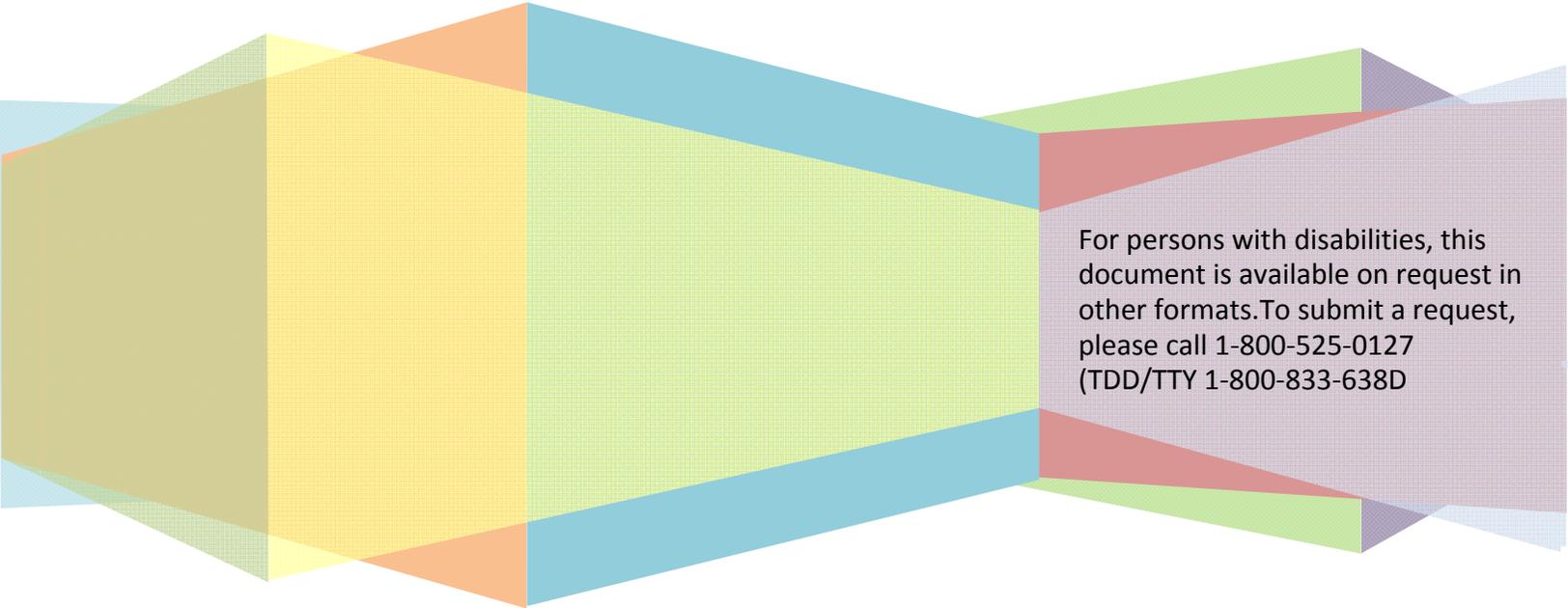


PHIMS TB User Manual

A Step-By-Step Guide to Entering and Managing Tuberculosis Disease Data for Surveillance and Reporting

Washington State Department of Health Tuberculosis Program



For persons with disabilities, this document is available on request in other formats. To submit a request, please call 1-800-525-0127 (TDD/TTY 1-800-833-638D)

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PHIMS TB User Guide

The Public Health Information Management System (PHIMS) is a database of Notifiable Conditions for case information management. As a web application, PHIMS information is entered and edited by staff at Local Health Jurisdictions (LHJs). Case reports are then sent to the Washington State Department of Health (DOH) who, in turn, verifies information for reporting to the U.S. Centers for Disease Control and Prevention (CDC).

1) Accessing the Tuberculosis Reporting Form in PHIMS TB

Please be aware that there are significant differences between some of the functionality in the PHIMS TB screens compared to other Notifiable Conditions. These differences are related to the revised TB Report of Verified Case of Tuberculosis (RVCT) form that was implemented by the CDC in 2008.

The PHIMS TB application is accessible through the SecureAccess Washington website. SecureAccess Washington is a single sign-on application gateway created by Washington State's Department of Information Services to simplify access to the growing list of government services accessible via the Internet. SecureAccess Washington allows Internet access to multiple online government services with the use of a unique single self-generated User-ID and password. Once signed in, users have the ability to change their password and register for access to various online government services.

If you have any questions regarding the process of applying for a SecureAccess Washington account, please contact:

- DOH Informatics Office

Phone: 1-877-889-3377

E-mail: informatics.csc@doh.wa.gov

2) Signing into PHIMS Online

- A) Once you have set up your account with SecureAccess Washington you will be able to sign in to use the system.
- B) Open Internet Explorer (other browsers are not guaranteed to work).

C) Type <http://secureaccess.wa.gov>. Enter your User ID and Password.

D) Your 'Service Page' should offer you a selection of reporting systems (depending on how many you are authorized to use).

Service	Agency	Description	User Status	Action
PHIMS - Public Health Issues Management System	Department of Health	Public Health Issues Management System (PHIMS)	Active	Remove
PHRED Classic	Department of Health	The Public Health Reporting of Electronic Data System (PHRED).	Active	Remove

E) Select PHIMS – Public Health Issues Management. You will get a “Please wait” screen before your PHIMS Case Action Screen is opened.



3) Main Menu Options

The Case Action screen has a blue banner with the Main Menu options displayed across the top (these options will appear at the top of every PHIMS screen).

A) Case Management

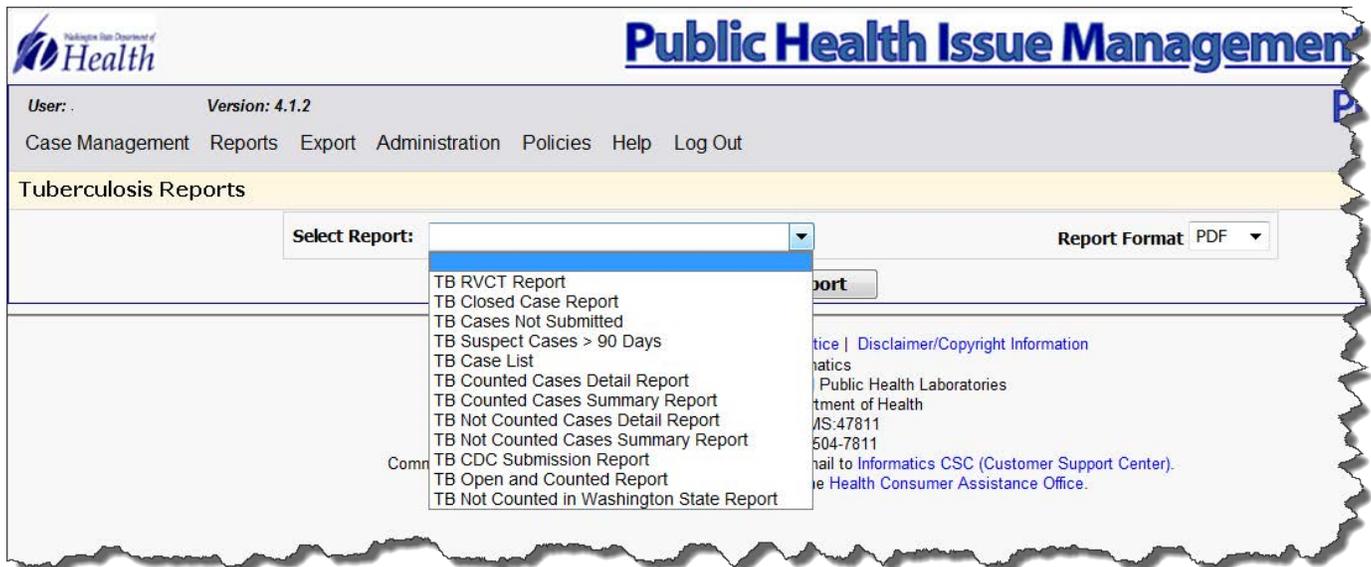
1. **New Case:** Used to create and enter data for new suspects and cases.
2. **Find Case:** Used to search the database for a specific record (records can be located through a variety of means e.g. last name, reporting county, PHIMS ID number and State Case number (RVCT number).
3. **Case Action:** Used to return to the Case Action screen (which displays all your open cases).



B) Reports: Used to access the various reports formulated by the PHIMS TB database.



TB RVCT Report: Contains the information entered into a PHIMS record that is required by the CDC for reporting and surveillance. Not all information entered into PHIMS TB is required by the CDC, which is why the RVCT and PHIMS appear differently.



1. **TB Closed Case Report:** A list of all confirmed and suspect cases for a reporting county that have been closed. To close a PHIMS RVCT record, the date therapy stopped (field # 43) AND the reason therapy was stopped (field # 44) must be completed. A TB patient may be closed due to: completion of therapy, lost, patient uncooperative or refused, adverse treatment event, TB ruled out, patient died, other or unknown. If the patient died during TB therapy and the cause of death was related to TB disease or TB therapy this must be documented in PHIMS.
2. **TB Cases Not Submitted:** A list of all patients entered into PHIMS by a reporting jurisdiction that have **not** been electronically sent to DOH by using the 'Submit Now' button (located on the left hand side of the screen above the patient's last name).
3. **TB Suspect Cases > 90 days:** A list of all patients entered by a reporting county that have been in PHIMS for more than 90 days without a diagnosis (or verification of TB).
4. **TB Case List:** A list of all suspects, cases ruled out, and confirmed cases (counted and non-countable) entered into PHIMS by a reporting county within a designated period of time (e.g. 01/01/2011 to 12/31/2011).
5. **TB Counted Cases Detail Report:** A list of all cases with personal identifiers (e.g. name, address, date of birth, etc) that have been counted for Washington State by a reporting county within a designated period of time (e.g. 01/01/2011 to 12/31/11).
6. **TB Counted Cases Summary Report:** A list of the number of counted cases entered by a reporting county within a designated time period without any personal identifiers given.
7. **TB Not Counted Cases Detail Report:** A list of all cases with personal identifiers (e.g. name, address, date of birth, etc) entered into PHIMS by a reporting county that were NOT counted as verified cases of TB for Washington State (e.g. cases counted in another county, state or counting authority, TB treatment initiated in another country, or recurrent TB within 12 months after completion of therapy) within a designated time period.
8. **TB Not Counted Cases Summary Report:** A list of cases entered into PHIMS by a reporting county that were NOT counted as verified cases of TB for Washington State (e.g. cases counted in another county, state or counting authority, TB treatment initiated in another country, or recurrent TB within 12 months after completion of therapy) within a designated time period.

9. **TB CDC Submission Report:** For DOH use only.
10. **TB Open and Counted Cases:** Any cases **counted** in Washington that are not closed.
11. **TB Not Counted in Washington State:** All verified cases of TB that were counted in another state or country but have transferred to another jurisdiction while still on treatment.

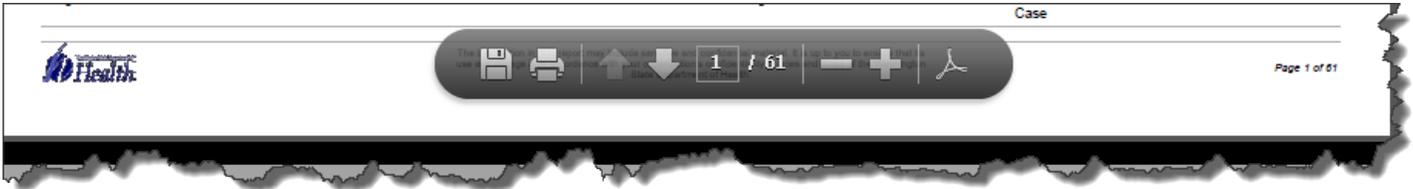
C) How to Print a Report

1. Select Report Format from drop down list.
2. Select a type of report from drop down list. The only file downloads are Excel and Xml. PDF is the format chosen by default.
3. The Selection Criteria Screen will be displayed after clicking on the type of report desired; selection of Reporting County is limited to those counties the PHIMS user has been given permission to access. For the 'TB Suspect Cases > 90 Days' report PHIMS runs an internal logarithm to calculate dates so the designated date boxes are grayed out or 'locked'.

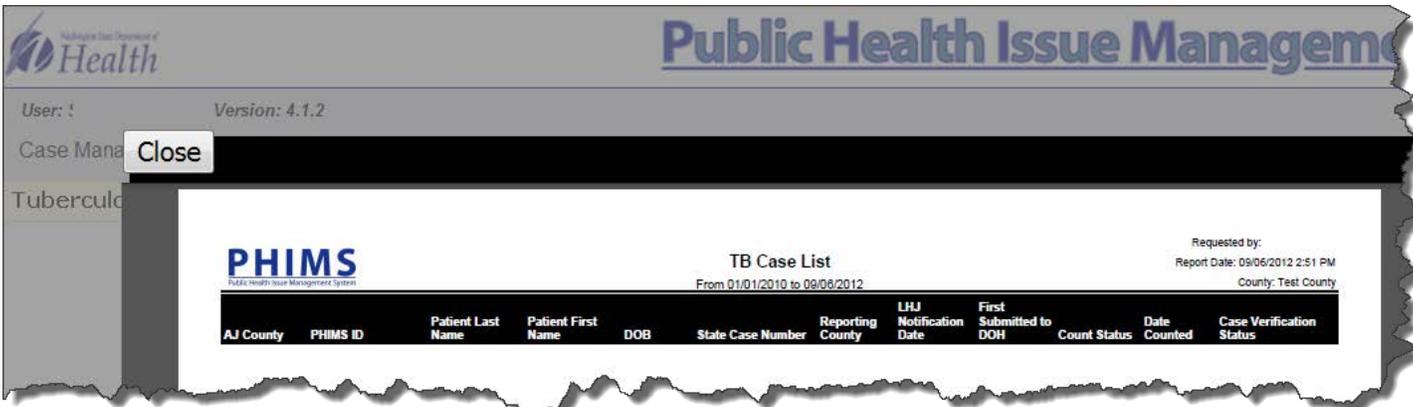


4. Click on the 'Submit Report' button. PHIMS will generate the report and display it across the screen.

- To print the report or save the PDF report, run your mouse over the bottom of the PDF; a tool bar with option will open.



- To close the report screen, simply click on the 'close' button in the top left corner of the report.



- D) TB Export Function:** Choose TB Export from the drop down menu to export TB data for in-depth data analysis.



- The **Export Case Count** option will produce a report with only the number of cases counted in the designated date range by selected reporting counties.

- The **Export** option will produce a report with all fields shown for cases counted for selected reporting counties within a designated date and places the report on the 'job queue' list.

Public Health Issue Management System
PHIMS

User: Version: 4.1.2
Case Management Reports Export Administration Policies Help Log Out

Tuberculosis Export

Selection Criteria

Reporting County: All Counties
 Adams
 Asotin
 Benton
 Chelan

<<-- Select all that apply
 Hold Shift key to select multiple adjacent items.
 Hold Ctrl key to select multiple non-adjacent items.

Date Range Type	Start	End
LHJ Notification Date:	01/01/2012	09/01/2012
Count Date:		

Export Case Count
Export
 View Files Go to the File Viewer page.
Reset Reset the criteria to the default values.

Reminder
 The information in this Export includes sensitive and confidential material. It is up to you to ensure that its use and storage is in accordance with organization's confidentiality policies.

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- The View Files option will open a new window with a history list of exported data in the top area of the screen and the new export in a .txt file at the bottom of the screen. Click on the *TBExport.txt* link to open a window with the requested data on a Notepad screen (the easiest way to put the data in a user friendly format is to use the Edit command and highlight 'Select All' then 'Copy'). Paste data into an Excel spreadsheet to use for analysis.

Public Health Issue Management System
PHIMS-LHJ

User: Version: 4.1.2
Case Management Reports Export Administration Policies Help Log Out

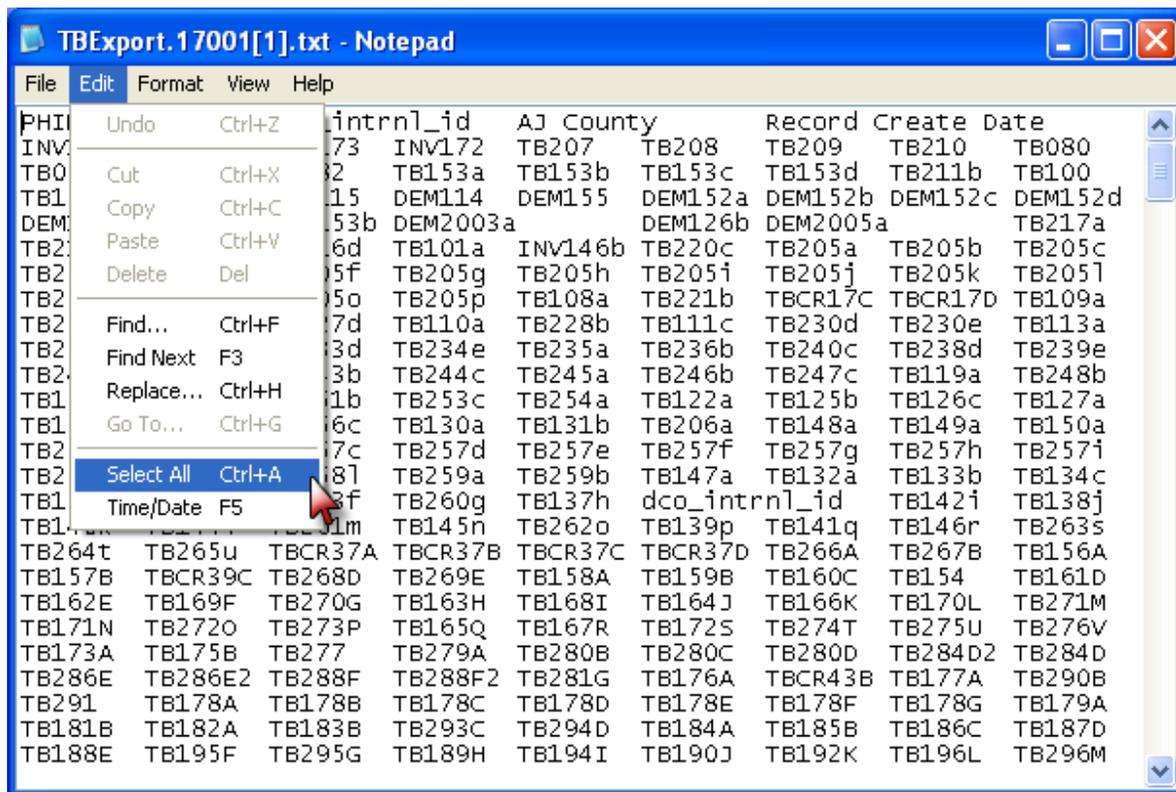
Files Refresh Delete

Job History Report queue length: 0 Export queue length: 4

Added to Queue	Status	Queue Type	Task
Sep 10 2012 7:57AM	Completed	Export Queue Item	TBExport
Aug 18 2011 11:58AM	Completed	Export Queue Item	TBExport
Jul 19 2011 11:19AM	Completed	Export Queue Item	TBExport
May 25 2011 1:43PM	Completed	Export Queue Item	TBExport
May 25 2011 1:40PM	Completed	Export Queue Item	TBExport
May 25 2011 1:34PM	Completed	Export Queue Item	TBExport

Name	Size	Type	Modified
TBExport.19898.txt	194 KB	Tab Delimited File	9/10/2012 7:57:42 AM

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E) **Administration:** Used by PHIMS administrators and data stewards to track PHIMS users' roles and security rights within the program.



F) **Policies:** Redirects the PHIMS user to the DOH website with guidelines and reporting forms for all the Notifiable Conditions for Washington State.

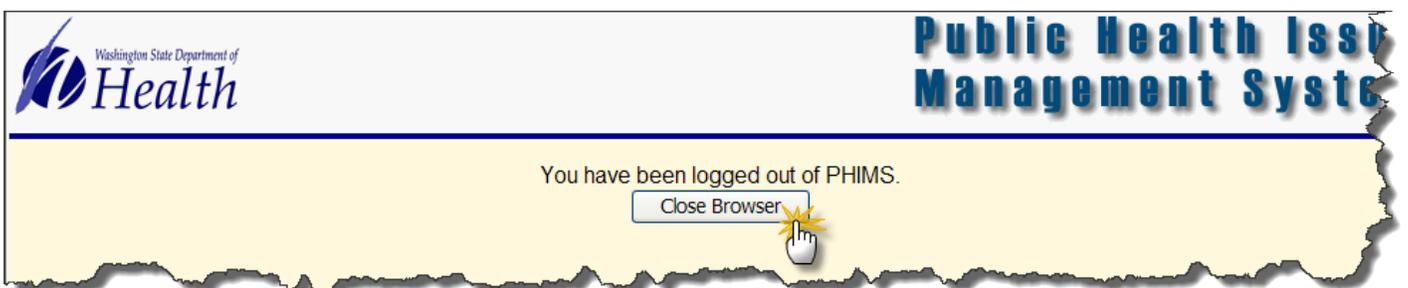


G) Help:

1. **Documentation to Support Data Analysis:** Includes the Data Dictionary which contains detailed information about each data element for every Notifiable Condition in PHIMS. An Excel file with information on what fields are asked by condition, and, if they are case-defining, what the sub-details are required (this Data Dictionary is universal for all Notifiable Conditions reported in PHIMS).
2. **Online Help System:** A screen by screen introduction to PHIMS; also contains contact information for questions and concerns and a link to the DOH website for downloading Notifiable Conditions reporting forms.
3. **Release Notes:** Description of changes introduced in each released version of PHIMS.
4. **Communicable Disease Epidemiology:** Opens a new window to the DOH Communicable Disease Epidemiology webpage.
5. **Contact Us:** Contact information and hours of operation for the DOH Informatics Customer Service Center.
6. **About:** Shows PHIMS copy rights, number of current version and last update date.



- H) **Log Out:** This is the only secure way to log out of PHIMS; close the browser, remove and store the digital certificate in a safe location.



4) How to Enter a New Suspect or Case into PHIMS TB:

- A. On the Main Menu banner select 'Case Management'.
- B. Use the drop down menu and select 'New Case'; the 'New Case' screen will open with required fields for initial case information.
- C. Before entering any other information, click on the drop down box for 'condition' and select 'Tuberculosis'. This will reset the screen to enter data pertinent to TB only.

The screenshot shows the 'New Case' form in the Public Health Issue Management System. The form is titled 'New Case' and includes a 'Create New Record' button. It contains various input fields for case information, including 'Accountable LHJ' (Test County), 'Condition' (Tuberculosis), 'Investigator', 'Last Name', 'First Name', 'Middle Name', 'Birth Date', 'Onset Date', 'LHJ Notification Date', 'Investigation Start Date', 'Classification', 'Initial Report Source', 'Other Source', 'LHJ Species/Organism', and 'LHJ Serotype/Serogroup'. There are also radio buttons for 'Hospitalization' and 'Died from Illness'. A 'General Notes' section is on the right. The form is marked with red asterisks for required fields.

- D. Choose Accountable LHJ if not prefilled.

The screenshot shows the 'New Case' form in the Public Health Issue Management System. The form is titled 'New Case' and includes 'Create New Record' and 'Cancel' buttons. It contains various input fields for case information, including 'Accountable LHJ' (Adams), 'Condition' (Tuberculosis), 'Investigator', 'Last Name', 'First Name', 'Middle Name', 'Birth Date', 'LHJ Notification Date', and 'Date LHJ Notified DOH'. There are also radio buttons for 'Hospitalization' and 'Died from Illness'. A 'General Notes' section is on the right. The form is marked with red asterisks for required fields.

- E. Select the assigned investigator from the names in the drop down box if not pre-filled with correct name.
- F. Enter the suspect's or cases last name, first name, middle name and date of birth in appropriate fields.
- G. Enter the date that the **LHJ was first notified** of a suspect of case of tuberculosis if not pre-filled.
- H. Enter the date that the LHJ notified the DOH TB Program.

- I. Click on the **'Create New Record'** on the top right hand side of the screen. You **cannot** use the **Enter button** on your keyboard to move to the next window - using the Enter button after filling in the data fields will erase all information entered and return you to the Case Action screen.
- J. A new screen will appear with the RVCT reporting form. Fill in fields 1-36 as completely as possible. **Use the Save button frequently as you enter information – if the Save button is not used about every 10 minutes the system will drop you from the program BUT the RVCT reporting form will remain on the screen and allow you to enter information that is not being saved.**
- K. The patient's name will appear in the dark blue banner under the Main Menu options.
- L. The **Case ID** number is also the **PHIMS** record number.

- M. The **LHJ Notification Date** will automatically be filled in with the date that was previously entered in that field on the **New Case** screen. This date can **NOT** be changed once entered.
- N. Enter patient's address in Washington. *PHIMS will not accept an out of state address*; if the patient is not a resident of Washington please refer to page 35 of the [RVCT Manual](#) for detailed instructions on what address to enter for specific populations and locations.
- O. **Field #1** will automatically pre-fill with the date the LHJ was first notified of the suspect or case (entered by the PHIMS user on the New Case Screen). The second date should be listed as the date that the LHJ first notified the DOH Tuberculosis Program of the case or suspect (this may have been by email, phone, fax or the PHIMS record itself). The **Contact Investigation Start Date** should be the date that the patient was first interviewed by LHJ staff to identify contacts. The **Date Patient Presented to Health Care system** should be the first time the patient sought medical care for signs and symptoms of tuberculosis, an abnormal chest x-ray, incidental lab result of for an immigration medical exam. **Field #2** is "grayed out" and will automatically pre-fill with the date that the **Submit Now** is used. Updates to the RVCT record that are submitted to DOH after the initial case report are recorded under the **Submit Now** button in the **"Last Submitted to DOH"** line.

5) Commonly Missed or Misunderstood Fields:

A) **Submit Now button:** When the LHJ user has entered as much information that is currently known about the suspect or case into the PHIMS TB form, the **'Submit Now'** button should be used. This will:

- Generate an email to the DOH TB program staff that the LHJ has entered a new or suspect case; and
- Generates the *State Case Number* (RVCT Field #3)

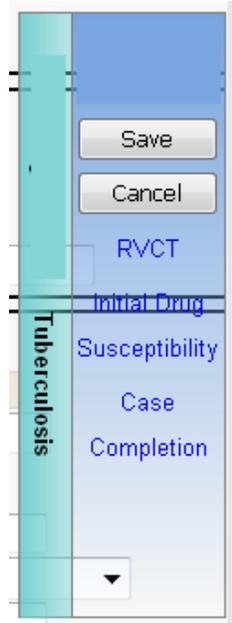
The screenshot shows the top portion of a web application interface. At the top left is the Washington State Department of Health logo. To the right is the text "Public Health". Below this is a navigation menu with links: "Case Management", "Reports", "Export", "Administration", "Policies", "Help", and "Log Out". A dark blue horizontal bar is present. Below that, there are several fields: "Section" with a dropdown menu showing "Data Entry", "Case ID: 53000-0901-0001", "Acct Jur", "LHJ Classification: Ruled Out", and "Inv". A pink header bar contains the text "Report of Verified Case of Tuberculosis". Below this are two buttons: "Submit Now" and "Case Verification". At the bottom left, it says "Last Submitted to DOH 5/23/2012 6:42:54 PM".

B) **Unknown Dates:** if a date is missing and there is no way to obtain it you may leave the field blank or enter a default date of 01/01/1900. Do NOT check the 'Unknown' box for data that is pending (e.g. culture results). If a valid value cannot be determined and there is no check-box labeled 'Unknown' then note that field in the Comments section. The CDC encourages active surveillance or collection of all applicable information so 'Unknown' choices should be rare.

C) **Verification Status** button: Once as much information as possible is entered into **fields' #1 - #36** the Case Verification button can be used to determine case status. Case status is based on an internal PHIMS formula that determines (based on the information entered into PHIMS – see cross reference table below) what case status should be assigned to the patient. The Case Verification button can be used more than once as a patient's status changes.

The screenshot shows a section titled "Report of Verified Case of Tuberculosis". It features a "Case Verification" button. To the right of the button, there are two status fields: "Current Verification Status" with a dropdown menu showing "Not a Verified Case", and "Verification Status" with a dropdown menu.

Case Verification	Fields Used to Verify
0 – not a verified case	#43, #44
1 – positive culture	#18, #20
1a – positive NAA	#21
2 – positive smear/tissue	#17, #19,
3 – clinical case definition	#16, #18 or #21, #22a, #23 or #24, #36 & #37
4 – verified by provider diagnosis	Overwrites default case verification of <i>Suspect</i>
5 – suspect	Default case verification



D) Using the Popup Toolbar and Error Messaging - there is a popup toolbar to the right of the *RVCT Data Entry* screen which expands when you hover over it with the cursor. This toolbar moves with you as you scroll through the page. Toolbar options are:

SAVE - save the case information frequently to avoid losing data.

Cancel – will exit the data entry screen without saving information

RVCT – will move the user to the top of the RVCT form

Initial Drug Susceptibilities – will move the user to Field #38

Case Completion – will move the user to Field #41

If you receive an error message you must correct all data entry errors or your data will not be saved.

There are two types of error message warnings when the user attempts to SAVE the data:

- A red exclamation mark (!) appears beside the field with incorrectly entered data. In addition, a **red text** warning message appears in two places: on the popup toolbar and at the top of the *RVCT Data Entry screen*. This warning occurs when the user has made more than one selection on an observation requiring only one answer (i.e. positive, negative, not done....or yes, no, unknown). In most cases these observations include a label “select only one” in the section.
- An error message dialogue box will appear if the user enters an invalid date (i.e. future date, bad date - 12/32/2011, incorrect date format - 1/2/10 – correct format is mm/dd/yyyy).

E) Saving your work

Be sure to click the Save button on the popup toolbar frequently (**about every 10-15 minutes**) to avoid losing data. When data is changed, a message box reminds you to save. PHIMS will time out without saving after 10- 15 minutes, even with keyboard activity. **Typing does not reset this timer and screen movement does not reset it. The only certain way to avoid a PHIMS timeout is to save the record within the timeout period. This is part of the web-based applications security activities.**

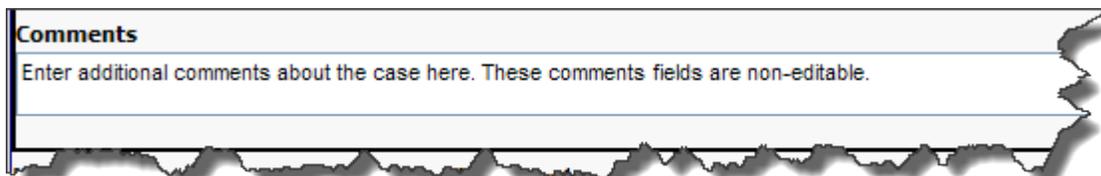
F) Reporting County vs. Accountable Jurisdiction

The Accountable Jurisdiction (i.e. Thurston, Spokane, King) is the county the user is associated with per the User Account Management form submitted by an LHJ Data Steward. A case becomes associated with an "Accountable Jurisdiction" when the case is first entered on the PHIMS New Case screen, or if the case is transferred to another county and the PHIMS "Transfer" function is executed in the "Case Administration" section.

The Reporting County is a user entered field and is defined in the RVCT guideline as the patient's residence at the time of diagnosis. Once the case has been reported to DOH via the "Report now" button, field #4 is no longer editable by the LHJ user.

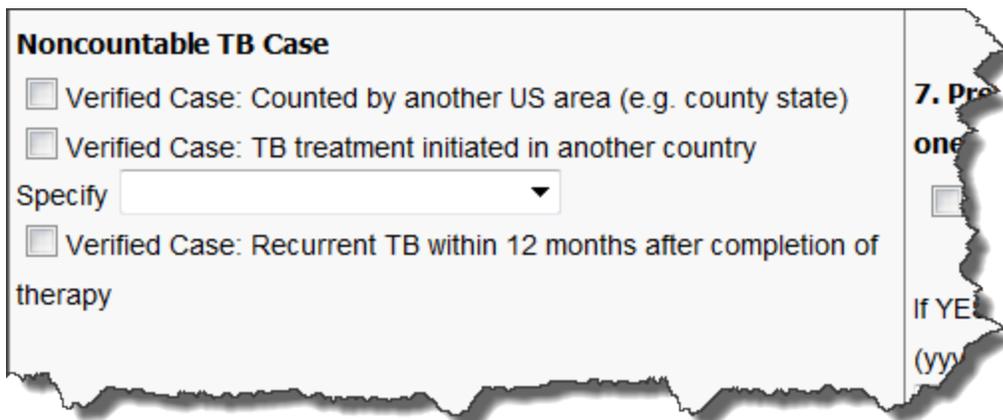
G) Comment Fields

The screen includes three *Comment* fields. You can enter text in the white space below the "Comments" label as shown below. You cannot, however, edit previously saved comments. The most recent comment is listed at the top with the name of the person who entered the comment as well as the time and date of entry.



H) Count Status: Field #5 and Date Counted Field #6 are for DOH use only.

I) Noncountable TB Case: If the patient meets the criteria for not being counted as a verified case of tuberculosis in Washington State then **both** a Noncountable TB Case status must be selected **as well a Linking Case Number and a Reason selected from the drop down box (located under Field #3 Case Numbers)**. For example if a patient lived, was diagnosed and started treatment in California and then moved to Washington three months later the fields would look like this:



3. Case Numbers

State Case Number

County Case Number

Linking Case Number 2012CA012345678

Reason 3-Case transferred from another area

Linking Case Number

Once the RVCT form is submitted to DOH it will also be assigned a State Case Number (RVCT number), but the patient will not be counted for the LHJ or WA state.

- J) **Case Action:** This screen lists all “open” cases (*case status* field = “investigation in progress”) assigned to you. No two *Case Action* screens have the same cases listed since a case is assigned to only one investigator at a time. See *Case Administration* section of this document to find out how to change the case assignment to a different investigator within your jurisdiction.

Public Health Issue Management System
PHIMS-LHJ

User: Version: 3.5.0

Case Management Reports Export Administration Policies Help Log Out

Case Action Open Cases = 1

Click on the CaseID to edit information for the patient

Case ID	Name	Condition	Onset Date	Classification	Age	Age Unit
53000-1105-0004		Tuberculosis		Suspect	Unknown	

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The case will remain on the screen until:

- the *Date Therapy Stopped* field is entered causing the *Case Status* to change to “complete”
- the case is reassigned to another LHJ investigator within the accountable jurisdiction using the function “*Case Administration | Reassign/Save*”
- the case is transferred to another jurisdiction using the function “*Case Administration | Transfer*”

Case Summary

Case Save Case Delete Case

Update Condition: Tuberculosis

Accountable Jurisdiction

Jurisdiction: Available Jurisdictions: Transfer

Investigator Assignment

Investigator: Available Investigators: Reassign/Save

Transfer History		Investigator History	
Jurisdiction	Effective Date	Investigator	Effective Date
Test County	1/14/2009 4:42:11 PM		1/14/2009 4:42:11 PM

K) Find Case: This screen allows an LHJ investigator to find case(s) using multiple selection criteria. The more information you search by, the quicker the system will respond to the search criteria and fewer records will be retrieved. The maximum number of cases returned per search is 75. A modified search screen using either the patient’s State Case number/RVCT number or PHIMS Case ID number can be accessed by choosing **Tuberculosis** for the **Disease Type** field:

Please remember that the RVCT ID is the State Case number and that the Case ID is the PHIMS ID Case number. You **MUST** use the **Find Case** button to enter data into search engine – if you use the ‘enter’ key on your keyboard you will be taken back to the Case Action screen.

Special situations for TB cases are:

- “Onset date” – does not apply to TB
- “Case Verification” values are assigned a “Case classification” value as shown above on page 20.
- *Notified Date* label is used for other PHIMS conditions; for TB this is the same as *Date Reported* field.

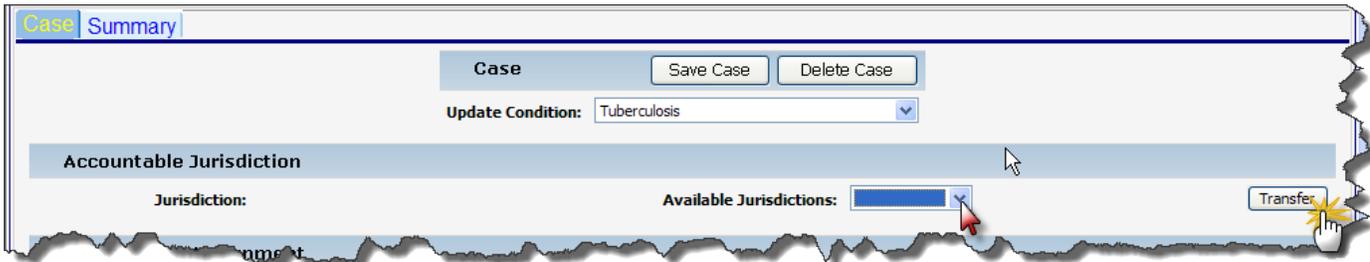
L) Case Administration: Access this screen by using the dropdown at the top of the *RVCT Data Entry* screen to change from Data Entered to Case Administration.

The Case Administration section allows you to:

- **Reassign** the case to another LHJ investigator within the accountable jurisdiction:



- **Transfer** the case to another jurisdiction:



Once the transfer has been made, **the accountable jurisdiction will no longer have access to the case information in PHIMS** and will need to refer to hard copy notes or a saved electronic copy of the case report for any ongoing follow-up. However, for the Accountable Jurisdiction the patient's name will continue to appear on that county's Case List report.

It is important to adhere to correct transfer procedures in order to avoid creating duplicate cases in the database (and to avoid duplicate reporting to the CDC). By following the guidelines below duplicate records can be minimized.

6) Guidelines for the Transferring County

- Consider saving a printed copy of the RVCT Report for your records prior to making a transfer.
- Transfer the case as soon as relevant patient information can be documented.
- Complete and fax the Interjurisdictional (IJN) Transfer form to the DOH TB Program and the receiving LHJ (click [here](#) to find contact information for all WA LHJs).
- Contact the receiving county prior to transferring the case and report all pertinent clinical information as well as the RVCT number and/or the PHIMS Case ID number – there is **no** automatic email notification to either the county or the state when a case is transferred.
- If the patient is moving to a different state please follow the guidelines as above.
- If the patient is planning an international move the international notification forms as well as a list of TB Controllers for different countries is available on the CDC website at <http://www.cdc.gov/tb/programs/international/default.htm> . Please be aware the WA DOH TB Services Program cannot place international calls or faxes.

7) Closing a Case in PHIMS TB:

The interval between Date Therapy Started (field #36) and Date Therapy Stopped (field #43) is meant to encompass the entire treatment period (including any interruptions in therapy) that the patient was receiving medications to treat confirmed or suspected TB disease.

- Change the date that therapy was stopped only if a patient was lost to follow-up and then returns and completes treatment.
- If a case is diagnosed with *recurrent TB* within 12 months after completion of therapy a new RVCT form must be started. The patient is entered into PHIMS, reported to DOH/CDC but NOT counted as a new TB case.
- **Fields #43 & Fields #44 must be completed for the case status to change from 'in progress' to 'completed'**. Once a patient has completed treatment and all information is entered into the PHIMS RVCT form the case status can be changed to 'completed'. If the case report is closed with a "Not TB" diagnosis the patient is neither counted as a Verified Case of TB nor reviewed during the medical case review or cohort review. Remember that the DOH TB Program needs to be notified of any changes in the RVCT record by clicking on the 'Submit Now' button.

8) Data Dictionary for Fields Added to the RVCT form by the WA TB Program:

- **#1a** – Date that index case was interviewed and contacts identified.
- **#1b** – Date the patient FIRST presents to a health care facility (PCP, hospital, urgent care, LHJ etc) for evaluation; patient may or may NOT have any signs/symptoms of TB at this point and may be presenting for testing for school, employment, immigration medical exam, etc.
- **#2** – Date the RVCT was **first** electronically submitted to DOH
- **#3** – List of case numbers. The PHIMS Case ID number is located in the banner above the patient's name.

State Case Number – Automatically generated and entered on screen. This is also referred to as the patient's RVCT number.

City/County Case Number – For use by the LHJs.

- **#12** – Country the patient was born in – if US born, please choose United States on drop down list.
- **#13** – If patient was foreign born please enter the month, year and entry status. to the United States. If the patient cannot remember the exact month an approximation may be used (e.g. arrived in the spring of 2012 would be entered as 04/2012).
- **#17** – Date a sputum specimen was collected and sent to the *first* lab (enter date first positive specimen collected and received or date first of many negative specimens are collected and received).
- **#22a** – Date that the initial chest x-ray was performed.
- **#22b** – Date that the initial CT Scan or other Imaging Study was performed.

- **#23** – TST results at the time of diagnosis and any previous documented positive results.
- **#24** – IGRA done at time of diagnosis and any previous documented positive results.
- **#36** – Date the patient started treatment and the anticipated duration of treatment
- **#38** – Genotyping results – this information is entered by DOH staff. If patient is part of a cluster, that information will be entered into the Comments section.
- **#41** – Only used if patient had sputum positive cultures.
- **#42** – For patients who move during treatment, please document date the Interjurisdictional Notice (IJN) was faxed to DOH.
- **#47** – Number of weeks the patient was on DOT (Directly Observed Therapy) – the use of electronic equipment to perform daily DOT (vDOT) should also be counted.

9) Contact Information:

- Informatics Office
Phone: 1-877-889-3377
E-mail: informatics.csc@doh.wa.gov
- TB Program
Phone: 360-236-3443
Fax: 360-236-3405
E-mail: tbservices@doh.wa.gov

10) Links to Useful Resources:

- [CDC RVCT Manual](#)
- [WA DOH TB Services Manual](#)
- [Self-Study Modules on Tuberculosis](#)
- [Core Curriculum on Tuberculosis](#)
- [Materials and Guidelines for TB Programs](#)

11) Glossary

Acid-fast bacilli (AFB)	Microorganisms that when stained, retain color even after they have been washed in an acid solution; may be detected under a microscope in a stained smear.
Active case finding	Looking for undiagnosed cases by screening a population.
Active TB disease	An illness, caused by bacteria called <i>Mycobacterium tuberculosis</i> , in which tuberculosis (TB) bacteria are multiplying and attacking parts of the body, most commonly the lungs. A person with active TB disease is capable of spreading the disease to others if the TB bacteria are active in the lungs or throat. The symptoms of active TB disease include weakness, weight loss, fever, no appetite, chills, and sweating at night. Other symptoms may include a bad cough, pain in the chest, and coughing up blood.
Adherence to treatment	Following the recommended course of treatment by taking all the prescribed medications for the entire length of time necessary.
Adverse effect	Negative side effect resulting from the use of a drug (for example, hepatitis, nausea, headache).
Bronchoscopy	A procedure used to obtain pulmonary secretions or lung tissue with an instrument called a bronchoscope.
Case management	A system in which a specific health department employee is assigned primary responsibility for the patient, systematic regular review of patient progress is conducted, and plans are made to address any barriers to adherence.
Case rate	The number of cases that occur during a certain time period, divided by the size of the population during that time period; the case rate is often expressed in terms of a population size of 100,000 persons.
Case reporting	Informing the state or local health department when a new case (an occurrence) of TB disease has been diagnosed or is suspected.
Cavity	A hollow space within the lung, visible on a chest x-ray or CT scan.
Clinical evaluation	An evaluation done to find out whether a patient has symptoms of TB disease or is responding to treatment; also done to check for adverse reaction to TB medications.
Clinician	A physician, physician's assistant, or nurse.

Congregate setting	A setting in which a group of usually unrelated persons reside in close physical proximity. These settings may include hospitals, long-term care facilities, assisted living facilities, correctional facilities, or homeless shelters (see residential facilities).
Contact investigation	A procedure for interviewing a person who has TB disease to determine who may have been exposed to TB. People who have been exposed to TB are tested for latent TB infection (LTBI) and TB disease.
Contacts	People exposed to someone with infectious TB disease, generally including family members, roommates or housemates, close friends, coworkers, classmates, and others.
Country of birth	The country where a person was born.
Culture	To grow organisms on media (substances containing nutrients) so that they or the product of this process can be identified.
Daily regimen	A treatment schedule in which the patient takes a dose of each prescribed medication every day.
Diabetes mellitus	A disease in which the body's ability to use sugar is altered.
Diagnostic evaluation	An evaluation used to diagnose TB disease; includes a medical history, a chest x-ray, the collection of specimens for bacteriologic examination, and possibly a tuberculin skin test or an interferon-gamma release assay such as the QuantiFERON®-TB Gold test.
Directly observed therapy (DOT)	A designated person watches the TB patient swallow each dose of the prescribed drugs.
Drug susceptibility test	A laboratory method for finding drug resistance in a microorganism.
Drug-resistant TB	TB caused by organisms that are able to grow in the presence of a particular drug; TB that is resistant to at least one first-line antituberculosis drug.
End-stage renal disease (ESRD)	A condition when chronic kidney failure has progressed to the point where kidney function is less than 10% of normal; requires dialysis or transplantation; also known as stage 5 chronic kidney disease. The most common cause of ESRD in the United States is diabetes.
Ethambutol (EMB)	A drug used to treat TB disease; may cause vision problems. Ethambutol should be used cautiously in children who are too young to be monitored for changes in their vision.
Extrapulmonary TB	TB disease that occurs in places other than the lungs, such as the lymph nodes, the pleura, the brain, the kidneys, or the bones; most types of extrapulmonary TB are not infectious.

First-line TB drugs	The initial drugs used for treating TB disease. Include isoniazid (INH), rifampin (RIF), pyrazinamide (PZA), and either ethambutol (EMB). or streptomycin (SM).
Foreign-born persons	People born outside of the United States.
HIV	Human immunodeficiency virus, the virus that causes AIDS.
Immunosuppressive therapy	Therapy that suppresses or weakens the immune system.
Interferon-gamma (IFN- γ)	Protein that is normally produced by the body in response to infection.
Interferon-gamma release assay (IGRA)	A type of blood test that measures a person's immune reactivity to M. tuberculosis by measuring release of IFN- γ . In the U.S., QuantiFERON®-TB Gold, QuantiFERON®-TB Gold In-Tube, and T-SPOT®.TB are currently available IGRAs.
Isolate	A sample from a specimen that was identified as a certain organism such as M. tuberculosis complex.
Isoniazid (INH)	A drug that is used for treating LTBI and one of the drugs used to treat TB disease; although relatively safe, it may cause hepatitis and other severe adverse reaction in some patients.
Latent TB infection (LTBI)	Refers to the condition when a person is infected with tubercle bacilli, but TB disease has not developed. Persons with LTBI do not have TB disease symptoms and they cannot spread TB germs to others. Persons with LTBI usually have a positive result to the Mantoux tuberculin skin test or an interferon-gamma release assay.
LTBI treatment	Medication that is given to people who have latent TB infection to prevent them from developing TB disease.
Mantoux tuberculin skin test (TST)	A method of testing for TB infection; a needle and syringe are used to inject 0.1 ml of 5 tuberculin units of liquid tuberculin between the layers of the skin (intradermally), usually on the forearm; the reaction to this test, a palpable swollen area (induration), is measured 48 to 72 hours after the injection and is interpreted as positive or negative depending on the size of the reaction and the patient's risk factors for TB.
Miliary TB	Miliary TB is a serious type of tuberculosis infection. It is a histological or radiologic finding, rather than a site of disease. It appears on radiograph as a great number of small, well-defined nodules that look like millet seeds scattered throughout the lungs, hence the name "miliary."

Multidrug-resistant TB (MDR TB)	Resistant to at least the drugs isoniazid and rifampin; MDR TB is more difficult to treat than drug-susceptible TB.
Mycobacterium tuberculosis	One of the organisms causing TB in humans, and sometimes called the tubercle bacillus; belongs to a group of bacteria called mycobacteria.
Mycobacterium tuberculosis complex	A group of closely related mycobacteria that can cause active TB (e.g., M. tuberculosis, M. bovis, and M. africanum). Most TB in the United States is caused by M. tuberculosis.
Nucleic acid amplification (NAA)	A technique that amplifies (copies) DNA or RNA segments, in order to directly identify microorganisms in sputum specimens.
Pulmonary TB	TB disease that occurs in the lungs, typically causing a cough and an abnormal chest x-ray. Pulmonary TB is usually infectious if untreated. Most TB cases reported in the United States are pulmonary TB.
Pyridoxine	Another name for vitamin B6; it is given to prevent peripheral neuropathy; should always be given to pregnant and breastfeeding women on isoniazid.
QuantiFERON®-TB Gold test (QFT-G)	A blood test used for diagnosing infection with M. tuberculosis. The QFT-G measures a patient's immune reactivity to M. tuberculosis by measuring the response to TB proteins when they are mixed with a small amount of blood (see IGRAs).
Recurrence	A patient who has either a Negative culture result while receiving anti-TB therapy, but at some point after therapy is completed, either the culture result becomes positive for M. tuberculosis or the patient has clinical or radiologic deterioration that is consistent with TB disease. or Negative smear and culture result (e.g., clinical case) at diagnosis and while receiving anti-TB therapy, but at some point after therapy is completed, either the patient has a culture result that is positive for M. tuberculosis or has clinical or radiologic deterioration that is consistent with TB disease.
Rifabutin	A drug used to treat TB disease; used as a substitute for rifampin (RIF) in the treatment of all forms of TB.
Rifampin	A drug used to treat TB disease; also used for LTBI treatment. Rifampin has several possible side effects (for example, hepatitis, turning body fluids orange, and drug interactions).

Rifapentine	A drug used to treat TB disease; used once weekly with isoniazid during the continuation phase with selected HIV-negative patients.
Second-line TB drugs	Drugs used to treat TB that is resistant to first-line TB drugs (for example, capreomycin, kanamycin, ethionamide, cycloserine, ciprofloxacin, amikacin).
Smear	A specimen that has been smeared onto a glass slide, stained, washed in an acid solution, and then placed under the microscope for examination; used to detect acid-fast bacilli in a specimen.
Specimen	A sample collected from a person for testing.
Sputum	Phlegm from deep in the lungs, collected in a sterile container for processing and examination.
Susceptibility	An organism's ability to be killed by a particular drug.
Suspect	A person for whom there is a high index of suspicion for active TB (e.g., a known contact to an active TB case or to a person with signs or symptoms consistent with TB) who is currently under evaluation for TB disease.
XDR TB	The occurrence of TB in persons whose M. tuberculosis isolates are resistant to isoniazid and rifampin, plus resistant to any fluoroquinolone and at least one of three injectable second-line drugs (i.e., amikacin, kanamycin, or capreomycin).