting

Percentage of new cases per treatment regimen	
Treatment Regimen	% of new cases
Category I	0.0
Category II	0.0
Category III	0.0
Category IV	0.0

Estimated number of new cases per month											
Nov-2010	Dec-2010	Jan-2011	Feb-2011	Mar-2011	Apr-2011	May-2011	Jun-2011	Jul-2011	Aug-2011	Sep-2011	Oct-2011
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0									

Figure 168

## Options

Figure 169 shows the possible **Options** to select.

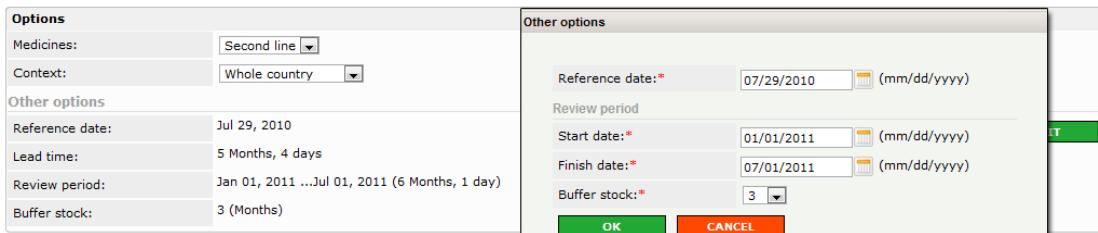


Figure 169

**Options** consist of the following:

- **Medicines**—Select the medicine line for the forecasting. The options are **First line**, **Second line**, or **Both lines**. When you select an option, the system automatically filters the list of medicines according to your selection.
- **Context**—Select the context of the forecasting from these options—
  - **Whole country** (i.e., the context of the forecasting is the whole country)
  - **Administrative unit** (i.e., the context of the forecasting is an administrative unit of the country, such as a region or locality). When selecting this option, you must select a specific administrative unit of the country.
  - **Health unit** (i.e., the forecasting will be based on a specific health unit of the country)

When the **Update** command is executed, the calculations are driven by the context of the cases under treatment (if the forecasting is using the cases registered in the database) and by the medicines.

- **Reference date**—Generally, you will enter today's date. It refers to the stock position of the medicines on that date.
- **Lead time**—Enter the number of months expected to elapse between ordering medicines and receiving them.
- **Review period**—Input the period that the forecasting will cover in estimating the quantity to be ordered. You must enter the initial and final dates of the review period.
- **Buffer stock**—Enter how much stock (in months) you want to keep on hand as buffer.

## Cases Under Treatment

Use these variables to set which cases under treatment are considered in the forecasting calculations (figure 168). You have two possibilities available:

- The forecasting may use the cases already registered in the **Cases** module (figure 170). If so, the system displays the number of cases on treatment in the database, and during execution, the forecasting will estimate the consumption of each case by the medicines prescribed for them.

The screenshot shows a user interface titled 'Cases under treatment'. A dropdown menu labeled 'How to get the cases on treatment?' is open, showing the option 'Cases already registered in the system'. Below the dropdown, the text 'Number of cases on treatment: 35' is displayed.

**Figure 170**

- As an alternative, you can provide the total number of cases that started treatment per month (figure 171). In this option, you must enter the total number of cases that started treatment in a past month for each of the regimens available in the system. The forecasting will estimate the consumption of medicine for each of the regimens and multiply by the number of cases entered, considering the period of treatment of the regimen.

The screenshot shows a user interface titled 'Cases under treatment'. A dropdown menu labeled 'How to get the cases on treatment?' is open, showing the option 'Provide total number of cases that started treatment per month'. Below the dropdown, there is a link '◀ Previous'. The main area contains a grid for entering data. The columns represent months from Aug-09 to Jul-10. The rows represent treatment regimens: Category IV - 1, Category IV - 2, Category IV - 3, Category IV - 4, Category IV - 5, and Category IV - 6. Each cell in the grid is a text input field.

**Figure 171**

## New Cases

These variables allow you to specify the estimated number of new cases that will start treatment in the future (figure 172). The forecasting displays a table containing future months starting from the reference date and finishing in the last month of the forecasting (end of the review period plus months of buffer stock).

New cases		Estimated number of new cases per month											
Percentage of new cases per treatment regimen													
Treatment Regimen	% of new cases	Jul-2010	Aug-2010	Sep-2010	Oct-2010	Nov-2010	Dec-2010	Jan-2011	Feb-2011	Mar-2011	Apr-2011	May-2011	Jun-2011
Category IV - 1	0.0	0	0	0	0	0	0	0	0	0	0	0	0
Category IV - 2	0.0	0	0										
Category IV - 3	0.0												
Category IV - 4	0.0												
Category IV - 5	0.0												
Category IV - 6	0.0												

**Figure 172**

The box is divided into two sections:

- **Percentage of new cases per treatment regimen**—For each of the regimens available in the system, enter the percentage of the new cases that you estimate will start treatment on that regimen in the forecasting period.
- **Estimated number of new cases per month**—Enter the absolute number of new cases that you estimate that will start treatment in the forecasting period.

During the forecasting, the program will calculate the number of new cases by regimen (according to the percentage) and calculate the consumption of medicines based on the period of treatment and quantity of medicines month by month for the regimen.

## Medicines

Enter in this box information about the medicines available (figure 173):

- **Stock on hand**—Quantity of medicine available in the context specified in the **Options** section
- **Unit price**—Unit price of the medicines
- **Stock on order**—Quantity of medicines that are going to be delivered
- **Batches to expire**—Quantity of medicines that will expire in the future

Medicines					Update
Medicine	Stock on hand	Unit price	Stock on order	Batches to expire	
Amikacin 1000mg (Powder/Vial)	0	0.00	> New order	> New batch	
Capreomycin 1000mg (Powder/Vial)	0	0.00	> New order	> New batch	
Cycloserine 250mg (Tablet or Capsule)	0	0.00	> New order	> New batch	
Ethionamide 250mg (Tablets)	0	0.00	> New order	> New batch	
Kanamycin 1000mg (Powder/Vial)	0	0.00	> New order	> New batch	
Levofloxacin 500mg (Tablet)	0	0.00	> New order	> New batch	
Oflloxacin 400mg (Tablets)	0	0.00	> New order	> New batch	
P-Aminosalicylic Acid 4000mg (Granules/Packet)	0	0.00	> New order	> New batch	

**Figure 173**

If you click on **Update**, the system will automatically fill these fields with information registered in the database. If you make a change in the **Options** section, you must click on **Update** to fill in the correct information based on the new options selected.

## Forecasting Results

After you have entered all the variables, click on **Execute** to generate a new forecasting. When the execution of the forecasting is finished, the system will display three new tabs with the results:

- **Resume**—Displays a résumé of the forecasting (figure 174).



Medicine	Stock on hand	Stock on order	Dispensing quantity during lead time	Stock on hand after lead time	Estimated qty (cases on treatment)	Estimated qty (new cases)	Estimated quantity (total)	Unit price	Total price
Amikacin 1000mg (Powder/Vial)	1,450,400		0	1,450,400	0	3,760	0	3.3100	0.00
Capreomycin 1000mg (Powder/Vial)	506,332		211	506,121	211	18,800	0	2.6400	0.00
Cycloserine 250mg (Tablet or Capsule)	461,431		18,625	442,806	21,509	272,818	0	1.0100	0.00
Ethionamide 250mg (Tablets)	565,107		14,095	551,012	16,004	173,597	0	0.9000	0.00
Kanamycin 1000mg (Powder/Vial)	559,637		0	559,637	0	7,522	0	1.0700	0.00
Levofloxacin 500mg (Tablet)	588,404		8,182	580,222	9,862	132,269	0	0.5900	0.00
Ofloxacin 400mg (Tablets)	535,668		4,882	530,786	5,107	49,597	0	1.1000	0.00
P-Aminosalicylic Acid 4000mg (Granules/Packet)	598,644		6,667	591,977	8,141	99,229	0	1.8600	0.00

**Figure 174**

- **Medicine consumption**—Displays the estimated medicine consumption from the reference date until the end of the forecasting, divided into three groups (figure 175):
  - **Stock on hand**—Quantity of medicine at the end of the month, considering the consumption, stock on order, and batches to expire
  - **Consumption of previous cases**—Consumption of medicine of cases that were in treatment before the reference date
  - **Consumption of new cases**—Consumption of medicines of new cases that started treatment after the reference date

Medicine		Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	
<b>Amikacin 1000mg (Powder/Vial)</b>		<b>Stock on hand</b>	<b>1,450,400</b>	<b>1,450,360</b>	<b>1,450,280</b>	<b>1,450,140</b>	<b>1,449,949</b>	<b>1,449,709</b>	<b>1,449,416</b>	<b>1,318,400</b>	<b>1,194,996</b>	<b>1,154,796</b>	<b>1,085,146</b>	<b>1,025,146</b>
		Consumption of previous cases												
		Consumption of new cases	40	80	140	191	240	293	286	291	335	305	320	340
<b>Capreomycin 1000mg (Powder/Vial)</b>		<b>Stock on hand</b>	<b>506,332</b>	<b>506,101</b>	<b>505,655</b>	<b>504,913</b>	<b>503,927</b>	<b>502,697</b>	<b>501,202</b>	<b>374,332</b>	<b>250,928</b>	<b>210,728</b>	<b>141,078</b>	<b>81,078</b>
		Consumption of previous cases	31	46	42	31	30	31						
		Consumption of new cases	200	400	700	955	1,200	1,464	1,432	1,455	1,673	1,527	1,600	1,700
<b>Cycloserine 250mg (Tablet or Capsule)</b>		<b>Stock on hand</b>	<b>461,431</b>	<b>455,696</b>	<b>448,458</b>	<b>439,116</b>	<b>426,964</b>	<b>413,479</b>	<b>397,874</b>	<b>329,431</b>	<b>206,027</b>	<b>165,827</b>	<b>96,177</b>	<b>36,177</b>
		Consumption of previous cases	3,875	3,518	3,042	2,852	2,685	2,585	2,123	1,328	818	252	263	72
		Consumption of new cases	1,860	3,720	6,300	9,300	10,800	13,020	15,810	16,800	21,390	23,400	26,040	27,900
<b>Ethionamide 250mg (Tablets)</b>		<b>Stock on hand</b>	<b>565,107</b>	<b>561,257</b>	<b>556,209</b>	<b>549,968</b>	<b>541,849</b>	<b>532,831</b>	<b>522,426</b>	<b>433,107</b>	<b>309,703</b>	<b>269,503</b>	<b>199,853</b>	<b>139,853</b>
		Consumption of previous cases	2,666	2,681	2,232	2,201	2,145	2,120	1,565	908	446	162	170	72
		Consumption of new cases	1,184	2,367	4,009	5,918	6,873	8,285	10,061	10,691	13,612	14,891	16,571	17,755
<b>Kanamycin 1000mg (Powder/Vial)</b>		<b>Stock on hand</b>	<b>559,637</b>	<b>559,557</b>	<b>559,397</b>	<b>559,117</b>	<b>558,735</b>	<b>558,255</b>	<b>557,670</b>	<b>427,637</b>	<b>304,233</b>	<b>264,033</b>	<b>194,383</b>	<b>134,383</b>
		Consumption of previous cases	...	...	...	...	...	...	...	...	...	...	...	

Figure 175

- Cases on treatment**—Displays the number of cases on treatment by month from the reference date to the end of the forecasting (figure 176):

Medicine		Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11
<b>Amikacin 1000mg (Powder/Vial)</b>		Previous cases on treatment														
		New cases on treatment	2	4	6	9	11	13	15	18	21	24	25	28	30	32
		<b>Total</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>9</b>	<b>11</b>	<b>13</b>	<b>15</b>	<b>18</b>	<b>21</b>	<b>24</b>	<b>25</b>	<b>28</b>	<b>30</b>	<b>34</b>
<b>Capreomycin 1000mg (Powder/Vial)</b>		Previous cases on treatment	1	2	2	1	1	1								
		New cases on treatment	9	18	32	45	55	64	77	91	105	118	127	141	150	159
		<b>Total</b>	<b>10</b>	<b>20</b>	<b>34</b>	<b>46</b>	<b>56</b>	<b>65</b>	<b>77</b>	<b>91</b>	<b>105</b>	<b>118</b>	<b>127</b>	<b>141</b>	<b>150</b>	<b>168</b>
<b>Cycloserine 250mg (Tablet or Capsule)</b>		Previous cases on treatment	42	39	35	31	31	29	24	17	10	4	4	2	2	2
		New cases on treatment	20	40	70	100	120	140	170	200	230	260	280	310	330	350
		<b>Total</b>	<b>62</b>	<b>79</b>	<b>105</b>	<b>131</b>	<b>151</b>	<b>169</b>	<b>194</b>	<b>217</b>	<b>240</b>	<b>264</b>	<b>284</b>	<b>312</b>	<b>332</b>	<b>352</b>
<b>Ethionamide 250mg (Tablets)</b>		Previous cases on treatment	29	30	26	24	25	24	18	12	6	3	3	2	2	2
		New cases on treatment	13	25	45	64	76	89	108	127	146	165	178	197	210	223
		<b>Total</b>	<b>42</b>	<b>55</b>	<b>71</b>	<b>88</b>	<b>101</b>	<b>113</b>	<b>126</b>	<b>139</b>	<b>152</b>	<b>168</b>	<b>181</b>	<b>199</b>	<b>212</b>	<b>225</b>
<b>Kanamycin 1000mg (Powder/Vial)</b>		Previous cases on treatment														
		New cases on treatment	4	7	13	18	22	25	31	36	42	47	51	56	60	64
		<b>Total</b>	<b>4</b>	<b>7</b>	<b>13</b>	<b>18</b>	<b>22</b>	<b>25</b>	<b>31</b>	<b>36</b>	<b>42</b>	<b>47</b>	<b>51</b>	<b>56</b>	<b>60</b>	<b>67</b>
<b>Levofloxacin 500mg (Tablet)</b>		Previous cases on treatment	27	26	24	20	20	19	15	14	8	3	3	2	2	2
		New cases on treatment	15	29	51	73	87	102	124	145	167	189	204	225	240	255
		<b>Total</b>	<b>42</b>	<b>55</b>	<b>71</b>	<b>88</b>	<b>101</b>	<b>113</b>	<b>126</b>	<b>139</b>	<b>152</b>	<b>168</b>	<b>181</b>	<b>199</b>	<b>212</b>	<b>225</b>

Figure 176

You may save your forecast by clicking on **SAVE** (figure 168) and entering a name for the forecast. You may then access that forecast at a later date by clicking on **Load forecasting** (figure 168) and selecting the forecast by name.

## CHAPTER 7. ADMINISTRATION MODULE

The **Administration** module allows you to manage the system to include, remove, and change users, health system structures, medicines, treatment regimens, and other features. The specific information concerning structure, planning, and activities adopted for management of TB/DR-TB patients in a country needs to be entered using the **Administration** module for satisfactory operation of the e-TB Manager.

### How to Access the Administration Module

Click on **Administration** at the system's main page (circled in red on figure 177), and the **Administration** module's main page will appear (figure 178).



Figure 177

### How to Use the Administration Options

At the **Administration** page the options for data configurations are shown at the left menu (figure 178). Click on the links and complete or change the recorded data as described under the following topics.

## Administration

On-line users
User Session History
Transaction log Report
Setup MSH Demo
tables
Administrative units
Health systems
TB Units
Medicine sources
Medicine generic names
Medicines
Treatment regimens
Laboratories
-----
Weekly frequencies
Age ranges
TB field values
-----
Users
User's profiles
Workspaces
-----
Import data

**Figure 178**

### **On-line Users**

**On-line users** displays the users connected to the system at the moment (figure 179).

On-line users						
ID	Login	Session time	User account	Last page	Last request	Inactive time
946005	6:57:39 PM	26min 30sec	Julie Frye JFRYE	/admin/websessions.seam	7:24:10 PM	-

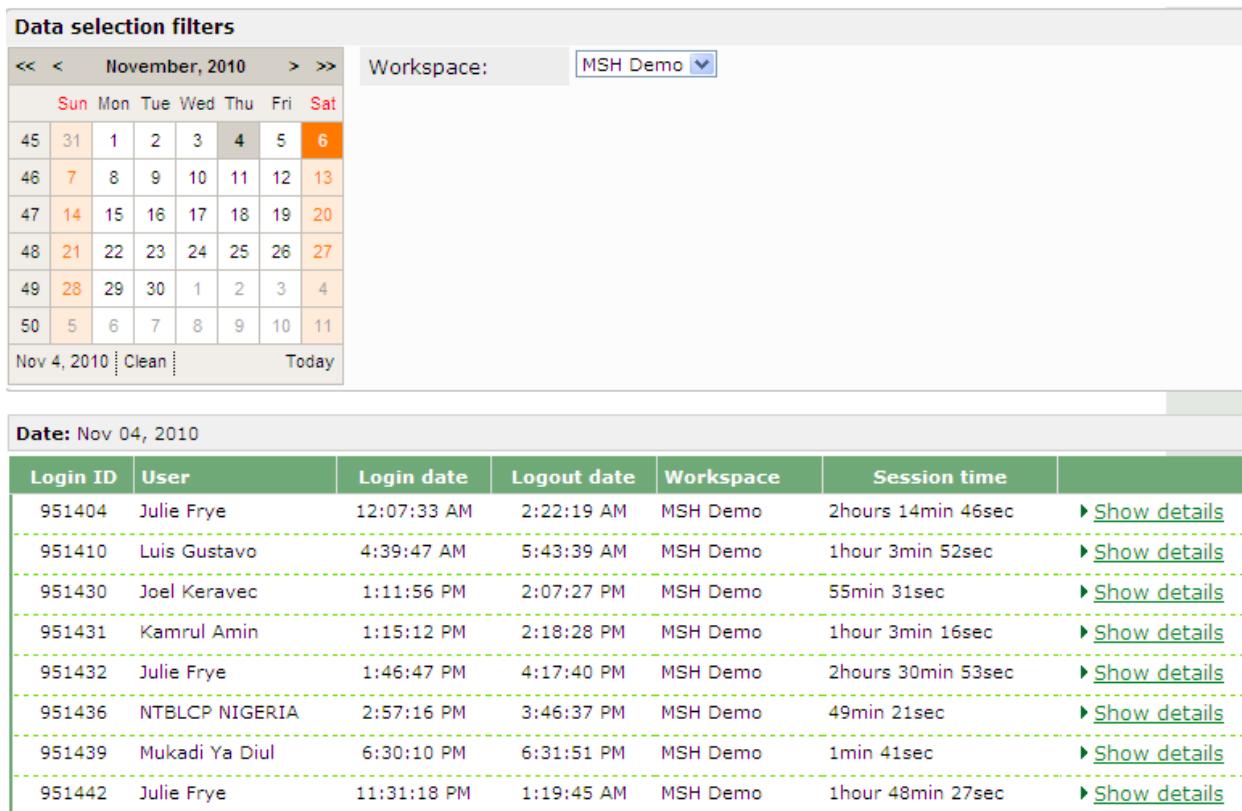
**Figure 179**

The report contains a listing of users connected to the system, including the following information:

- **ID**—A unique number generated by the system identifying the user login
- **Login**—The date and time that the user connected to the system
- **Session time**—How long the user has been connected to the system
- **User account**—Information about the user (login and name)
- **Last page**—The last page visited by the user
- **Last request**—The last time the user requested information from the system during the session (same time the last page was requested)
- **Inactive time**—The time between the last request and the current time

## User Session History

The **User Session History** displays a calendar with the history of the users who have logged into the system (figure 180).



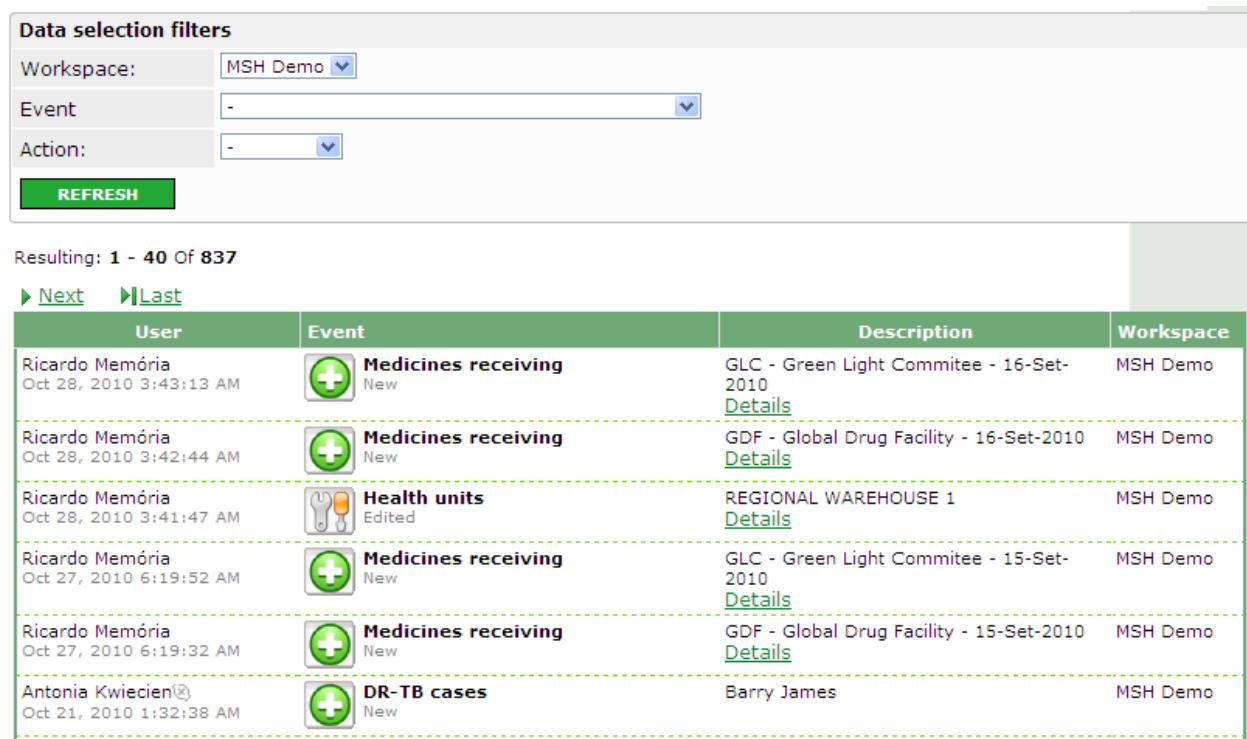
**Figure 180**

The report contains a listing of users who have logged in to the system, including the following information:

- **Login ID**—A unique number generated by the system identifying the user login
- **User**—The name of the user
- **Login date**—The time the user entered into the system
- **Logout date**—The time the user was logged out of the system
- **Workspace**—The workspace used in the system
- **Session time**—The length of time the user was logged in
- **Show details**—Details including the user's Internet provider address and browser information

## Transaction Log Report

The **Transaction log Report** (figure 181) displays a record of all of the transactions made in the system, as well as which user made the change. The program allows the user to filter the data by workspace, event, and action.



The screenshot shows a web-based application interface for managing transaction logs. At the top, there is a section titled "Data selection filters" with three dropdown menus: "Workspace" set to "MSH Demo", "Event" set to "-", and "Action" set to "-". Below this is a green "REFRESH" button. The main area displays a table of transactions with the following columns: "User", "Event", "Description", and "Workspace". The table contains the following data:

User	Event	Description	Workspace
Ricardo Memória Oct 28, 2010 3:43:13 AM	Medicines receiving New	GLC - Green Light Committee - 16-Set-2010 <a href="#">Details</a>	MSH Demo
Ricardo Memória Oct 28, 2010 3:42:44 AM	Medicines receiving New	GDF - Global Drug Facility - 16-Set-2010 <a href="#">Details</a>	MSH Demo
Ricardo Memória Oct 28, 2010 3:41:47 AM	Health units Edited	REGIONAL WAREHOUSE 1 <a href="#">Details</a>	MSH Demo
Ricardo Memória Oct 27, 2010 6:19:52 AM	Medicines receiving New	GLC - Green Light Committee - 15-Set-2010 <a href="#">Details</a>	MSH Demo
Ricardo Memória Oct 27, 2010 6:19:32 AM	Medicines receiving New	GDF - Global Drug Facility - 15-Set-2010 <a href="#">Details</a>	MSH Demo
Antonia Kwiecien Oct 21, 2010 1:32:38 AM	DR-TB cases New	Barry James	MSH Demo

At the bottom left, there are navigation links for "Next" and "Last". The text "Resulting: 1 - 40 Of 837" is displayed above the table.

Figure 181

## Setup a Specific Workspace

This option allows entering and changing information about the workspace in use (figure 182). The options available are the **Name** of the workspace (usually the name of the country), **Name** of the workspace in the local language (here, Ukrainian), summary **Description** of the purpose of the workspace, the **Default language**, the **Alternate language** (if one exists), the workspace's **Default time zone** related to Greenwich Time, and the **Patient name composition** (the setup of this option allows you to separate the first, second, and third names of the patient into different fields). You may also tick the boxes to allow TB or DR-TB treatment to start before information is validated. For the case number to display, choose from no number, a system-generated number, or a screening code. You can select which levels are required for patient addresses. You may also select an image to display for the workspace. This image will appear at the top right of the e-TB Manager site. In the sample in figure 182, because Ukrainian is selected as the alternate language, the user is given an option to enter a Ukrainian name for many fields.

## Setup MSH Demo

[Print this page](#)

Name:<sup>\*</sup> MSH Demo

Name: (Ukrainian (Ukraine)): М.Ш.Х. Демонстрация

Description:<sup>\*</sup> MSH Demonstration space - No real information

Default language:<sup>\*</sup> -

Alternate language: українська (Україна)

Default time zone:<sup>\*</sup> (GMT-03:00): Brazil/East

System URL:

Patient name composition:<sup>\*</sup> First, middle and last name in 3 separate fields

Start TB treatment before validation

Start DR-TB treatment before validation

Display case number:<sup>\*</sup> System generated

Required levels for patient address:<sup>\*</sup> Region

Workspace picture:

New image file  Browse...

Figure 182

**Box 3. Important Note**

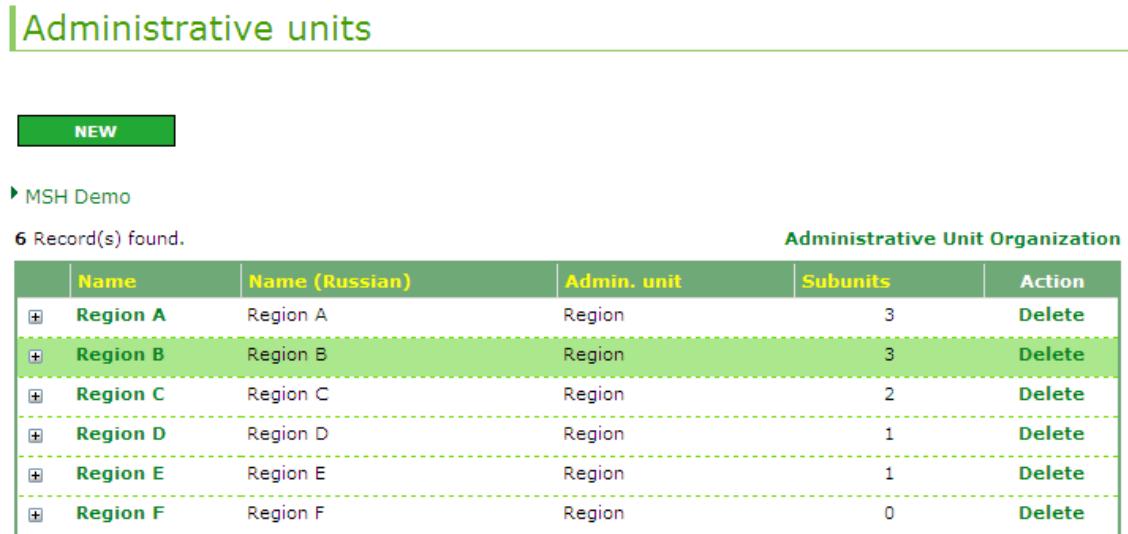
All fields marked with an asterisk (\*) symbol are required fields and must be filled in. On all **Administration** pages after entering or editing information and clicking on **OK**, a confirmation message, like the orange rectangle below, appears to assure you that the new information was recorded to the system. If this message does not appear, check the message displayed by the system, and repeat the operation until it does appear.

When an alternate language is defined, the system will allow information from the administration module to be entered in two different languages. It's useful for countries that have a strong second language. When the user works in the second language, the system messages (as well as data such as medicine names, TB units, medicine sources, and so on) will be displayed in the language selected.

**Successfully updated**

## Administrative Units

This option shows all administrative units of the country already registered in the system (e.g., states, regions, villages, cities, or districts), and allows you to edit, exclude, or create new ones (figure 183).



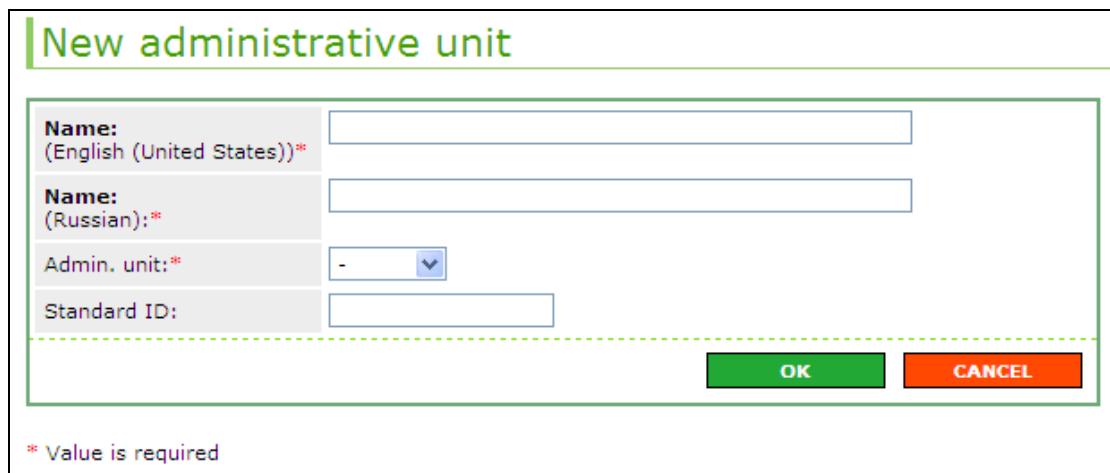
The screenshot shows a table titled "Administrative Unit Organization". The columns are: Name, Name (Russian), Admin. unit, Subunits, and Action. The data is as follows:

Name	Name (Russian)	Admin. unit	Subunits	Action
Region A	Region A	Region	3	Delete
Region B	Region B	Region	3	Delete
Region C	Region C	Region	2	Delete
Region D	Region D	Region	1	Delete
Region E	Region E	Region	1	Delete
Region F	Region F	Region	0	Delete

**Figure 183**

To make changes within the **Administrative unit** option, follow these procedures:

1. To insert an administrative unit defined by the country's infrastructure, click on **NEW** (figure 183). Enter information in the specified field, and click on **OK** to confirm or **CANCEL** to undo it (figure 184).



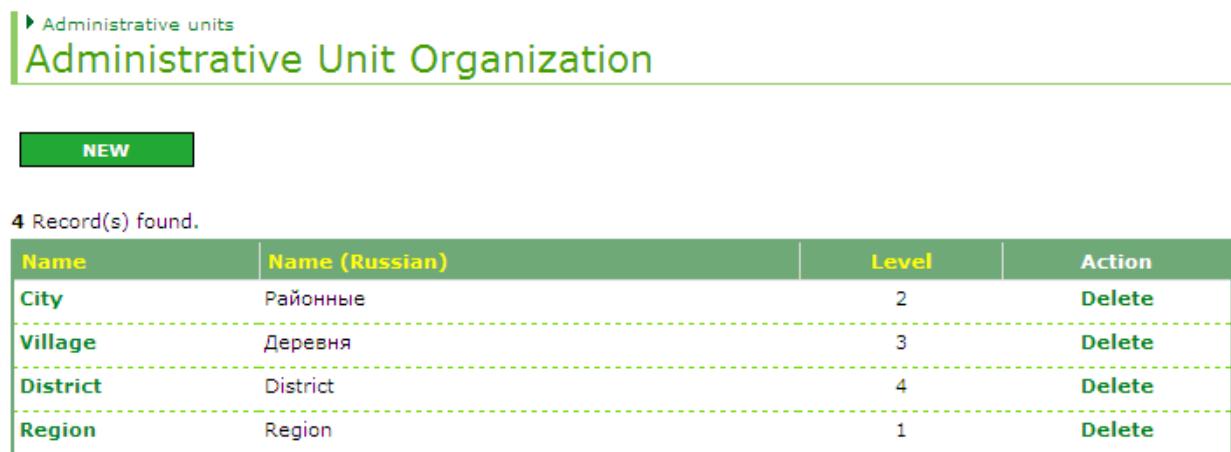
The dialog box has the title "New administrative unit". It contains the following fields:

- Name: (English (United States))\*
- Name: (Russian):\*
- Admin. unit:\*
- Standard ID:

At the bottom right are two buttons: "OK" (green) and "CANCEL" (orange). A note at the bottom left says "\* Value is required".

**Figure 184**

2. To edit a table showing sublevels of units within the space work in use, click on **Administrative Unit Organization** (figure 183). Click on **NEW** to create a new level; the system separates the administrative units into four different levels (figure 185).



The screenshot shows a table titled "Administrative Unit Organization". At the top left is a green button labeled "NEW". Below it, a message says "4 Record(s) found.". The table has four columns: "Name", "Name (Russian)", "Level", and "Action". The data is as follows:

Name	Name (Russian)	Level	Action
City	Районные	2	Delete
Village	Деревня	3	Delete
District	District	4	Delete
Region	Region	1	Delete

Figure 185

3. To exclude a registered administrative unit, click on **Delete** in the **Action** column (figure 185), and in the confirmation window displayed, click on **OK** to confirm or **CANCEL** to undo it (figure 186).

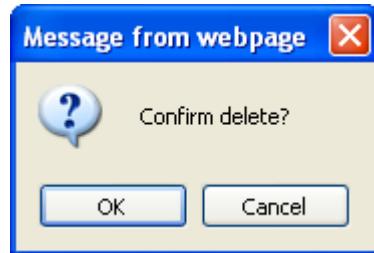


Figure 186

## Health Systems

This option shows all the health systems of the country already recorded in the system and allows you to edit, exclude, or create new ones (figure 187). All the recorded localities must be related to a specific region previously registered in the system.

Name	Name (Russian)	Action
Ministry of Justice	Министерство юстиции	<a href="#">Delete</a>
Ministry of Health	Министерство здравоохранения	<a href="#">Delete</a>
Open Health	Открыть здравоохранения	<a href="#">Delete</a>

Figure 187

To make changes within the **Health systems** option, follow these procedures:

1. To add a new health system, click on **NEW** (figure 187). Enter information in both fields, and click on **OK** to confirm or **CANCEL** to undo it (figure 188).

New health system

<b>Name:</b> (English (United States))*	<input type="text"/>
<b>Name:</b> (Russian):*	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

\* Value is required

Figure 188

2. To edit an existing entry, click on the appropriate entry in the **Name** column of the health systems (figure 187) to change the recorded information. Change the information displayed and click on **OK** to confirm or **CANCEL** to undo it (figure 189).

<b>Id:</b>	902
<b>Name:</b> (English)*	Ministry of Health
<b>Name:</b> (Russian):*	Министерство здравоохранения
<hr/>	
<b>OK</b> <b>CANCEL</b>	

\* Value is required

**Figure 189**

3. To exclude the specific health system, click on **Delete** in the **Action** column (figure 187), and in the confirmation window that appears, click on **OK** button to confirm or **CANCEL** to undo it.

## TB Units

This option shows all TB units defined by the country and recorded in the system and allows you to edit, exclude, or insert new information about these health units (figure 190). These units include warehouses where TB medicines and commodities are stored; primary health units, health centers, or hospitals where TB patients are treated; tuberculosis control programs; and other administrative or regulatory departments involved in TB control countrywide.

TB Units			
Name	Medicine supplier	Options	Action
NATIONAL WAREHOUSE НАЦИОНАЛЬНЫЕ СКЛАДЫ Region A ▶ City A	Order authorizer: NATIONAL TUBERCULOSIS PROGRAM	<input type="checkbox"/> TB unit <input checked="" type="checkbox"/> Unit stores medicines <input checked="" type="checkbox"/> Unit receives medicines from medicine sources <input type="checkbox"/> Allows to change the estimated quantity on orders <input checked="" type="checkbox"/> Unit is a medicine supplier	<a href="#">Delete</a>
NATIONAL TUBERCULOSIS PROGRAM НАЦИОНАЛЬНЫЙ ТУБЕРКУЛОЗНЫЙ ПРОГРАММА Region A ▶ City B		<input type="checkbox"/> TB unit <input type="checkbox"/> Unit stores medicines <input type="checkbox"/> Unit receives medicines from medicine sources <input type="checkbox"/> Allows to change the estimated quantity on orders <input type="checkbox"/> Unit is a medicine supplier	<a href="#">Delete</a>
REGIONAL WAREHOUSE 1 REGIONAL WAREHOUSE 1 Region A ▶ City C	1st Line: NATIONAL WAREHOUSE 2nd Line: NATIONAL WAREHOUSE Order authorizer: NATIONAL TUBERCULOSIS PROGRAM	<input type="checkbox"/> TB unit <input checked="" type="checkbox"/> Unit stores medicines <input type="checkbox"/> Unit receives medicines from medicine sources <input checked="" type="checkbox"/> Allows to change the estimated quantity on orders <input checked="" type="checkbox"/> Unit is a medicine supplier	<a href="#">Delete</a>
HEALTH CENTER 1 HEALTH CENTER 1 Region A ▶ City A	1st Line: REGIONAL WAREHOUSE 1 2nd Line: REGIONAL WAREHOUSE 1	<input checked="" type="checkbox"/> TB unit <input checked="" type="checkbox"/> Unit stores medicines <input type="checkbox"/> Unit receives medicines from medicine sources <input checked="" type="checkbox"/> Allows to change the estimated quantity on orders <input type="checkbox"/> Unit is a medicine supplier	<a href="#">Delete</a>

Figure 190

To make changes within the **TB Units** option, refer to figure 191 and follow these procedures:

1. To list the health units from a specific region, select from the drop-down menu in the **Region** field.
2. To list the health units from a specific health system, select from the drop-down menu in the **Health System** field.
3. To insert a new health unit previously defined by the country's infrastructure, click on **NEW**.
4. To edit an existing health unit, click on its **Name**; in the window displayed, change the information. Click on **OK** to save the information or **CANCEL** to undo it.

**Edit - TB Unit**

<b>Id:</b>	1
<b>Name:*</b>	NATIONAL WAREHOUSE
<b>Health System:</b>	Ministry of Health ▾
<b>Address:</b>	London Street, 26
<b>District:</b>	Rose Land
<b>Region:*</b>	Region A ▾
<b>City:</b>	City A ▾
<b>Village:</b>	- ▾
<input type="checkbox"/> Treatment health unit	
<b>Medicine management</b>	
<input checked="" type="checkbox"/> Unit stores medicines	
<input checked="" type="checkbox"/> Unit receives medicines from medicine sources	
<b>Medicine orders</b>	
<b>2nd line medicine supplier</b>	
<b>Region:*</b>	- ▾
<b>1st line medicine supplier</b>	
<b>Region:*</b>	- ▾
<b>Number of days for medicine consumption estimation:</b>	<input type="text"/>
<input type="checkbox"/> Allows to change the estimated quantity on orders	
<input type="checkbox"/> Orders medicines over minimum buffer stock	
<b>Medicine order delivery</b>	
<input checked="" type="checkbox"/> Unit is a medicine supplier	
<b>Order authorizer</b>	
<b>Region:*</b>	Region A ▾
<b>Name:*</b>	NATIONAL TUBERCULOSIS PROGRAM ▾
<b>Medicine dispensing</b>	
<b>Dispensing frequency registration :</b>	- ▾
<b>OK</b> <b>CANCEL</b>	

\* Value is required

Figure 191

## **Medicine Sources**

This option shows all medicine sources, that is, the international or national manufacturers and donors (e.g., WHO, GDF, GLC, MoH, NTP) connected with the country and registered in the system, and allows you to edit, exclude, or create new ones (figure 192).

To make changes within the **Medicine sources** option, follow these procedures:

1. To enter a new medicine source, click on **NEW**. Enter information in the field and click on **OK** to confirm or **CANCEL** to undo it (figure 193).
2. To edit already recorded information, click on the appropriate entry in the **Name** column on the **Medicine sources** page (figure 192). In the screen that appears (figure 194), change the information recorded in the field, and click on **OK** to confirm or **CANCEL** to undo it.
3. To exclude an already recorded medicine source, click on **Delete** in the **Action** column (figure 192), and in the confirmation window that appears, click on **OK** button to confirm or **CANCEL** to undo it.

Name	Name (Russian)	Abbrev. name	Action
Global Drug Facility		GDF	<b>Delete</b>
Green Light Committee		GLC	<b>Delete</b>
Ministry of Health		MoH	<b>Delete</b>

**Figure 192**

### New medicine source

English (United States)

Name:\*

Abbrev. name:\*

Russian

Name:\*

Abbrev. name:\*

**OK** **CANCEL**

\* Value is required

Figure 193

### Edit medicine source

ID: 28796

English (United States)

Name:\*

Abbrev. name:\*

Russian

Name:\*

Abbrev. name:\*

**OK** **CANCEL**

\* Value is required

Figure 194

### **Medicine Generic Names**

The medicine generic names function is used for registering susceptibility test results, registering previous TB treatments, and assigning medicines with the same active ingredients. The system allows you to edit, exclude, or create entries.

To make changes within the **Medicine generic names** option, follow these procedures:

1. To enter a new medicine generic name, click on **NEW** (figure 195). Enter the information in all required fields. To change the order of the presentation on the **Case details** page, fill in the **Display order** field, and click on **OK** to confirm or **CANCEL** to undo it (figure 196).
2. To edit a medicine generic name, click on the appropriate entry in the **Name** column (figure 195). On the displayed page (figure 197), change information recorded in all fields (**Abbrev. name**, **Generic Name**, **Display order**, and **Type**), and check the boxes to include in previous treatments or DST (drug susceptibility testing) results forms on the **Case details** page. Click on **OK** to confirm or **CANCEL** to undo it.
3. To remove a registered ingredient, click on **Delete** in the **Action** column of the medicine generic name page (figure 195), and in the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.

NEW					
Name	Display order	Abbrev. name	Type	Action	
Amikacin	7	Am	Second line	Delete	
Ciprofloxacin	12	Cfx	Second line	Delete	
Capreomycin	8	Cm	Second line	Delete	
Cycloserine	16	Cs	Second line	Delete	
Ethambutol	2	E	First line	Delete	
Ethionamide	14	Eto	Second line	Delete	
Gatifloxacin	13	Gati	Second line	Delete	
Isoniazid	0	H	First line	Delete	
Kanamycin	6	Km	Second line	Delete	
Levofloxacin	9	Lfx	Second line	Delete	
Moxifloxacin	10	Mfx	Second line	Delete	
Ofloxacin	11	Ofx	Second line	Delete	
P-Aminosalicylic Acid	18	PAS	Second line	Delete	
Protonamide	15	Pto	Second line	Delete	
Rifampicin	1	R	First line	Delete	
Rifabutin	5	Rfb	First line	Delete	
Streptomycin	4	S	First line	Delete	
Terizidone	17	Trd	Second line	Delete	
Pyrazinamide	3	Z	First line	Delete	

Figure 195

Abbrev. name (English (United States));*	<input type="text"/>
Abbrev. name (Russian);*	<input type="text"/>
Generic Name (English (United States));*	<input type="text"/>
Generic Name (Russian);*	<input type="text"/>
	<input type="checkbox"/> Include in previous treatments form
	<input type="checkbox"/> Include in DST results form
Display order:	<input type="text"/>
Type:*	<input style="width: 20px; height: 20px; border: none;" type="button" value=" - "/>
<input style="width: 80px; height: 30px; background-color: #008000; color: white; border: none; font-weight: bold; border-radius: 5px; padding: 5px; margin-right: 10px;" type="button" value="OK"/> <input style="width: 80px; height: 30px; background-color: #FF0000; color: white; border: none; font-weight: bold; border-radius: 5px;" type="button" value="CANCEL"/>	

\* Value is required

Figure 196

Abbrev. name (English);*	<input type="text" value="Am"/>
Abbrev. name (Russian);*	<input type="text" value="Am"/>
Generic Name (English);*	<input type="text" value="Amikacin"/>
Generic Name (Russian);*	<input type="text" value="Амикацин"/>
	<input checked="" type="checkbox"/> Include in previous treatments form
	<input checked="" type="checkbox"/> Include in DST results form
Display order:	<input type="text" value="7"/>
Type:*	<input style="width: 20px; height: 20px; border: none; border-radius: 5px;" type="button" value="Second line"/>
<input style="width: 80px; height: 30px; background-color: #008000; color: white; border: none; font-weight: bold; border-radius: 5px;" type="button" value="OK"/> <input style="width: 80px; height: 30px; background-color: #FF0000; color: white; border: none; font-weight: bold; border-radius: 5px;" type="button" value="CANCEL"/>	

\* Value is required

Figure 197

## Medicines

This option shows all the medicines registered in the system and allows editing, excluding or creating new ones (figure 198). To make changes within the **Medicines** option, use the following procedures:

1. To enter a new medicine, click on **NEW** (figure 198), and the screen in figure 199 will appear. Enter information in the required fields, and click on **OK** to confirm or **CANCEL** to undo it.
2. To edit the registered information, click on the appropriate entry in the **Generic Name** column (figure 198). On the displayed page, change information in the necessary fields, and click on **OK** to confirm or **CANCEL** to undo it (figure 200).
3. To exclude an already registered medicine, click on **Delete** in the **Action** column (figure 198), and in the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.

Medicines									
<input type="button" value="NEW"/> <input type="button" value="Print"/> <input type="button" value="Export"/> <input type="button" value="Import"/>									
Generic Name	Generic Name (Russian)	Strength	Unit	Dosage Form	Abbrev. name	Category	Category	Action	
Amikacin	Амикацин	1000	mg	Powder/Vial	Am	Injectable	Second line	<input type="button" value="Delete"/>	
Capreomycin	Карбомицину	1000	mg	Powder/Vial	Cm	Injectable	Second line	<input type="button" value="Delete"/>	
Cycloserine	Сиклосерин	250	mg	Tablet or Capsule	Cs	Oral	Second line	<input type="button" value="Delete"/>	
Ethambutol	Этамбутол	400	mg	Tablet	E	Oral	First line	<input type="button" value="Delete"/>	
Ethionamide	Этионамид	250	mg	Tablets	Eto	Oral	Second line	<input type="button" value="Delete"/>	
Isoniazid	Исоназид	100	mg	Tablet	H	Oral	First line	<input type="button" value="Delete"/>	
Isoniazid + Rifampicin	Исоназид + Рифампикин	75/150	mg	Tablet	HR	Oral	First line	<input type="button" value="Delete"/>	
Isoniazid + Rifampicin + Pirazinamide + Ethambutol	Исоназид + Рифампикин + Пиразинамид + Этамбутол	75/150/400/275 mg		Tablet	HRZE	Oral	First line	<input type="button" value="Delete"/>	
Kanamycin	Канамycin	1000	mg	Powder/Vial	Km	Injectable	Second line	<input type="button" value="Delete"/>	
Levofloxacin		500	mg	Tablet	Lfx	Oral	Second line	<input type="button" value="Delete"/>	
Ofloxacin	Офлоксацин	400	mg	Tablets	Ofx	Oral	Second line	<input type="button" value="Delete"/>	
P-Aminosalicylic Acid	Р-Аминосалициловая кислота	4000	mg	Granules/Packet	PAS	Oral	Second line	<input type="button" value="Delete"/>	
Pyrazinamide	Пиразинамид	500	mg	Tablet	Z	Oral	First line	<input type="button" value="Delete"/>	
Rifampicin	Рифампикин	300	mg	Tablet or capsule	R	Oral	First line	<input type="button" value="Delete"/>	
Streptomycin	Стрептомицин	1000	mg	Powder/Vial	S	Injectable	First line	<input type="button" value="Delete"/>	

Figure 198

Generic Name (English (United States)): <sup>*</sup>	<input type="text"/>
Generic Name (Ukrainian (Ukraine)): <sup>*</sup>	<input type="text"/>
Abbrev. name: <sup>*</sup>	<input type="text"/>
Strength: <sup>*</sup>	<input type="text"/>
Unit: <sup>*</sup>	<input type="text"/>
Dosage Form: <sup>*</sup>	<input type="text"/>
Category: <sup>*</sup>	- <input type="button" value="▼"/>
Type: <sup>*</sup>	- <input type="button" value="▼"/>
Standard ID:	<input type="text"/>

Medicine generic name	Strength
<input checked="" type="checkbox"/> Amikacin (Am)	
<input type="checkbox"/> Capreomycin (Cm)	
<input type="checkbox"/> Ciprofloxacin (Cfx)	
<input type="checkbox"/> Cycloserine (Cs)	
<input type="checkbox"/> Ethambutol (E)	
<input type="checkbox"/> Ethionamide (Eto)	
<input type="checkbox"/> Gatifloxacin (Gati)	
<input type="checkbox"/> Isoniazid (H)	
<input type="checkbox"/> Kanamycin (Km)	
<input type="checkbox"/> Levofloxacin (Lfx)	

**Figure 199**

## Edit - Medicine

ID:	28779
Generic Name (English):*	Amikacin
Generic Name (Russian):*	Амикацин
Abbrev. name:*	Am
Strength:*	1000
Unit:*	mg
Dosage Form:*	Powder/Vial
Category:*	Injectable
Type:*	Second line
Standard ID:	

Medicine generic name	Strength
<input type="checkbox"/> Allapurinol (ALL)	
<input checked="" type="checkbox"/> Amikacin (Am)	1000
<input type="checkbox"/> Capreomycin (Cm)	
<input type="checkbox"/> Ciprofloxacin (Cfx)	
<input type="checkbox"/> Cycloserine (Cs)	
<input type="checkbox"/> Ethambutol (E)	
<input type="checkbox"/> Ethionamide (Eto)	
<input type="checkbox"/> Gatifloxacin (Gati)	
<input type="checkbox"/> Isoniazid (H)	
<input type="checkbox"/> Kanamycin (Km)	
<input type="checkbox"/> Levofloxacin (Lfx)	
<input type="checkbox"/> Moxifloxacin (Mfx)	
<input type="checkbox"/> Ofloxacin (Ofx)	
<input type="checkbox"/> P-Aminosalicylic Acid (PAS)	
<input type="checkbox"/> Prontonamide (Pto)	
<input type="checkbox"/> Pyrazinamide (Z)	
<input type="checkbox"/> Rifabutin (Rfb)	
<input type="checkbox"/> Rifampicin (R)	
<input type="checkbox"/> Streptomycin (S)	
<input type="checkbox"/> Terizidone (Trd)	

**OK**    **CANCEL**

**Figure 200**

## Treatment Regimens

This option shows all the regimens used in the country to treat TB and DR-TB cases that are already registered in the system and also allows editing, excluding, and creating new regimens (figure 201). Follow these procedures to make changes within the **Treatment regimens** option.

### Adding a New Regimen

1. To enter a new regimen, click on **NEW** (figure 201), and the screen in figure 202 will appear. Enter information concerning the **Name** of the regimen, the **Target classification**, and the **Duration** in months of both its phases in the respective fields (figure 202).

Name	Target classification	Action
Category I	TB Case	<a href="#">Delete</a>
Category II	TB Case	<a href="#">Delete</a>
Category III	TB Case	<a href="#">Delete</a>
Category IV - 1	DR-TB Case	<a href="#">Delete</a>
Category IV - 2	DR-TB Case	<a href="#">Delete</a>
Category IV - 3	DR-TB Case	<a href="#">Delete</a>
Category IV - 4	DR-TB Case	<a href="#">Delete</a>
Category IV - 5	DR-TB Case	<a href="#">Delete</a>
Category IV - 6	DR-TB Case	<a href="#">Delete</a>

Figure 201

New treatment regimen

Name:*	<input type="text"/>
Target classification:*	<input type="text"/>
<b>Intensive Phase</b>	
Duration (months):	<a href="#">Add Medicine</a>
<b>Continuous Phase</b>	
Duration (months):	<a href="#">Add Medicine</a>
<b>OK</b> <b>CANCEL</b>	

\* Value is required

Figure 202

- Click on **Add medicine** in both phases (figure 202). In the displayed window (figure 203), mark the medicines to be included in the regimen, and click on **OK** to confirm or **CANCEL** to undo it.

New treatment regimen

Name:*	<input type="text"/>
<input type="checkbox"/> TB treatment <input type="checkbox"/> MDR treatment	
<b>Intensive Phase</b>	
Duration (months):*	<input type="text"/>
<b>Continuous Phase</b>	
Duration (months):*	<input type="text"/>
* Value is required	

Select the received medicines

<input type="checkbox"/> <b>Medicine</b>
<b>Injectable</b>
<input type="checkbox"/> Amikacin 1000mg (Powder/Vial) Second line
<input type="checkbox"/> Capreomycin 1000mg (Powder/Vial) Second line
<input type="checkbox"/> Kanamycin 1000mg (Powder/Vial) Second line
<input type="checkbox"/> Streptomycin 1000mg (Powder/Vial) First line
<b>Oral</b>
<input type="checkbox"/> Cycloserine 250mg (Tablet or Capsule) Second line
<input type="checkbox"/> Ethambutol 400mg (Tablet) First line
<input type="checkbox"/> Ethionamide 250mg (Tablets) Second line

**OK**    **CANCEL**

Figure 203

3. On the **New treatment regimen** page (figure 204), enter the usual doses, duration, frequencies, and sources of medicines included in the regimens adopted by the country, and click on **OK** to confirm or **CANCEL** to undo it.

## New treatment regimen

**Intensive Phase**

Medicine	Default dose unit	Duration (months)	Default frequency	Medicine Source	Action
Amikacin 1000mg (Powder/Vial)		1	1/7	-	<a href="#">Delete</a>
Cycloserine 250mg (Tablet or Capsule)		1	1/7	-	<a href="#">Delete</a>

**Continuous Phase**

Medicine	Default dose unit	Duration (months)	Default frequency	Medicine Source	Action
Ofloxacin 400mg (Tablets)		1	1/7	-	<a href="#">Delete</a>
Streptomycin 1000mg (Powder/Vial)		1	1/7	-	<a href="#">Delete</a>

Figure 204

4. Click on **Add medicine** (red circle on figure 204) to include additional medicines in both phases.
5. Click on **Delete** (blue circle on figure 204) to exclude a specific medicine in both phases.

## Editing a Regimen

- At the **Treatment regimen** page (figure 201), click on the name of a regimen to edit the recorded information. Change the information in the fields as desired, and click on **OK** to confirm or **CANCEL** to undo it (figure 205).

**Edit treatment regimen**

ID:	22496												
Name:*	<input type="text" value="Category I"/>												
<input checked="" type="checkbox"/> TB treatment <input type="checkbox"/> DR-TB treatment													
<b>Intensive Phase</b>													
Duration (months):	<input type="text" value="4"/> Add Medicine												
<table border="1"> <thead> <tr> <th>Medicine</th> <th>Default dose unit</th> <th>Duration (months)</th> <th>Default frequency</th> <th>Medicine Source</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)</td> <td>4</td> <td>2</td> <td>7/7</td> <td>Global Drug Facility</td> <td><input type="button" value="Delete"/></td> </tr> </tbody> </table>		Medicine	Default dose unit	Duration (months)	Default frequency	Medicine Source	Action	Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)	4	2	7/7	Global Drug Facility	<input type="button" value="Delete"/>
Medicine	Default dose unit	Duration (months)	Default frequency	Medicine Source	Action								
Isoniazid + Rifampicin + Pirazinamide + Ethambutol 75/150/400/275mg (Tablet)	4	2	7/7	Global Drug Facility	<input type="button" value="Delete"/>								
<b>Continuous Phase</b>													
Duration (months):	<input type="text" value="4"/> Add Medicine												
<table border="1"> <thead> <tr> <th>Medicine</th> <th>Default dose unit</th> <th>Duration (months)</th> <th>Default frequency</th> <th>Medicine Source</th> <th>Action</th> </tr> </thead> <tbody> <tr> <td>Isoniazid + Rifampicin 75/150mg (Tablet)</td> <td>4</td> <td>4</td> <td>7/7</td> <td>Global Drug Facility</td> <td><input type="button" value="Delete"/></td> </tr> </tbody> </table>		Medicine	Default dose unit	Duration (months)	Default frequency	Medicine Source	Action	Isoniazid + Rifampicin 75/150mg (Tablet)	4	4	7/7	Global Drug Facility	<input type="button" value="Delete"/>
Medicine	Default dose unit	Duration (months)	Default frequency	Medicine Source	Action								
Isoniazid + Rifampicin 75/150mg (Tablet)	4	4	7/7	Global Drug Facility	<input type="button" value="Delete"/>								
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>													

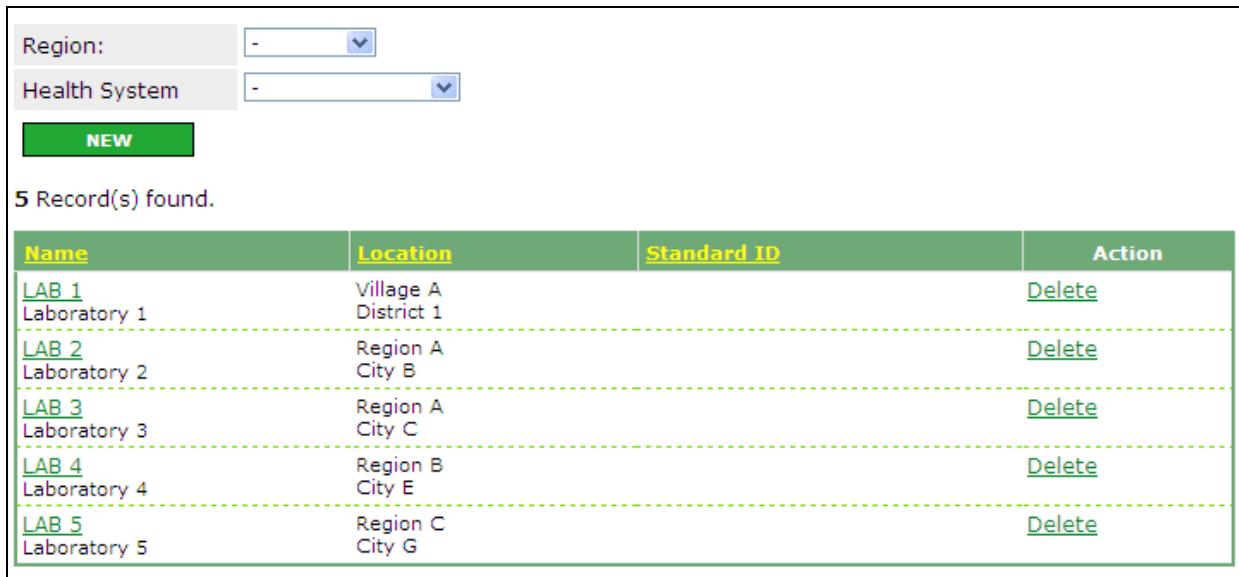
**Figure 205**

## Deleting a Regimen

- To delete a registered regimen, at the **Edit treatment regimen** page (figure 201), click on **Delete** in the **Action** column, and in the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.

## Laboratories

This option shows all the laboratories registered in the system and allows editing, excluding, or creating new entries (figure 206). You may filter the list by selecting a region and/or health system in the drop-down menu.



The screenshot shows a user interface for managing laboratories. At the top, there are two dropdown menus: 'Region:' and 'Health System', both currently set to '-'. Below them is a green 'NEW' button. A message '5 Record(s) found.' is displayed. A table follows, with columns: 'Name', 'Location', 'Standard ID', and 'Action'. The data is as follows:

Name	Location	Standard ID	Action
<a href="#">LAB 1</a> Laboratory 1	Village A District 1		<a href="#">Delete</a>
<a href="#">LAB 2</a> Laboratory 2	Region A City B		<a href="#">Delete</a>
<a href="#">LAB 3</a> Laboratory 3	Region A City C		<a href="#">Delete</a>
<a href="#">LAB 4</a> Laboratory 4	Region B City E		<a href="#">Delete</a>
<a href="#">LAB 5</a> Laboratory 5	Region C City G		<a href="#">Delete</a>

**Figure 206**

Use the following procedures to make changes within the **Laboratories** option:

1. To enter a new laboratory listing, click on **NEW** (figure 206), and the screen in figure 207 will appear. Enter information in the fields, and click on **OK** to confirm or **CANCEL** to undo it.
2. To exclude a registered laboratory, click on **Delete** in the **Action** column (figure 206), and in the confirmation window that appears, click on **OK** button to confirm or **CANCEL** to undo it.

Abbrev. name:*	<input type="text"/>
Name:*	<input type="text"/>
Standard ID:	<input type="text"/>
Health System*	<input type="button" value="-"/>
Region:*	<input type="button" value="-"/>
<b>OK</b> <b>CANCEL</b>	

\* Value is required

**Figure 207**

3. To edit registered information, click on the appropriate entry in the **Name** column (figure 206). The screen in figure 208 will appear. Change information in the desired fields, and click on **OK** to confirm or **CANCEL** to undo it.

<b>Id:</b>	32901
Abbrev. name:*	<input type="text" value="LAB 1"/>
Name:*	<input type="text" value="Laboratory 1"/>
Standard ID:	<input type="text"/>
Health System*	<input type="button" value="-"/>
Region:*	<input type="button" value="Region A"/>
City:	<input type="button" value="City A"/>
Village:	<input type="button" value="Village A"/>
District:	<input type="button" value="District 1"/>
<b>OK</b> <b>CANCEL</b>	

\* Value is required

**Figure 208**

## Weekly Frequencies

This option shows all the configuration of the weekly frequencies (figure 209); for example, “1/7” means one day out of seven and “3/7” means three days out of seven.

Weekly frequencies		Sun	Mon	Tue	Wed	Thu	Fri	Sat
1/7		<input checked="" type="checkbox"/>						
2/7			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			
3/7		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		
4/7		<input checked="" type="checkbox"/>						
5/7		<input checked="" type="checkbox"/>						
6/7		<input checked="" type="checkbox"/>						
7/7	<input checked="" type="checkbox"/>							

Figure 209

Click on **EDIT** to modify the weekly frequencies, ticking the box to designate which day(s) of the week are included for that frequency. Click on **OK** to confirm or **CANCEL** to undo it (figure 210).

Weekly frequencies		Sun	Mon	Tue	Wed	Thu	Fri	Sat	
1/7		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2/7		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3/7		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
4/7		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
5/7		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6/7		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
7/7	<input checked="" type="checkbox"/>								
		<b>OK</b>	<b>CANCEL</b>						

Figure 210

## Age Ranges

This option shows all the age ranges registered in the system and allows you to edit, exclude, or create new ones (figure 211).



The screenshot shows a software interface titled "Age ranges". At the top left is a green "NEW" button. Below it is a table with two columns: "Age range" and "Action". The "Age range" column lists eight age groups: "<= 4", "5 - 14", "15 - 24", "25 - 34", "35 - 44", "45 - 54", "55 - 64", and ">= 65". The "Action" column contains the word "Delete" next to each age range entry.

Age range	Action
<= 4	Delete
5 - 14	Delete
15 - 24	Delete
25 - 34	Delete
35 - 44	Delete
45 - 54	Delete
55 - 64	Delete
>= 65	Delete

Figure 211

To make changes within the **Age range** option, follow these procedures:

1. To enter a new age range, click on **NEW** (figure 211), and the screen in figure 212 will appear. Enter information in the fields, and click on **OK** to confirm or **CANCEL** to undo it.
2. To edit the age range data, click on the age range registered (figure 211). Change information in the specified fields, and click on **OK** to confirm or **CANCEL** to undo it.
3. To exclude a registered age range, click on **Delete** in the **Action** column (figure 211), and in the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.

The screenshot shows a dialog box titled 'New age range'. It contains two input fields: 'Initial age:' with a value of '0' and 'Final age:' also with a value of '0'. Below the fields is a note: '\* Value is required'. At the bottom right are 'OK' and 'CANCEL' buttons.

Figure 212

### TB Field Values

This item allows the TB program staff to define which options should be displayed in the respective fields according to each country's needs. You may specify options for the fields listed in figure 213.

The screenshot shows a configuration screen for 'TB field values'. A dropdown menu labeled 'TB field:' is open, showing a list of options: Comorbidity, Adverse Reaction, Method used in DST exams, Method used in culture exams, Contact's Conducts, Type of Contacts, X-Ray Presentation, Pulmonary forms, and Extrapulmonary forms. A message 'No record found' is visible on the left side of the screen.

Figure 213

To make changes within the **TB field values** option, follow these procedures:

1. Select one option on the **TB field** to see the screen where you may enter choices for that option (figure 214).

TB field: Comorbidity

**NEW**

14 Record(s) found.

Name	Short name	Custom ID	Display field to enter additional information	Display order	Action
Diabetes Mellitus	Diabetes				<a href="#">Delete</a>
Renal Dysfunction	Renal Dysfunction				<a href="#">Delete</a>
Cancer Disease	Cancer				<a href="#">Delete</a>
Homeless	Homeless				<a href="#">Delete</a>
Health Care Worker	HCW				<a href="#">Delete</a>
Refugee/Immigrant	Refugee/Immigrant				<a href="#">Delete</a>
Detained/Imprisoned	Detained/Imprisoned				<a href="#">Delete</a>
Alcoholism	Alcoholism				<a href="#">Delete</a>
Aids	Aids				<a href="#">Delete</a>
Illicit drugs abuse	IDA				<a href="#">Delete</a>
Mental disorders	Mental disorders				<a href="#">Delete</a>
Other	Other				<a href="#">Delete</a>
Prolonged cortisone therapy	Cortisone therapy				<a href="#">Delete</a>
Organ transplant	Transplant				<a href="#">Delete</a>

Figure 214

2. To add a new choice for that field, click on **NEW** (figure 214), and the screen in figure 215 will appear. Enter information in all the required fields, and click on **OK** to confirm or **CANCEL** to undo it.

TB field:	Comorbidity
Name:*	<input type="text"/>
Short name:*	<input type="text"/>
Display order:	<input type="text"/>
Custom ID:	<input type="text"/>
<input type="checkbox"/> Display field to enter additional information	
Field label for additional information:	<input type="text"/>
<b>OK</b> <b>CANCEL</b>	

\* Value is required

Figure 215

3. To edit a choice, click on the appropriate entry in the **Name** column (figure 214). Change information in the specified fields, and click on **OK** to confirm or **CANCEL** to undo it.
4. To exclude registered information, click on **Delete** in the **Action** column (figure 214), and in the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.

## Users

This option shows all the users registered in the system and allows editing, excluding, or creating new entries (figure 216).



Name	Login	e-mail	Status	TB Unit	User View	User profile	Action
Zagorskiy, Andrey MSH	ANDRE	azagorskiy@msh.org	Active	NATIONAL WAREHOUSE	MSH Demo	Central Administrator	<b>Delete</b>
Joel Keravec	JOEL	jkeravec@hotmail.com	Active	NATIONAL WAREHOUSE	MSH Demo	Central Administrator	<b>Delete</b>
Seykash Rita MSH Consultant	RITA	seicasr@yahoo.co.uk	Active	NATIONAL WAREHOUSE	MSH Demo	Central Administrator	<b>Delete</b>
Farm	FARMACIST	rseicas@yahoo.com	Active	NATIONAL WAREHOUSE	MSH Demo	Visitor	<b>Delete</b>
Disp	DISPENSAR	rseicas@yahoo.com	Active	NATIONAL WAREHOUSE	MSH Demo	Visitor	<b>Delete</b>
Quilma Andrade MSH Brazil	QUILMA	quilmandrade@yahoo.com.br	Active	NATIONAL WAREHOUSE	MSH Demo	Central Administrator	<b>Delete</b>
Luis Gustavo MSH Brazil	GUSTAVO	gustavomsh@hotmail.com	Active	NATIONAL WAREHOUSE	MSH Demo	Central Administrator	<b>Delete</b>
Edgar Barillas	EDGAR	ebarillas@msh.org	Active	NATIONAL WAREHOUSE	MSH Demo	Visitor	<b>Delete</b>
USAID User	USAID	ricardo@memoria.com.br	Active	NATIONAL WAREHOUSE	MSH Demo	Visitor	<b>Delete</b>
Aleksey Ukraine - PATH	ABOGDANOV	abogdanov@path.org	Active	NATIONAL WAREHOUSE	MSH Demo	Visitor	<b>Delete</b>
Thidiane Ndoye	THIDIANE	jkeravec@hotmail.com	Active	NATIONAL WAREHOUSE	MSH Demo	Visitor	<b>Delete</b>

Figure 216

To make changes within the **Users** option, follow these procedures:

### Registering a New User

1. To register a new user defined and authorized by the NTP or MoH, click on **NEW** (figure 216), and the screen in figure 217 will appear.
2. Fill in all fields displayed, and click on **OK** to confirm. An e-mail will automatically be sent to the new user with information about login, a password generated by the system, and the e-TB Manager's address. This message will appear informing that the operation was successful. If this message does not appear, click **CANCEL** to undo the operation (figure 217).

An e-mail message was sent to luiz.reciolino@gmail.com  
Successfully created

Login:*	<input type="text"/>
Name:*	<input type="text"/>
e-mail:*	<input type="text"/>
State:*	<input type="button" value="-"/>
Comments:	<input type="text"/>
Health System:	<input type="button" value="- All -"/>
<b>TB Unit</b>	
Region:	<input type="button" value="-"/>
Name:*	<input type="button" value="-"/>
<input type="checkbox"/> Perform activities of other units	
User profile:*	<input type="button" value="-"/>
User View:*	<input type="button" value="-"/>
<input style="background-color: green; color: white; border: none; padding: 5px 20px; margin-right: 10px;" type="button" value="OK"/> <input style="background-color: red; color: white; border: none; padding: 5px 20px;" type="button" value="CANCEL"/>	

\* Value is required

**Figure 217**

3. The **User View** field (see figure 217) restricts the user's access to certain data. It informs the system what the user can "see" in the database. Select one of these four options from the drop-down menu: (a) the user may have access to the whole country (the whole database), (b) the user may have access for data from only one region (the region assigned to the user's TB Unit), (c) the user may have access to data from a locality (the locality assigned to the user's TB unit), or (d) the user may have access only to data from his or her TB unit.
4. Check the box **Perform activities of other units** to permit the new user to change the data and perform procedures related to other health units within his or her user view selected (figure 217).

### Editing a User

- To edit an existing user, click on the appropriate entry in the **Name** column (figure 216), and the screen in figure 218 will appear. Change the information displayed in the specified fields. Click on **SEND NEW PASSWORD** to send a new password created by the system to the user's e-mail address. Click **OK** to confirm or **CANCEL** to undo it.

**Edit - User**

<b>Id:</b>	17983
<b>Login:*</b>	ANDRE
<b>Name:*</b>	Zagorski, Andre
<b>e-mail:*</b>	azagorski@msh.org
<b>State:*</b>	Active
<b>Comments:</b>	MSH
<b>Health System:</b>	- All -
<b>TB Unit</b>	
<b>Region:</b>	Region A
<b>Name:*</b>	NATIONAL WAREHOUSE
<input checked="" type="checkbox"/> Perform activities of other units	
<b>User profile:*</b>	Central Administrator
<b>User View:*</b>	MSH Demo
<input type="button" value="SEND NEW PASSWORD"/> <input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

\* Value is required

**Figure 218**

### Deleting a user

- To delete a specific registered user, click on **Delete** in the **Action** column (figure 216), and in the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.

### **User's Profile**

The **User's profiles** option contains the list of operations (functions) in the system a user has permission to access (figure 219). Once you create a user profile you may assign several users to the same profile, making it easier to restrict access of users. To include a new profile or to edit or delete an already existing one, follow the instructions below.

Name	Action
Central Administrator	Delete
User DT	Delete
User Farmacie	Delete
UNIFARM	Delete
UIP	Delete
Visitor	Delete

**Figure 219**

1. To enter a new profile defined by the NTP or MoH, click on **NEW** (figure 219), and the screen in figure 220 will appear.

2. Enter the profile's **Name** in the specified field, and mark the boxes in the two columns (**Change** and **Grant**) for each permission item that corresponds to the functions the user will be allowed to do for each of the four modules (**Cases**, **Medicines**, **Management**, and **Administration**) for the respective profile (figure 220). Click on **OK** to confirm or **CANCEL** to undo it.

Name: <sup>*</sup>	Doctor	
Permission	Change	Grant
<input checked="" type="checkbox"/> Case management <span style="font-size: small;">+/-</span>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> TB Case - General view <span style="font-size: small;">+/-</span>	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Case data	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Case treatment	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Medicine intake follow-up	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Case exam results	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Additional information of the case	<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/> Drugogram view		
<input type="checkbox"/> Validate case		
<input type="checkbox"/> Edit/Delete case after validation		
<input checked="" type="checkbox"/> Transfer case to another health unit		
<input checked="" type="checkbox"/> Close case		
<input type="checkbox"/> Reopen case		
<input checked="" type="checkbox"/> Display personal information of the patient		
<input type="checkbox"/> DR-TB Case - General view <span style="font-size: small;">+/-</span>		
<input checked="" type="checkbox"/> Medicine Management <span style="font-size: small;">+/-</span>		
<input type="checkbox"/> Medicines receiving		
<input type="checkbox"/> Medicine orders <span style="font-size: small;">+/-</span>		
<input checked="" type="checkbox"/> Patient dispensing	<input checked="" type="checkbox"/>	
<input type="checkbox"/> Medicine transfer <span style="font-size: small;">+/-</span>		
<input type="checkbox"/> Include/remove unit from medicine management		
<input type="checkbox"/> Report control by unit <span style="font-size: small;">+/-</span>		

**Figure 220**

3. To edit a profile, click on appropriate entry in the **Name** column at the **User's profiles** page (figure 219), and the screen in figure 221 will appear. Change the profile's **Name** displayed, mark or unmark the boxes for permission in the two columns (**Change** and **Grant**), and click on **OK** to confirm or **CANCEL** to undo it.

Name: <sup>*</sup>	<input type="text" value="Pharmacist"/>	
<b>Permission</b>	<b>Change</b>	<b>Grant</b>
<input type="checkbox"/> <b>Case management</b> <span style="font-size: small;">+/-</span> <input checked="" type="checkbox"/> <b>Medicine Management</b> <span style="font-size: small;">+/-</span> <input checked="" type="checkbox"/> Medicines receiving <input checked="" type="checkbox"/> Medicine orders <span style="font-size: small;">+/-</span> <input checked="" type="checkbox"/> New medicine order <input type="checkbox"/> Authorize order <input type="checkbox"/> Notify medicines shipping <input checked="" type="checkbox"/> Notify order receiving <input checked="" type="checkbox"/> Cancel medicine order <input checked="" type="checkbox"/> Patient dispensing <input checked="" type="checkbox"/> Medicine transfer <span style="font-size: small;">+/-</span> <input checked="" type="checkbox"/> New medicine transfer <input checked="" type="checkbox"/> Register medicine transfer receiving <input checked="" type="checkbox"/> Include/remove unit from medicime management <input type="checkbox"/> Report control by unit <span style="font-size: small;">+/-</span> <input type="checkbox"/> Reports <span style="font-size: small;">+/-</span> <input type="checkbox"/> Administration <span style="font-size: small;">+/-</span>		
<input style="background-color: green; color: white; border: none; padding: 2px 10px; margin-right: 10px;" type="button" value="OK"/> <input style="background-color: orange; color: white; border: none; padding: 2px 10px;" type="button" value="CANCEL"/>		

\* Value is required

**Figure 221**

4. To exclude a registered profile, click on **Delete** in the **Action** column (figure 219), and in the confirmation window that appears, click on **OK** to confirm or **CANCEL** to undo it.

## Workspaces

The workspaces feature is a convenient way of hosting several different databases, as shown in figure 222. This functionality is intended to be used by the IT administrator of the system. A country can create a separate workspace for training so that real data are not affected by users learning the system.

A workspace represents a database with a unique configuration of administrative units, laboratories, medicines, TB units, and (among other data) TB and MDR-TB cases. Information in a workspace cannot be shared among other workspaces. A user can be part of several workspaces and selects in which one to work through the **Settings** option at the top right corner of the main e-TB Manager screen.

NEW			
Name	Default language	Default time zone	
 <a href="#">Azerbaijan</a> Azerbaijan Workspace	Azerbaijani (Azerbaijan)	Asia/Baku	
 <a href="#">Bangladesh</a> Bangladesh Workspace	English	Asia/Dhaka	
 <a href="#">Brasil</a> Área de Trabalho com dados importados do sistema TBMR	Portuguese (Brazil)	America/Sao_Paulo	
 <a href="#">Brasil Treinamento</a> Área de trabalho de treinamento para o Brasil	Portuguese (Brazil)	America/Bahia	
<a href="#">Ecuador</a> Área de Trabajo con datos simulados	Spanish	America/Guayaquil	
<a href="#">Forecasting Validation</a> Forecasting Validation	English	America/Sao_Paulo	
 <a href="#">Georgia</a> Georgia Workspace	English	Asia/Tbilisi	
 <a href="#">Indonesia</a> Indonesia Workspace	Indonesian English (United States)	Asia/Jakarta	

Figure 222

To make changes within the **Workspaces** option, follow these procedures:

1. To edit information about the workspace, click the name of a workspace (figure 222), then click **Edit** (red box on figure 223).

**Administration > Workspace**

## Workspace: MSH Demo

<a href="#">Edit</a> <a href="#">Delete</a> <a href="#">Add/Remove users</a> <a href="#">Copy data from another workspace</a>	 Strengthening Pharmaceutical Systems <p>ID: 19417  Name: MSH Demo  Description: MSH Demonstration space - No real information  Default language: English  Alternate language: Russian  Default time zone: America/New_York</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="background-color: #6b8e23; color: white;">Workspace users</th> </tr> </thead> <tbody> <tr><td>Ricardo Memória</td><td>Zagorski, Andre</td></tr> <tr><td>Luis Gustavo</td><td>Aleksey</td></tr> <tr><td>Thidiane Ndoye</td><td>Kyle Duarte</td></tr> <tr><td>Arin Speed</td><td>NTP-ARMENIA</td></tr> <tr><td>Thomas Moore</td><td>Faik Agayev</td></tr> <tr><td>Gege Buki</td><td>Andrei Dadu</td></tr> <tr><td>Ruben Zjamalyan</td><td>D Falzon</td></tr> <tr><td>Lusine Aydinyan</td><td>Alexander Pasechnikov</td></tr> <tr><td>Lucica Ditiu</td><td>Luc Janssens</td></tr> <tr><td>Damira Bibosunova</td><td>Nilufar Rakhmanova</td></tr> <tr><td>Lola Nazarova</td><td>Джовид Тиллоев</td></tr> <tr><td>Джовид Тиллоев</td><td>Cheri Vincent</td></tr> <tr><td>Ersin Topcuoglu</td><td>Claire Moodie</td></tr> <tr><td>John Vartanian</td><td>Luiz Avelino</td></tr> <tr><td>Selma Lina Suzuki</td><td>Jorge Luiz Rocha</td></tr> <tr><td>Chet Chaulagai</td><td>Sabrina Eagan</td></tr> <tr><td>Fulano</td><td>Molly Lindner</td></tr> </tbody> </table>	Workspace users		Ricardo Memória	Zagorski, Andre	Luis Gustavo	Aleksey	Thidiane Ndoye	Kyle Duarte	Arin Speed	NTP-ARMENIA	Thomas Moore	Faik Agayev	Gege Buki	Andrei Dadu	Ruben Zjamalyan	D Falzon	Lusine Aydinyan	Alexander Pasechnikov	Lucica Ditiu	Luc Janssens	Damira Bibosunova	Nilufar Rakhmanova	Lola Nazarova	Джовид Тиллоев	Джовид Тиллоев	Cheri Vincent	Ersin Topcuoglu	Claire Moodie	John Vartanian	Luiz Avelino	Selma Lina Suzuki	Jorge Luiz Rocha	Chet Chaulagai	Sabrina Eagan	Fulano	Molly Lindner
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Selma Lina Suzuki	Jorge Luiz Rocha																																				
Chet Chaulagai	Sabrina Eagan																																				
Fulano	Molly Lindner																																				

**Figure 223**

2. The **Edit workspace** data screen (figure 224) will appear. Make any necessary changes, and then click on **OK** to save your changes or **CANCEL** to cancel them.

**Edit workspace data**

Name: <sup>*</sup>	MSH Demo
Description: <sup>*</sup>	MSH Demonstration space - No real information
Default language: <sup>*</sup>	English
Alternate language:	русский
Default time zone: <sup>*</sup>	(GMT-05:00): America/New_York
Workspace picture:	 <input type="checkbox"/> Clear image New image file <input type="file"/> <input type="button" value="Browse..."/>
<hr/> <p><sup>*</sup> Value is required</p>	
<input type="button" value="OK"/> <input type="button" value="CANCEL"/>	

**Figure 224**

3. To include already existing users (or remove them) in a workspace, first click on the name of a workspace to see its detail page (figure 222).

4. Click the **Add/remove users** option to modify which users can access this workspace (figure 225). Click **OK** to save your changes or **CANCEL** to cancel them.

Workspace: Add/Remove users

The screenshot shows the 'Add/Remove users' interface for the 'MSH Demo' workspace. On the left, there is a table titled 'Workspace users' listing various users with their names and a 'Remove' link next to each. On the right, there is a form titled 'Users' with fields for 'User', 'TB Unit', 'User View', and 'Profile', each with dropdown menus. A green 'ADD' button is located at the bottom right of the form area.

Name	Action
RICARDO - Ricardo Memória	<a href="#">Remove</a>
ANDRE - Zagorski, Andre	<a href="#">Remove</a>
GUSTAVO - Luis Gustavo	<a href="#">Remove</a>
ABOGDANOV - Aleksey	<a href="#">Remove</a>
THIDIANE - Thidiane Ndoye	<a href="#">Remove</a>
KDUARTE - Kyle Duarte	<a href="#">Remove</a>
ASPEED - Arin Speed	<a href="#">Remove</a>
SHSAMV - NTP-ARMENIA	<a href="#">Remove</a>
THOMAS4 - Thomas Moore	<a href="#">Remove</a>
FAIK AGAYEV - Faiq Agayev	<a href="#">Remove</a>
GBUKI - Gege Buki	<a href="#">Remove</a>
ADADU - Andrei Dadu	<a href="#">Remove</a>

Figure 225

5. To delete a workspace, click on **Delete** on the workspace details page (figure 223).
6. To copy data from another workspace, click on **Copy data from another workspace** on the workspace details page (Figure 223).

## **Import Data**

The last item of the **Administration** menu is **Import Data**. Currently, only CSV (comma separated value) files are supported as the source files, and you can import data only to the administrative unit table, but other formats and tables will be available in the future.

A common scenario is to import the list of administrative units (e.g., regions, cities) from an Excel file to a new workspace in the system. Follow the steps below to import the data to the system.

### *File Format*

The system reads only CSV files. The easiest way to generate a CSV file is from an Excel spreadsheet with your data. This file must follow the format described below:

- The rows of this file must contain the name of the administrative units.
- The columns must contain the groups of administrative units.
- The first line of the spreadsheet must contain the name of the administrative unit structures (the types of units).

The following examples demonstrate how to construct a usable file.

### **Example 1**

This is the simplest format. Each column is a structure of the country.

Region	City	Village/Towns
Calisto	City 1	Rio de Janeiro
Calisto	City 1	Sao Paulo
Calisto	City 2	Belo Horizonte
Eclipse	City 3	Bahia

In this example, the system will include two regions (Calisto and Eclipse), three cities (City 1, City 2, and City 3), and four villages or towns. The system supports up to five levels (columns) of country structure.

### **Example 2**

If you want to include a standard code for each unit, separate each one into a separate row and include a new column called “ID.”

Region	City	Village/Towns	ID
Calisto			10000
	City 1		11000
		Rio de Janeiro	11001
		Sao Paulo	11002
	City 2		12000
		Belo Horizonte	12001
Eclipse			20000
	City 3		21000
		Bahia	21001

In this example the system will import the data the same way as example 1, but will also assign your ID code to each unit.

### **Example 3**

In a same level of the country structure, you may find different naming systems. In the previous example, in the third level of the country, we may have villages and towns. The solution is to include another column with the title “Type,” as in example 3.

Region	City	Village/Towns	ID	Type
Calisto			10000	
	City 1		11000	
		Rio de Janeiro	11001	Village
		Sao Paulo	11002	Town
	City 2		12000	
		Belo Horizonte	12001	Village
Eclipse			20000	
	City 3		21000	
		Bahia	21001	Town

In the example, because the rows in the third column have specific values in the “Type” column, the system will use its names to compose the country structure, so Rio de Janeiro and Belo Horizonte will be imported as villages, but Sao Paulo and Bahia will be imported as towns.

### *Generating the CSV File*

Once you have your Excel file ready, simply export it to a CSV format by using the Excel “Save as...” option, and selecting the format as CSV.

### *Importing the File*

In the **Administration** module of e-TB Manager, click on **Import data** (figure 178). Select the destination table, and select the CSV file in your computer. The default values for the **Delimiter char**(acter) and **Charset** are probably fine, but you may change them if required. To start importing the data, click on IMPORT (figure 226).

The screenshot shows a dialog box titled 'Import Data' with the following fields:

- Destination table:** A dropdown menu currently showing a single item.
- CSV File:** An input field with a 'Browse...' button to select a file.
- Delimiter char:** A dropdown menu set to a semicolon (';').
- Charset:** A dropdown menu set to 'UTF-8'.

A large green 'IMPORT' button is located at the bottom left of the dialog.

**Figure 226**

The import procedure will run as a background operation, so while it's being processed you may continue using the system. When the data import is completed, the system will send you an e-mail alerting you about the status of the import.

