

Ministry of Health Uganda



THE REPUBLIC OF UGANDA

OpenMRS HIV/AIDS Database



User Training and Users Manual

OpenMRS is a community-developed, open-source, enterprise electronic medical record system framework intended to aid resource-constrained healthcare environments

www.openmrs.org



This customization of the OpenMRS HIV/AIDS Database has been designed by the National AIDS Control Programme in conjunction with WHO, CDC and Partners in Uganda

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1.0 Introduction

1.1 Overview

The OpenMRS HIV/AIDS database is designed to be a system for HIV/AIDS clinics in Uganda to store and analyze core data specified for collection by the Sexual Transmitted Disease/AIDS Control Programme (STD/ICP) as well as additional more detailed data. It is scalable to be used by a large number of users on a network and to store a large quantity of data.

It consists of a customized version of OpenMRS used for data entry and data storage, coupled with a report and export tool for generating a range of Facility and National specific and other reports as well as for exporting data to District and the STD/ACP in electronic format.

1.2 Functions

The system allows the user to enter the following information

- Patient registration details, contact details
- Detailed forms for visits (adult initial, adult return,). These forms contain the core visit information from the Blue HIV/AIDS care and treatment card.
- Lab related
- Details of counselling and education given (as on back of Blue card)
- Updates on the status / state of patients within the HIV care program (attending clinic / transferred out / lost to follow up / died etc)

The report and export tool provides the following outputs:

- Data checking / validation reports
- Lists of patients who need to be tracked for follow-up
- A range of analysis functions for generating indicators
- Printouts of patient pre-ART and ART registers to allow paper based analysis
- Printouts of cross sectional and cohort reports required by the STI/ACP
- Export to Excel to allow manual analysis
- Export file for sending to District AIDS Coordinators / Regional AIDS Coordinators / NACP if electronic sending option is followed.

The system includes the following facilities

- Facilities to add and manage users of the database and staff of the clinic
- Multi-user system – facility for multiple users on different computers on a network to work with the system at the same time
- Reports available for any date range specified

1.3 *Frequently Asked Questions*

What is OpenMRS?

OpenMRS is an application which enables design of a customized medical records system with no programming knowledge (although medical and systems analysis knowledge is required). It is a common framework upon which medical informatics efforts in developing countries can be built.

OpenMRS is also a community of people working to apply health information technologies to solve problems, primarily in resource-poor environments. We are a proud community of developers, implementers, funders, and users all trying to make the world a better place by using our expertise to improve the health and wellness of the planet.

Who is OpenMRS for?

OpenMRS is for people that need to implement a medical records system. It is both just a library of API calls and a database and a default implementation of those API calls in the form of a web application.

How much does OpenMRS cost?

OpenMRS is a free, open-source program. All of the core resources needed are open source and freely available.

Where is OpenMRS being used?

OpenMRS is in use [around the world](#). Further implementations are underway in other locations globally through the work of such groups as the [Millennium Villages Project](#) and FACES. Nearly twelve million discrete observations have been collected for nearly 50,000 HIV patients with over 550,000 encounters within the [AMPATH implementation in Kenya](#). The [Jembi](#) in South Africa is leading the effort to form an implementers group to aid in further implementations.

Why should I use OpenMRS?

At this stage, OpenMRS requires a fairly sophisticated team of implementers to install and run. Such teams in several countries are in the process or considering implementations at this time. We are working toward a pre-built implementation that would allow more clinic sites to take advantage of a sophisticated, scalable EMR without needing the expertise to support and maintain it at a low level. OpenMRS is backed by a data model driven by a concept dictionary, allowing for the collection of coded, reusable data without requiring changes to the data model. Furthermore, OpenMRS is not based on an HIV-centric data model, so it can be adapted for use in

tuberculosis, malaria, or general medical care. OpenMRS is based upon a program which has been used effectively for over 30 years at Regenstrief Institute.

What technologies is OpenMRS built on?

OpenMRS is programmed in Java and the core application works through a web-browser. Hibernate is used as an interface layer to the database. Tomcat is used as the web application server. The back end database is currently in MySQL. The system creates XML schemas for form design. Form design and form data entry is currently done in Microsoft Infopath, HTML, or XForms. When form data entered is submitted, it is converted into a HL7 message before going into the database.

Do I need the Java SDK to run OpenMRS? Or is the Java JRE sufficient?
The JRE is sufficient unless you are planning on doing code development.

Where can I get OpenMRS?

OpenMRS is a work in progress. The [source code](#) is always freely available for your review and download. You can find additional download information on the [Downloads](#)

What is the plan for new features in OpenMRS?

We will post our plans on the [Road Map](#) page in the [OpenMRS Wiki](#).

Where can I see a working example of OpenMRS?

Our demo is a basic installation of OpenMRS with some common add-on modules and a sample patient data set. Try it out today!

What if my question isn't answered here?

[Drop us a line](#). Someone will be in touch with you promptly.

1.4 System Requirements

In order to install and use OpenMRS Express:HIV, you must have the following:

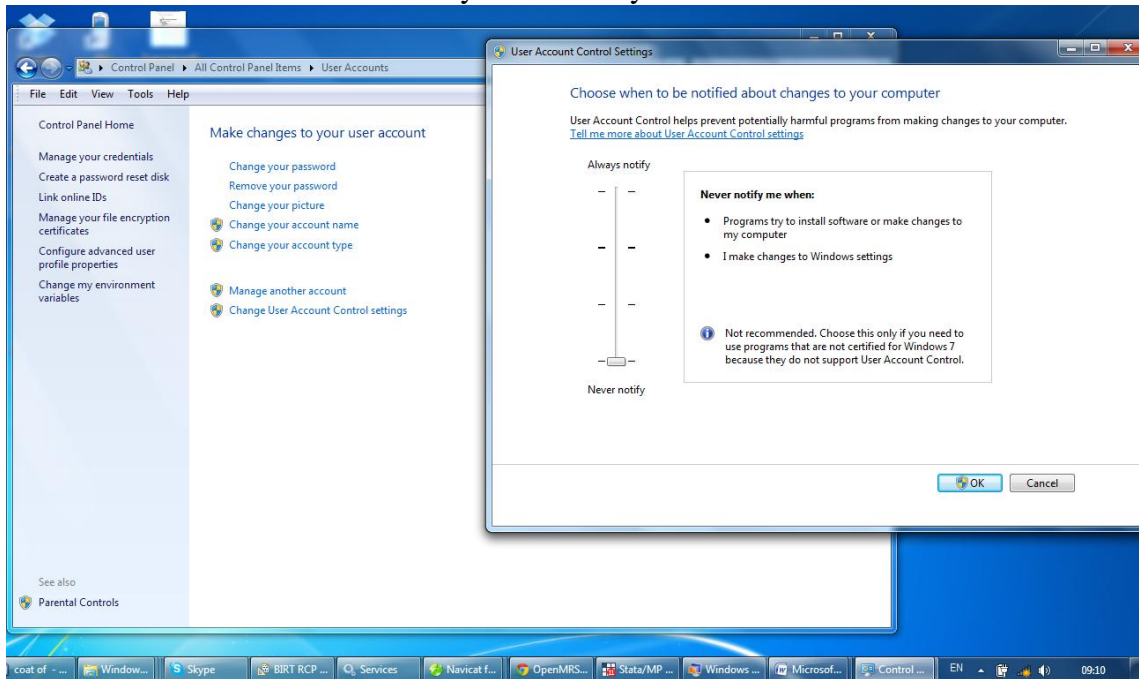
- A computer with a 1GHz Pentium IV processor or better, at least 512 Mb of RAM,
- 1Gb of available hard disk space.
- Windows XP SP2 or Windows Vista or Windows 7(For Windows 7 and Vista, you will have to lower security settings of the user account from the control panel)
- Adobe Acrobat Reader
- FireFox 4 (Upgrade if you have an earlier version)
- C drive.

1.5 Installation

- Copy the OpenMRS Express folder zip from your CD to the computer you intend to install. Unzip this folder to your desktop. Unzipping sometimes may take very long as the installation files are huge but when you are done, the installation should not take long. (Installing directly from CD may take longer)
- In this folder open the "OpenMRS installer" folder and double click the install. Follow the wizard and take caution not to change any of the default setup values as you go along. When the installation is complete, a readme file is opened for you to read the licence etc and closing this file the wizard reveals that the installation is complete

- To setup reports, Go to the Installation path at “C:\Program Files\WHO\OpenMRS\mysql-5.0.51a-win32\bin” and double click the “create reports” file to install all reports.
- To install Mozilla 4.0, go to the “Other Resources Folder”

For Windows 7 and Vista, you have to remove Security restrictions by Going to Control Panel; Under User Account set account security to “Never Notify” as shown below. You should then successfully install the system on Windows 7.



1.6 OpenMRS Startup and Login

You can start Openmrs in various ways;

- By use of the desktop short cut
- By use of the Program menu via the windows start button->programs->Openmrs express
- Manually via the web browser;
With Mozilla firefox open, type “http://localhost:8079/openmrs” if you are working on the server.
When accessing Openmrs from a computer other than the server type “http://[serverip]:8079/openmrs” where [serverip] is the ip address of the computer that is running the tomcat server that is hosting your instance of OpenMRS.



Figure 1: Mozilla Firefox address bar with the OpenMRS address

2.0 Initial Setup

In order to ready the system for production there are some prerequisite customization to be instituted.

2.1 Site profile

As a first user, you will log in using the administration account which allows you privileges to the entire system. Having logged as the first step towards readying the system for production, you will have to set up your site /clinic profile. To set up the profile;

- i. From the Home Screen Click the administration link (Figure 2);
- ii. Click “Manage Locations”
- iii. Click the Current location to edit
- iv. Change the name, Description and the other details accordingly and save the location: Do not create a new location unless you have a multi site setup. This is for consistency with the reporting otherwise you will have to edit the reports to reflect this new site profile.

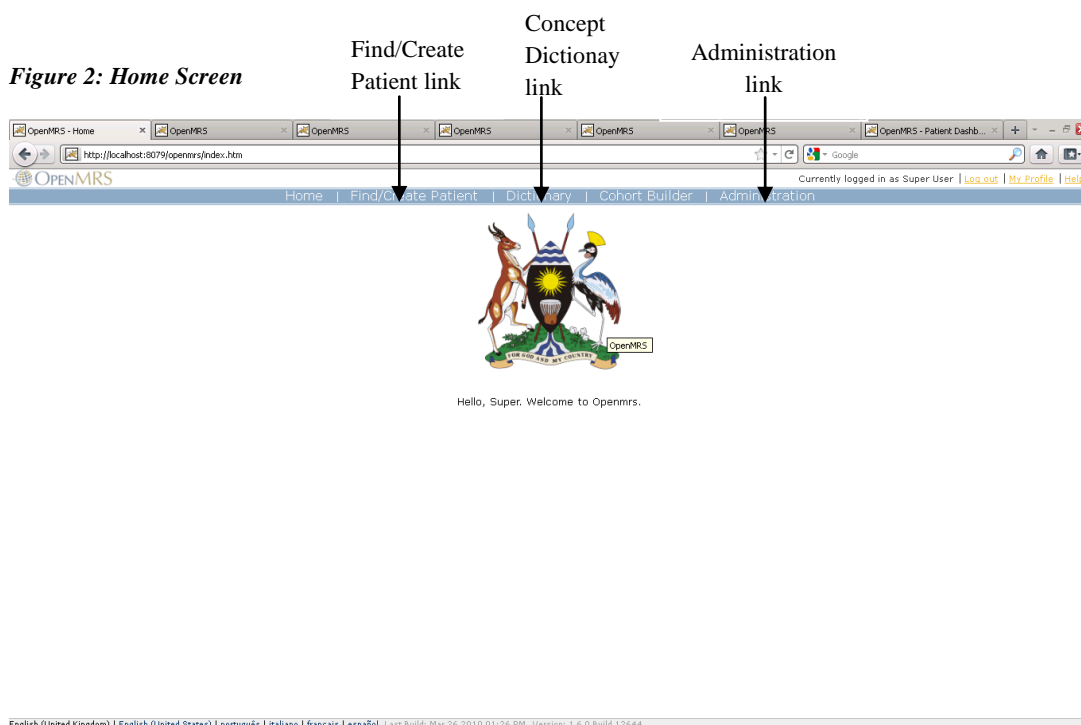


Figure 3

Firefox | OpenMRS

http://localhost:8079/openmrs/admin/locations/location.form?locationId=1

OPENMRS

Home | Find/Create Pa

Admin | Manage Locations

Location

Name: Iss Clinic Mbarara

Description: HIV Clinic within Mbarara Regional Referral Hospital. Supported by MJAP, ICRC, THALAS, ETE and MOH.

District: Mbarara

County: Municipality

SubCounty: Municipality

Parish: Municipality

Village: Municipality

Telephone:

Created By Super User - 22 September 2005 00:00:00 AST

Save Location

Retire this Location

Reason:

Retire this Location

To the left is a screen shot of the Site Profile creation/editing form

2.2 Users

Users in OpenMRS are persons who will be using the system. These may include, Data Managers, Data Entrants, Providers, System developers etc. NOTE: Users are **NOT** patients and creation of either is very different. To create/edit a user;

- i. From the Administration link, click “Manage Users” to open the form as shown below. Note the list of users already in the database and take caution not to duplicate these users. ALWAYS SEARCH THE DATABASE FOR A USER BEFORE YOU CREATE THE USER TO AVOID DUPLICATION.
- ii. Clicking an existing user will open the user editing page where you can edit the user’s details.
- iii. To add a new user, click “Add user” which will open the user creation page as shown in the figure below.
- iv. Enter the user details as instructed and select the user role/roles.
- v. All fields are required except the “Middle name”.
- vi. Make sure to enter password not less than 8 characters or otherwise the system will reject them.
- vii. For user name you could follow the firstInitial LastName convention for consistency. With this convention, Denis Ssempijja will have the user name dssempijja etc
- viii. To add a secret question and answer for the users account, click “Show Advanced Options”

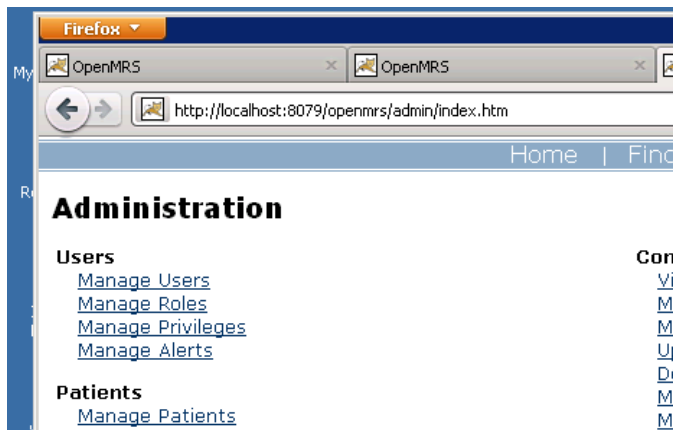


Figure 4: Administration Page showing the Section for User Administration

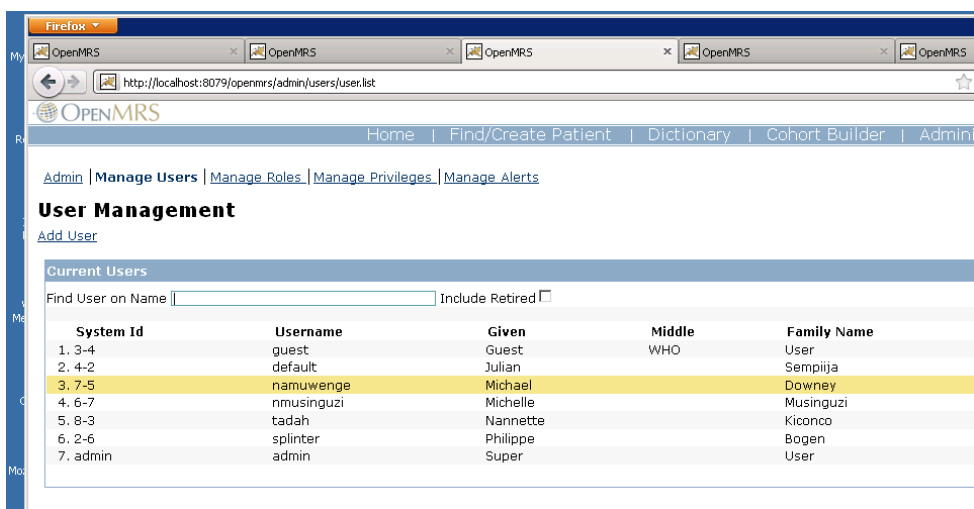


Figure 5: List of Users already in system

2.3 Providers

A provider is a user with the “Provider” role. To define a provider, select a user and edit to add the “Provider” role. Note that these users with the provider role will appear in every provider/clinician drop down

The screenshot shows the OpenMRS 'Add/Edit User' form. The browser is Firefox, and the URL is <http://localhost:8079/openmrs/admin/users/user.form?createNewPerson=true>. The form has a navigation bar with links: Home, Find/Create Patient, Dictionary, and C. Below this is a sub-navigation bar with links: Admin, Manage Users, Manage Roles, Manage Privileges, and Manage Alerts. The main form is titled 'Add/Edit User' and is divided into three sections: Demographic Info, Login Info, and Roles. The Demographic Info section has fields for Given, Middle, and Family Name, and a Gender section with radio buttons for Male and Female. The Login Info section has a System Id field (with a note that it will be generated after saving), a Username field (with a note that the user can log in with either Username or System Id), a User's Password field, a Confirm Password field (with a note to retype the password for accuracy), and a Force Password Change checkbox (with a note that it optionally requires the user to change their password on next login). The Roles section has four checkboxes: Data Entry, Data Manager, Provider (which is checked), and System Developer. At the bottom of the form is a 'Save User' button.

Figure 6: The Edit/Add User form. The set a user as a provider, check the provider role.

2.4 Patient Identifier Types

The system has 4 identifiers preloaded;

- i. The Chronic *HIVCare/HIVCare Number* is the default facility unique identifier that the clinic uses to uniquely identify its registered patients. Every patient registered at this clinic **MUST** have this identifier and a patient will not be saved without it.
- ii. The *ART Identifier* is the unique identifier of patients within individual ART providers at site. Use this identifier to uniquely identify patients within a program at your clinic. If for instance MOH, JCRC, MJAP and Uganda Cares provide Anti retroviral therapy at your clinic and have different identifiers for their particular patients. This Identifier is not mandatory.
- iii. *PMTCT Identifier* is the ANC identifier for pregnant mothers as issued by their ANC Care Clinic
- iv. *TB Identifier* is the District TB identifier for those TB patients who have such an identifier.

Editing/Adding new Identifier Types:

In the event that you have an identifier other than those mentioned in (ii)-(iv) above you can create an additional identifier as follows;

- i. Through the administration link click Manage Patient Identifiers
- ii. Click “Add Patient Identifier Type” to create a new Identifier
- iii. Click the respective identifier to edit.

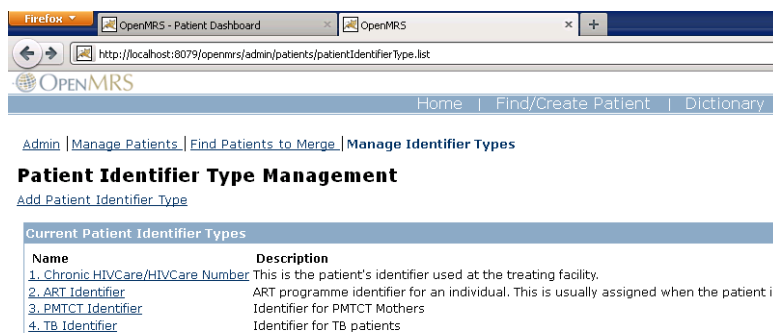


Figure 7: Identifier Type Management Page

3.0 Data Entry

In order to enter a record you MUST create the patient whose record you intend to enter if the patient has not been created yet

3.1 Patient Registration

- i. To create a patient, click the “Find/Create Patient link” to search for and ascertain that the patient does not exist.

Patient Search

Find Patient(s)

Patient Identifier or Patient Name: Include Verbose ☐

or

Create Patient

To create a new person, enter the person's name and other information below first to double-check

Name

Birthdate or Age
(Format: dd/mm/yyyy)

Gender ☐ Male ☐ Female

Figure 8: Patient Search/Creation Page

Create Patient

To create a new person, enter the person's name and other information below first to double-check

Name

Birthdate or Age
(Format: dd/mm/yyyy)

Gender ☒ Male ☐ Female

Figure 9: Name entry format

- i. If the patient does not exist, Go back to the Find/Create Patient page and under the “Create Patient” section; Type the patient’s names in the Name field. Type all names in the order “Christian/First Name” “Middle Name” “Family Name/Given Name/Last Name” without the as in the figure above.
- ii. Enter the birth date and/or the patient’s age.
- iii. Select the Gender and click “Create Patient”

- iv. On the next page enter the patients' clinic identifier and select the identifier location which is your site name. For Patients with additional identifiers click "Add Identifier" to provide this additional identifier.
- v. Enter the Patient Address: NOTE that this address is not your site address but rather the patient's address which can be a different district from that of the site/clinic.
- vi. Enter the Health Facility District and marital status
- vii. Check if deceased and
- viii. Finally save the patient and you will have successfully created a patient

Create a New Patient

Name	Given	Middle	Family Name
	FirstName	MiddleName	LastName

ID Number(s)	Identifier	Identifier Type	Identifier Location	Preferred
	4569229-0	1. Chronic HIVCare/HIVCare Number	Iss Clinic Mbarara	<input type="radio"/> Remove
Add Identifier				

Demographics	Gender	Age	Birthdate (Format: dd/mm/yyyy)
	<input checked="" type="radio"/> Male <input type="radio"/> Female	(30 yrs)	12/05/1980 Estimated <input type="checkbox"/>

Address	District	Mbarara
	County	Kamukuzi
	SubCounty	Ruharo
	Parish	Ruharo
	Village	Kiyanja
	Telephone	0752999999

Health Facility District Mbarara

Marital Status MARRIED [Change](#)

Deceased Check if this person is deceased ☐

[Save](#) [Back](#)

Figure 10: Patient Detail Entry Page

After you have saved, you will see the patient dashboard for that patient. In the patient dashboard, click on "Demographics" and at the end of the screen you will see options to "edit patient"

3.2 Searching for a patient and viewing the patient dashboard

In order to work on a patient (enter forms, manage observations, update status etc) you must first search for the patient.

Choose "Find/Create Patient".

Enter some letters of his or her name and a list of patients matching will appear.

Click on the patient you want and you will see that patient's "patient dashboard". The options in the patient dashboard which you will be using most are "Overview", "Encounters", "Demographics" and "Forms".

3.3 How to enter/view/edit an encounter

- Search for the patient from the Find/Create Patient link. You can search by name or identifier (any of the identifiers). Search is real-time in that it returns results as you type the name or identifier
- To filter for particular patients by name type the first few initials of either names, a space and the first few initials of the other name and you should get the result filtered to that specific criteria.
- Select the patient and you will be taken to the patient dashboard
- To enter/create an encounter click the “form entry” tab to reveal the forms available for entry.
- Select the form and enter the data. See Forms section for a detailed description of the forms

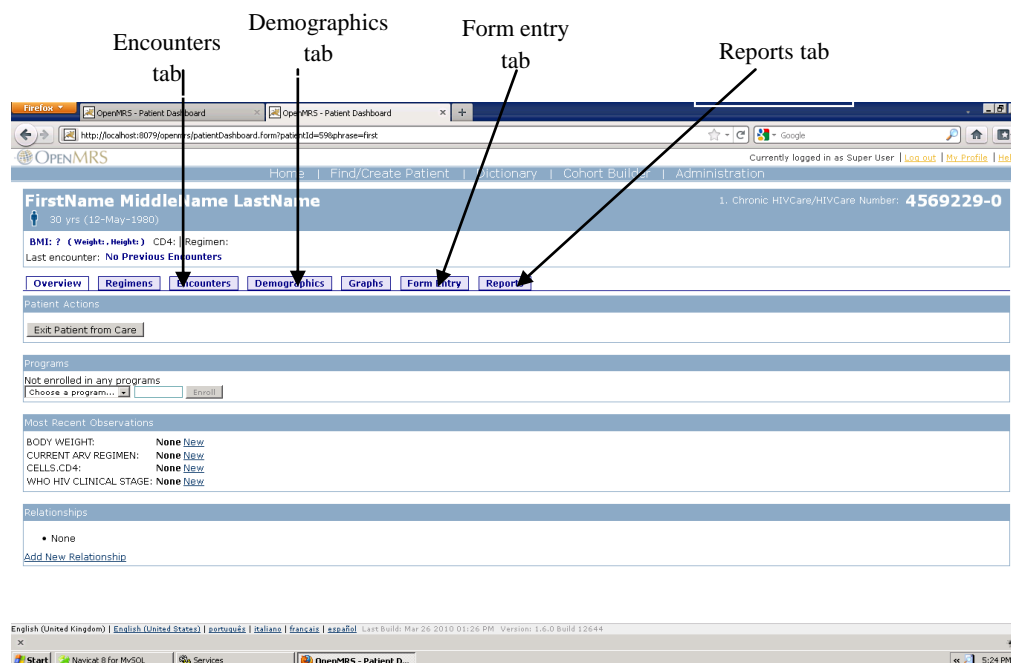


Figure 11: The patient Dashboard

- To edit an encounter click the encounters tab to reveal entered encounters and click the edit icon for the respective encounter

The Edit Icon

Overview Regimens Encounters Demographics Graphs Form Entry Reports						
Last Three Encounters						
Edit	View	Encounter Date	Encounter Type	Provider	Form	Loc
		02/03/2011	ENCOUNTER PAGE	Philippe Boucher	HIV CARE/ART CARD Encounter Page Iss	
		24/02/2011	ENCOUNTER PAGE	Super User	HIV CARE/ART CARD Encounter Page Iss	
		10/02/2011	SUMMARY PAGE	GName FName	HIV CARE/ART CARD Summary Page Iss	

Enter Form		
Search:	<input type="text"/>	<input type="checkbox"/> Include Retired
Name	Version	Encounter Type
HIV CARE/ART CARD Encounter Page	0.1 (Unpublished)	ENCOUNTER PAGE
HIV CARE/ART CARD Health Education Page	0.1 (Unpublished)	HEALTH EDUCATION
HIV CARE/ART CARD Summary Page	0.1 (Unpublished)	SUMMARY PAGE
LAB FORM Chemistry	0.1 (Unpublished)	LAB ENCOUNTER
LAB FORM Hematology	0.1 (Unpublished)	LAB ENCOUNTER
LAB FORM Immunology	0.1 (Unpublished)	LAB ENCOUNTER
LAB FORM Molecular	0.1 (Unpublished)	LAB ENCOUNTER

The view icon of the encounter

Figure 12: Form Entry Tab

- To delete an encounter, click the view icon of the respective encounter and select delete at the upper right of the encounter view mode as shown in the figure below

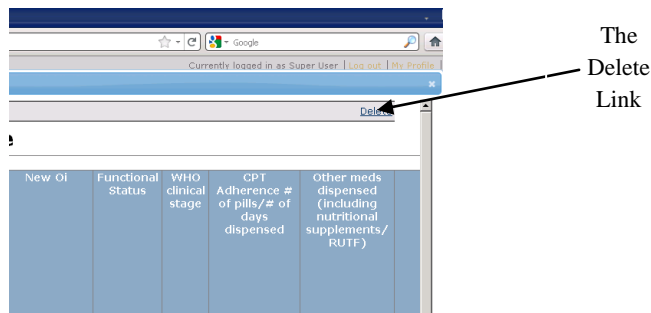


Figure 13

3.4 Forms

Entry screens were developed with the idea that they should look like their paper equivalents as much as possible. They are developed using custom html tags as implemented by the [HTML form entry module](#). These forms were optimized for Mozilla Firefox 4. You may notice usual behaviour with lower versions of Mozilla and browsers other than Mozilla. You are encouraged to use MOZILLA FIREFOX 4.0 for the best database browsing experience.

3.4.1 Form types

- i. HIV CARE/ART CARD | Summary Page: This is the front page of the MOH card
- ii. HIV CARE/ART CARD | Encounter Page: This is the page on MOH card that takes the visit details
- iii. HIV CARE/ART CARD | Health Education Page: This is the page that takes the health education information as collected on the MOH card just below the summary page
- iv. LAB FORM | Chemistry: This is lab entry form specific for chemistry results
- v. LAB FORM | Immunology: This lab form is specific for Immunology results like CD4 and CD4% etc
- vi. LAB FORM | Hematology: This form is for entry of Hematology results like Hemoglobin etc

3.4.2 Data entry

- i. Summary Page

The data in blue below are populated as entered from the patient creation page. Note that a number of fields are a must enter and you will not be able to save any encounter unless these fields have been entered. The following are required fields

- a. Health Unit
- b. Clinical Team leader
- c. HIV enrol date

There are some other rules specific for certain fields or sets of fields which must be met for the record to be saved.

Summary Page

HIV CARE/ARTCARD | Summary Page

Health Facility District: **Mbarara** Health Unit: **Iss Clinic Mbarara** Clinical team leader: **Choose...**

Name: **FirstName MiddleName LastName** Identifier:

Gender: **M** DOB: **12/May/1980** Age: **30** Marital Status: **MARRIED**

District: **Mbarara** Sub County: **Ruharo**

Parish: **Ruharo** LC1: **Kiyanja**

Telephone: **0752999999** Whose:

Care entry point: ☐ PMTCT ☐ TB ☐ Under 5yrs ☐ Outreach ☐ Medical out patient ☐ Sexually Transmitted Infections(STI)

☐ Inpatient ☐ Exposed Infant ☐ Other specify

Tx supporter/medicine pick-up if ill: SubCounty:

Address District: LC1:

Telephone: Whose:

Home based care provided by:

Names of family members, partners	Age	HIV P/N/U	HIV Care Y/N	Unique No >	Exposed Infant								
					Name/#	DOB	Infant feeding	CTX	Test type	Result	Final status	If confirm	

Drug Allergies

Relevant Me

ART CARE

ART Transfer from: ARVs:

Start ART 1st initial regimen:

At start ART:Wt: Stage:

Substitute within 1st line

New Reg: Specify other:

New Reg: Specify other:

New Reg: Specify other:

New Reg: Specify other:

Switch to 2nd-line(or substitute within 2n)

New Reg: Specify other:

New Reg: Specify other:

New Reg: Specify other:

ART treatment interruptions--STOP or missed

Figure 14: Summary Page

Click the “Enter form” button (as in picture below) at the bottom of the page to save the encounter.

Eligible for ART: ☐

Eligible and Ready: ☐

Enter Form

Figure 15: The Enter Form Button

ii. Encounter Page

The encounter Page like the summary has some required fields. These include but may not be limited to;

- The encounter location field at the top left corner is required but will be pre populated with your site profile name by default
- The Encounter date below the scheduled? Check box
- The provider field is also required for the form to save successfully
- Various other fields may have different validation rules which must be met whenever values are entered on those fields. E.g Return date cannot be in the future and the record will not save unless this condition is fulfilled.

Click the “Enter form” button to save the record.

Encounter Page

Discard changes | Print

Richard Odong | HIV CARE/ART CARD | Encounter Page (ENCOUNTER PAGE) | (Unsaved Form)

Date	Follow-up date	Duration in months since first starting ART / since starting current regimen	Weight	If Pregnant EDD? PMICT? Write gestation in weeks and ANC #	TB Status	Potential SIDE EFFECTS	New OI	Functional Status	WHO clinical stage	CPT Adherence # of pills/# of days dispensed	Other meds dispensed (including nutritional supplements/ RUTF)	ARV d
Check if scheduled. Write in alternate pick-up if ill	Return date: (Months since baseline) Duration: (Months on current regimen)	Wt(kg): Ht(cm): oedema: Method: 1. Condoms 5. Vas/Tub. MUAC: Age(months):	Family Planning? Yes	1. No signs 2. Suspect 3. Tb Rx Start Date: Stop Date: District TB reg #:	Nausea Diarrhoea Fatigue BN Rash Anaemia AB Headache Jaundice Other specify:	Zoster Pneumonia Dementia Enceph Thrush Cough Malaria Headache RTI Fever DB Weight loss UD	Status: Stage: Adherence: # Pills: Days: Septin Nutrition Support Mutivitamins Paracetamol Amoxicillin Mebendazole Vit B Complex Fluconazole Amitriptyline Ciprofloxacin Ibuprofen Doxycycline Metronidazole	Adherence: Why f	1. T 2. S 3. F 4. F 5. T 6. S 7. S 8. L 9. T 10. 11. 12.			

Figure 16: The Encounter Page

iii. Health Education and the Lab forms

By now you hopefully know that every form has at least 3 required fields;

- Site/Location name which is usually pre populated with the site profile name
- The Encounter date
- The provider

3.4.3 Editing/Deleting encounters/visit

Editing visit

- On the patient dashboard and under the encounters tab; click the edit icon of the encounter that you wish to edit and the encounter will pop up in the form exactly like that you used when you first entered that encounter. Make the necessary changes and click the “save changes” button at the bottom left of the form.

Richard Odong
20 yrs (~01-Jan-1991)

BMI: 222.2 (Weight: 45.0 kg , Height: 45.0 cm) CD4: | Regimen:
Last encounter: [ENCOUNTER PAGE @ Iss Clinic Mbarara, 02-Mar-2011](#)

[Overview](#) [Regimens](#) [Encounters](#) [Demographics](#) [Graphs](#) [Form Entry](#) [Reports](#)

Encounters

Show entries

Edit	View	Encounter Date	Encounter Type	Provider	Form	Location	Enterer
		02/03/2011	ENCOUNTER PAGE	Philippe Boucher	HIV CARE/ART CARD Encounter Page	Iss Clinic Mbarara	Super User
		24/02/2011	ENCOUNTER PAGE	Super User	HIV CARE/ART CARD Encounter Page	Iss Clinic Mbarara	Super User
		16/02/2011	SUMMARY PAGE	GName FName	HIV CARE/ART CARD Summary Page	Iss Clinic Mbarara	Super User
		08/02/2011	WHO/IMAI FOLLOWUP	Super User	IMAI Followup	Iss Clinic Mbarara	Super User
		04/02/2011	ENCOUNTER PAGE	Philippe Boucher	HIV CARE/ART CARD Encounter Page	Iss Clinic Mbarara	Super User
		02/02/2011	ENCOUNTER PAGE	Philippe Boucher	HIV CARE/ART CARD Encounter Page	Iss Clinic Mbarara	Super User
		18/01/2011	SUMMARY PAGE	GName FName	HIV CARE/ART CARD Summary Page	Iss Clinic Mbarara	Super User
		14/01/2011	ENCOUNTER PAGE	Philippe Boucher	HIV CARE/ART CARD Encounter Page	Iss Clinic Mbarara	Super User
		12/01/2011	ENCOUNTER PAGE	Philippe Boucher	HIV CARE/ART CARD Encounter Page	Iss Clinic Mbarara	Super User
		01/01/2011	WHO/IMAI LAB RESULTS	Super User	IMAI Lab Results form	Iss Clinic Mbarara	Super User

Showing 1 to 10 of 10 entries

Figure 17: The Encounters Tab under the Patient Dashboard

1. To delete an encounter/visit; click the view button of the respective encounter and select delete at the top right of the window that opens. You will be asked to provide a reason as to why you are deleting this encounter.

4.0 Reporting

OpenMRS has various reporting frameworks including [BIRT](#), [JASPER](#) reporting and by use of another [Reporting](#) tool which is preinstalled with your system. We chose the BIRT reporting for its extensive functionality and ease of use. BIRT reports are run as PDF by default but can also out as spreadsheet and html.

4.1 How to run BIRT reports

- i. Under the administration page open “Manage BIRT Reports” under the Birt Reporting module section. DO NOT confuse this with the “run reports” section under reports as this is a difference reporting system.

OpenMRS

Home | Find/Create Patient | Dictionary | Cohort Builder | Administration

[Admin](#) | [View All Reports](#) | [Create a New Report](#) | [Configure BIRT Module](#)

Manage BIRT Reports

View All Reports

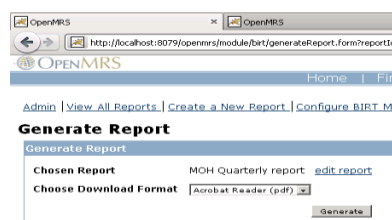
Run Edit Report Title

- MOH Quarterly Cohort Analysis Report
- MOH Quarterly report
- Patient Summary Sheet
- Pre-ART register

Figure 18: BIRT Report Administration Page

- i. Click the run icon of the respective report you intend to produce.
- ii. Choose the Download format which by default is pdf
- iii. Provide the necessary parameters: NOTE that for date parameters, the format is strictly **YYYY-MM-DD**. Any other format may yield an

error or wrong results. 2011-5-31, 2011-05-5 are incorrect .2011-05-31 is the correct format.



- 1.
2. *Figure 19: Parameter Specification Page*

iv. Click Generate

4.2 Report categories

Note that reports are grouped into three categories, MOH, Site and Patient reports.

- i. MOH reports are those meant to be sent to the Ministry of Health.
- ii. Site reports are reports meant for individual site consumption
- iii. Patient reports are patient centric reports and will also appear under the reporting tab under the patient dashboard. All reports are named with the category prefix e.g MOH reports start with MOH etc. Below is the list of the reports pre installed in the system.

2. MOH Quarterly report
3. MOH Quarterly cohort analysis report
4. Patient summary
5. Site ART Register
6. Site Appointment list
7. Site Missed appointment list
8. Site Lost to follow-up list
9. Site Early Warning Indicators report
10. Site Quality Improvement reports

4.3 Cohort builder/Data exports

The Cohort builder can also generate simple reports; Tutorial will be provided separately and we will endeavour to keep the slides from that tutorial for your reference.

Reporting module

<https://modules.openmrs.org/modules/view.jsp?module=reporting>

4.4 Form Creation

Please see html form creation tutorial at “C:\Documents and Settings\XPMUser\Desktop\OpenMRS Installer\Documentation”

4.5 Understanding the form and data dictionary

View Appendix for details of the form concepts

In order to develop a report or query you have to understand the underlying concepts on the form. You can view the code for a particular concept by;

Searching the concept dictionary. This may be tedious since a concept may be represented in various ways and may turn out confusing as to which of the

concepts was used on the form. Use this option if you already know the concept_id from prior knowledge or otherwise use the next option. For example search the concept dictionary for cd4 and you will get a number of results meeting this search criterion. Which of these do you consider in your queries? Knowing the particular concept_id is key to finding the right data.

OpenMRS x OpenMRS x OpenMRS

http://localhost:8079/openmrs/dictionary/index.htm

Home | Find/Create Patient | Dictionary |

Concept Dictionary Maintenance

[Download the concept dictionary](#) in CSV format -- (dynamically creates a CSV file containing current dictionary)

Find Concept(s)

Search Phrase: Include Retired ☐ Include Verbose ☐

1. [CD4%](#)
2. [CD4⇒ CD4 COUNT](#)
3. [CD4/CD8](#)
4. [CELLS.CD4](#)
5. [BASELINE CD4](#)
6. [CD4 PANEL](#)
7. [BASELINE CD4 PERCENTAGE](#)
8. [ELIGIBLE FOR ART CD4](#)
9. [CELLS.CD4/100 CELLS](#)
10. [CD4 COUNT GREATER THAN 200](#)
11. [CD4% CLASSIFICATION FOR INFANTS](#)
12. [CD4 COUNT GREATER THAN 15%](#)
13. [CD45+ABS CNT⇒ LYMPHOCYTE COUNT](#)

[Add new Concept](#) (Use sparingly)

Figure 20: Cd4 Search on the Concept Dictionary

b. Reviewing the form design schema

To view the underlying form concept_ids ; Click Administration->Html form entry->Manage forms and choose a form

OpenMRS x OpenMRS x OpenMRS

http://localhost:8079/openmrs/module/htmlformentry/htmlFormForm?id=3

Home | Find/Create Patient | Dictionary | Cohort E

[Admin](#) | [Manage HTML Forms](#) | [Preview HTML Form from File](#)

Edit HTML Form

[Show/Hide extra fields](#)

Id: 3

Name:

Published: ☐

Retired: ☐

Form Schema: [View](#)

HTML:

```
<td>
  <table id="inner_most">
    <tr><th>Names of family members, partners</th><th>Age</th>
    <th>HIV P/N/U</th><th>HIV Care Y/N</th><th>Unique No</th></tr>
    <tr>
      <td><obs group groupingConceptId="99075">
        <td><obs conceptId="99074"/>
        </td><td><obs conceptId="90253"
          answerConceptIds="90166,90167,90001" answerLabels="P.N.U"/>
        </td><td><obs conceptId="90270" answerConceptIds="90003,90004"
          answerLabels="N"/></td><td><obs conceptId="90263" size="10"/></td>
      </td><td><obs group groupingConceptId="99075">
        <td><obs conceptId="99074"/>
        </td><td><obs conceptId="90253"
          answerConceptIds="90166,90167,90001" answerLabels="P.N.U"/>
        </td><td><obs conceptId="90270" answerConceptIds="90003,90004"
          answerLabels="N"/></td><td><obs conceptId="90263" size="10"/></td>
      </td><td><obs group groupingConceptId="99075">
        <td><obs
```

[Save](#)

[Preview](#)

The view Schema link

Figure 21: The form code: DO NOT MODIFY THIS CODE

OpenMRS OpenMRS OpenMRS

http://localhost:8079/openmrs/module/htmlformentry/htmlFormSchema.form?id=3

OPENMRS Home Find/Create Patient

Preview Form

Form Schema Preview

Concept: Whose: -> [PATIENT TELEPHONE NUMBER OWNER \(99117\)](#) Answer: Text

CARE ENTRY POINT SET (99116)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: PMTCT -> [PMTCT \(90012\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: TB -> [TB TREATMENT CENTER \(90016\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Under 5yrs -> [UNDER 5 \(99088\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Outreach -> [IDU OUTREACH \(90019\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Medical out patient -> [MEDICAL OUTPAT \(90016\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Sexually Transmitted Infections (STI) -> [SEXUALLY TRANSMITTED INFECTIONS \(STI\) \(90016\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Inpatient -> [MEDICAL INPATIENT \(90016\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Exposed Infant -> [EXPOSED INFANT \(90016\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Other specify -> [OTHER SPECIFY \(90002\)](#)

Concept: -> [OTHER CARE ENTRY POINT \(99115\)](#) Answer: Text

Concept: -> [TREATMENT SUPPORTER NAME \(99142\)](#) Answer: Text

Concept: Address District: -> [TREATMENT SUPPORTER DISTRICT \(99138\)](#) Answer: Text

Concept: SubCounty: -> [TREATMENT SUPPORTER SUB COUNTY \(99139\)](#) Answer: Text

Concept: Parish: -> [TREATMENT SUPPORTER PARISH \(99140\)](#) Answer: Text

Concept: LC1: -> [TREATMENT SUPPORTER VILLAGE \(99141\)](#) Answer: Text

Concept: Telephone: -> [TREATMENT SUPPORTER TELEPHONE NUMBER \(90278\)](#) Answer: Text

Concept: Whose: -> [TREATMENT SUPPORTER TELEPHONE NUMBER OWNER \(99118\)](#) Answer: Text

Concept: -> [HOME BASED CARE PROVIDED BY \(99124\)](#) Answer: Text

Figure 22: The Form Schema

- c. Click the link “view” to view the Form Schema

The figure 22 is the schema for Care Entry Point Section from the summary page. Notice the concept Care Entry Point and the Answers PMTCT, TB, Under 5 etc on both figures. The concept_id of the concept set is 99116, the concept_id of Entry point is 90200 with answers PMTCT(90012), TB(90016), Under 5(99088) etc. You have to understand the data model to be to figure all this out perfectly

Care entry point: ☐ PMTCT ☐ TB ☐ Under 5yrs ☐ Outreach ☐ Medical out patient ☐ ☐ Inpatient ☐ Exposed Infant ☐ Other specify

Tx supporter/medicine pick-up if ill:

Address District: SubCounty:

Parish: LC1:

Telephone: Whose:

Home based care provided by:

Figure 23: Cross section of Summary Page showing Care Entry Section

OpenMRS OpenMRS OpenMRS

http://localhost:8079/openmrs/dictionary/concept.htm?conceptId=99116

OPENMRS Home Find/Create Patient

Viewing Concept CARE ENTRY POINT SET

Previous | Edit | Stats | Next | New Search

Id 99116

Locale [English](#) | [Spanish](#) | [French](#) | [Italian](#) | [Portuguese](#)

Name CARE ENTRY POINT SET

Short Name

Description

Synonyms

Class ConvSet

Set Members [OTHER CARE ENTRY POINT \(99115\)](#) [ENTRY POINT INTO HIV CARE \(90200\)](#)

Datatype N/A

Mappings

Version false

Retired false

Created By Super User - 24 August 2010 15:15:38 AST

Figure 24: Care Entry Point from the Concept Dictionary

Viewing Concept ENTRY POINT INTO HIV CARE

Previous Edit Stats Next New	<input type="text" value=""/>	<input type="button" value="Search"/>
Id	90200	
Locale	English Spanish French Italian Portuguese	
Name	ENTRY POINT INTO HIV CARE	
Short Name	K00200	
Description	This concept added to support WHO HIV care and monit	
Synonyms		
Class	Question	
Datatype	Coded	
Answers	OTHER SPECIFY (90002) PMTCT (90012) MEDICAL OUTPATIENT (90013) PEDIATRIC OUTPATIENT (90014) STI OUTPATIENT (90015) TB TREATMENT CENTER (90016) PRIVATE PROVIDER (90017) MEDICAL INPATIENT (90018) IDU OUTREACH (90019) SEX WORKER OUTREACH (90020) ADOLESCENT OUTREACH (90021) VCT (90022) COMMUNITY BASED ORGANIZATION (90023) MILITARY RECRUITEMENT (90024) POLICE RECRUITEMENT (90025) EXPOSED INFANT (99087) UNDER 5 (99088)	

Figure 25: Expanded view of Care Entry Point

To query for all records with care entry point of “Under 5” you would write something like SELECT * FROM OBS WHERE CONCEPT_ID=90200 AND VALUE_CODED=99088 AND VOIDED=0

However to query for all records where care entry point is “other care entry point” concept_id=99115 as in figure 24 above write something like SELECT * FROM OBS WHERE CONCEPT_ID=99115 AND VOIDED=0

5.0 Data Validation

In addition to validations done during data entry, we have a module to catch inconsistencies within the data that have been entered. Under Administration->Data Integrity module->Run multiple checks to view checks that failed the set criteria.

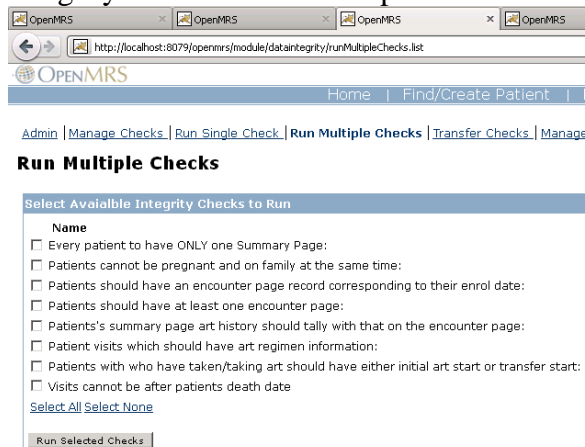


Figure 26: Data Validation Checks

Check “Select All” and click “Run Selected Checks”

In figure 27 below; 13 records failed the first check whereas the second check was successfully satisfied.

Patients's summary page art history should tally with that on the encounter page: Results	
Number of failed Records	13
Failure Operator	greater than
Fail Directive	0
Pass/Fail	Failed
Date Last Ran	03 May 2011 22:28:38 AST
Query Duration	0.411 seconds
List of Failed Records Repair Failed Records Run This Check Again	

Patient visits which should have art regimen information: Results	
Number of failed Records	0
Failure Operator	greater than
Fail Directive	0
Pass/Fail	Passed
Date Last Ran	03 May 2011 22:28:38 AST
Query Duration	0.01 seconds
Run This Check Again	

Figure 27: Results from Running Checks

You can create your own custom checks with some simple SQL. In addition you can schedule to run checks at particular intervals of your convenience. It is advisable that all checks are run and pass before you run MOH reports.

6.0 Additional Functionality (MODULES)

OpenMRS has a wealth of modules developed to add functionality to the system. Modules can be downloaded from here. Please pay attention to the module version as different database versions are compatible with different module versions. You will get an error if you try to upload an incompatible module version.

How to install/uninstall a module

- d. Download the module
- e. Under the OpenMRS administration link, click “Manage Modules” to open the page below

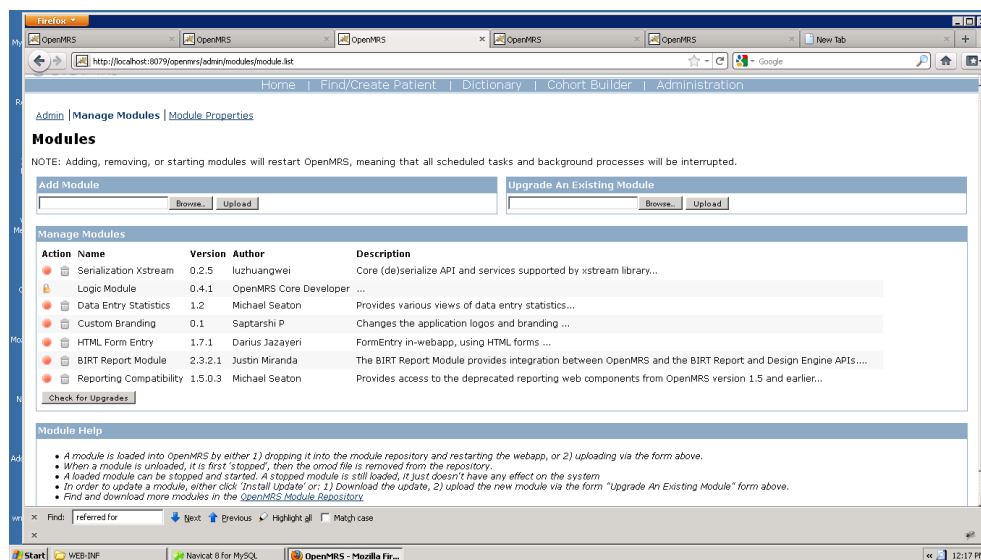


Figure 28: The Module Management Page

- f. To add a new module or update an existing module, use the appropriate link. Read the instructions at the bottom of that page in Figure5 for more information.
- g. To uninstall a module, stop it by clicking the pink button to the left and finally click the delete module icon

7.0 Database Management

7.1 Data back-ups

- i. To create an OpenMRS database backup; Open the Windows “Start” Menu->OpenMRS->Admin->Backup OpenMRS Database

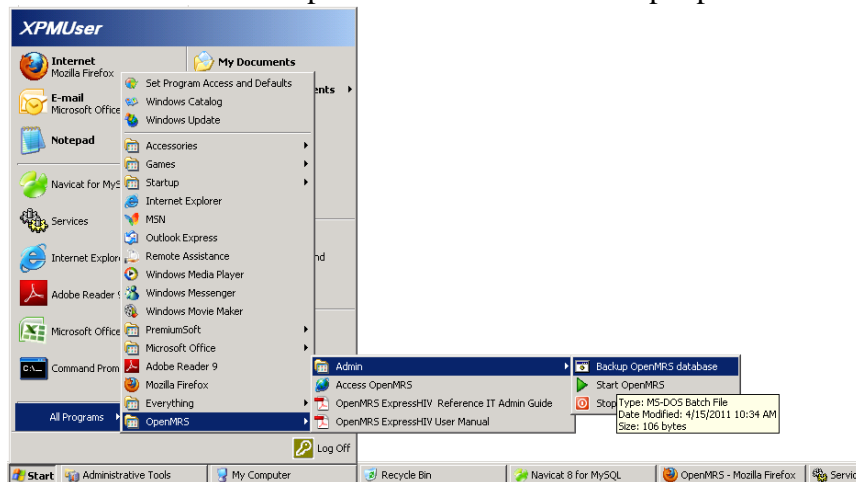


Figure 29: Backup link Through the Start Menu

- ii. If OpenMRS is running, it will be stopped. The backup script will generate an encrypted `openmrs_express_db_VERSION_TIMESTAMP.sql` file, where `VERSION` is the release version number of the OpenMRS Express distribution and `TIMESTAMP` is the moment of execution of the backup. User is asked for a location to save a copy of the backup file

7.2 Restore Data from Backup

- i. Launch the recover script located in the `OPENMRS_HOME/script` folder which is usually `C:\Program Files\WHO\OpenMRS\script`

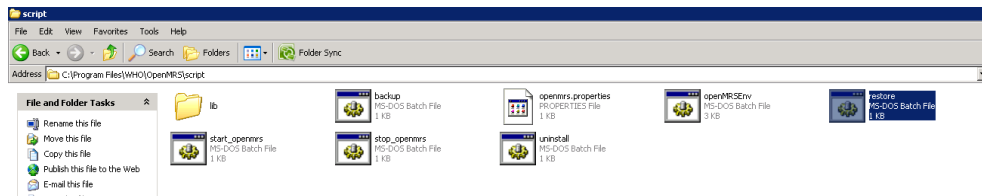


Figure 30: The Restore Script Folder

- iii. OpenMRS will stop if it was running. You will then be prompted for the location for the recovery file which you defined in Step (a) above.
- iv. The current database will be saved first, the selected backup file decrypted and restored.

7.2 Uninstall the System.

Follow the same instructions as those for restore but run the uninstall script.

8.0 Troubleshooting FAQ

OpenMRS is not starting

- i. Make sure that mysql and tomcat are running
- ii. Go to Window start->Control Panel->Administrative Tools->Services
- iii. Under services search for “OpenMRS Tomcat” and “OpenMRS MySQL” and make sure they are started or otherwise start them. Double click the Service (Figure 6) to open it. Figure 7 shows that the OpenMRS Tomcat service is started.

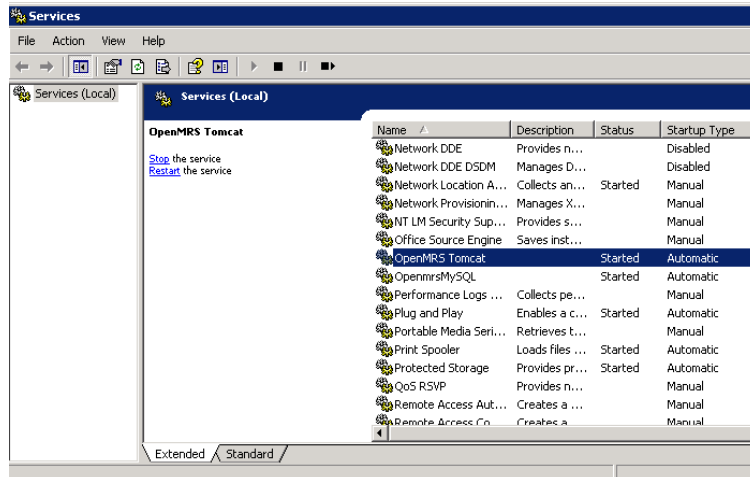


Figure 31: Windows XP Services Management Console

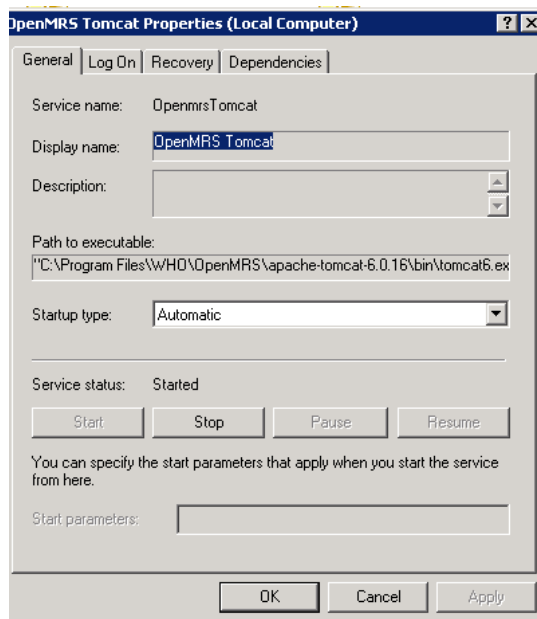


Figure 32: Service Start/Stop panel

- v. If both services are running, restart tomcat and start Openmrs again and it should launch successfully
- vi. If these steps fail, write to the implementers list on implementers@openmrs.org and make sure to include your tomcat logs(the file stdout.txt) which you can find on your server computer under “C:\Program Files\WHO\OpenMRS\apache-tomcat-6.0.16\logs”

FOR MOST TIMES WHEN THE SYSTEM IS NOT RUNNING OR IS MALFUNCTIONING THIS SOLUTION SHOULD FIX IT 90% OF THE TIME SO BE SURE TO UNDERSTAND IT.

You cannot see forms for entry

- i. Make sure that you have the required rights and privileges. Consult your system administrator if you think you don't
- ii. Make sure that the HTML form entry module is running. Under the "Administration->Manage Modules" look to make sure that the HTML form Entry module is running as show in the picture below. If it is not running, please start it.
- iii. If you just installed/upgraded a module, make sure it is compatible with your version of OpenMRS
- iv. If none of the above seems to work, email the implementers at implementers@openmrs.org
- v. General Openmrs Implementers list
 1. You are encouraged to join the implementers' listserv which is an email group of implementers and developers where implementers get the opportunity to share their challenges and to report bugs, seek guidance from the system developers etc. Membership is obviously free and you can subscribe at...
- vi. Openmrs wiki
 1. The OpenMRS wiki [pages](#) are another resourceful centre with lots of information ranging system setup to module documentation and lots more.

Reports are not running

- Make sure that you run (by double clicking) the file "create_reports" from the installation path "C:\Program Files\WHO\OpenMRS\mysql-5.0.51a-win32\bin". This is done only once and every after a backup restoration.

Forms look funny

- Make sure you are running Mozilla Firefox 4.0 or higher. You can download from the internet or find Firefox 4 from within the OpenMRS Express folder

The Patient Registration Page does not show the address like it usually does

This happens whenever you upgrade your system or when you redeploy openmrs.war for some reason. To remedy the situation, copy the file "openmrs-servlet.xml" from xxx and paste it at "C:\Program Files\WHO\OpenMRS\apache-tomcat-6.0.16\webapps\openmrs\WEB-INF" and restart tomcat.

9.0 Farther Trainings and Resources

- a. OpenMRS annual implementers meetings

There is an annual implementers meeting held in South Africa for the past 5 years. This meeting gets implementers, developers and would be implementers together for a week of general discussion, implementer experiences, connections etc. There is usually a limited funding for individuals from

institutions that are not able to cater for conference attendance and you are welcome to apply for this funding.

b. [REACH Informatics trainings](#)

Several times a year, general data management, developer trainings are held in Eldoret under the REACH Informatics programme at the AMPATH Center within MOI University. This site happens to be the birth place of openmrs and usually these meetings have some specialized OpenMRS training sessions. Module developers are usually invited to conduct training on specific module.

10.0 Appendix

Summary Page

Concept: Whose: -> [PATIENT TELEPHONE NUMBER OWNER \(99117\)](#) Answer: Text

CARE ENTRY POINT SET (99116)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: PMTCT -> [PMTCT \(90012\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: TB -> [TB TREATMENT CENTER \(90016\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Under 5yrs -> [UNDER 5 \(99088\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Outreach -> [IDU OUTREACH \(90019\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Medical out patient -> [MEDICAL OUTPATIENT \(90013\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Sexually Transmitted Infections(STI) -> [STI OUTPATIENT \(90015\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Inpatient -> [MEDICAL INPATIENT \(90018\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Exposed Infant -> [EXPOSED INFANT \(99087\)](#)

Concept: -> [ENTRY POINT INTO HIV CARE \(90200\)](#) Answer: Other specify -> [OTHER SPECIFY \(90002\)](#)

Concept: -> [OTHER CARE ENTRY POINT \(99115\)](#) Answer: Text

Concept: -> [TREATMENT SUPPORTER NAME \(99142\)](#) Answer: Text

Concept: Address District: -> [TREATMENT SUPPORTER DISTRICT \(99138\)](#) Answer: Text

Concept: SubCounty: -> [TREATMENT SUPPORTER SUB COUNTY \(99139\)](#) Answer: Text

Concept: Parish: -> [TREATMENT SUPPORTER PARISH \(99140\)](#) Answer: Text

Concept: LC1: -> [TREATMENT SUPPORTER VILLAGE \(99141\)](#) Answer: Text

Concept: Telephone: -> [TREATMENT SUPPORTER TELEPHONE NUMBER \(90278\)](#) Answer: Text

Concept: Whose: -> [TREATMENT SUPPORTER TELEPHONE NUMBER OWNER \(99118\)](#) Answer: Text

Concept: -> [HOME BASED CARE PROVIDED BY \(99124\)](#) Answer: Text

FAMILY MEMBER SET (99075)

Concept: -> [NAME OF FAMILY MEMBER \(99073\)](#) Answer: Text

Concept: -> [AGE OF FAMILY MEMBER \(99074\)](#) Answer: Numeric

Concept: -> [HIV STATUS \(90253\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
U -> [UNKNOWN \(90001\)](#)

Concept: -> [HIV CARE STATUS \(90270\)](#) Answers: Y -> [YES \(90003\)](#)
N -> [NO \(90004\)](#)

Concept: -> [PATIENT UNIQUE IDENTIFIER \(90263\)](#) Answer: Text

FAMILY MEMBER SET (99075)

Concept: -> [NAME OF FAMILY MEMBER \(99073\)](#) Answer: Text

Concept: -> [AGE OF FAMILY MEMBER \(99074\)](#) Answer: Numeric

Concept: -> [HIV STATUS \(90253\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
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Concept: -> [HIV CARE STATUS \(90270\)](#) Answers: Y -> [YES \(90003\)](#)
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Concept: -> [AGE OF FAMILY MEMBER \(99074\)](#) Answer: Numeric

Concept: -> [HIV STATUS \(90253\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
U -> [UNKNOWN \(90001\)](#)

Concept: -> [HIV CARE STATUS \(90270\)](#) Answers: Y -> [YES \(90003\)](#)
N -> [NO \(90004\)](#)

Concept: -> [PATIENT UNIQUE IDENTIFIER \(90263\)](#) Answer: Text

EXPOSED INFANT SET (99078)

Concept: -> [EXPOSED INFANT IDENTITY \(99077\)](#) Answer: Text

Concept: -> [DATE OF BIRTH \(90261\)](#) Answer: Date

Concept: -> [INFANT FEEDING METHOD \(1151\)](#) Answers: EBF -> [BREASTFED EXCLUSIVELY \(5526\)](#)
RF -> [REPLACEMENT FEEDING \(99089\)](#)
MF -> [MIXED FEEDING \(6046\)](#)

Concept: -> [COTRIMOXAZOLE AT 3 MONTHS \(99076\)](#) Answers: Y -> [YES \(90003\)](#)
N -> [NO \(90004\)](#)

Concept: -> [HIV TEST \(99080\)](#) Answers: Ab -> [ANTIBODY HIV TEST \(99079\)](#)
PCR -> [HIV DNA POLYMERASE CHAIN REACTION \(844\)](#)

Concept: -> [HIV TEST RESULT OF INFANT \(99153\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
U -> [UNKNOWN \(90001\)](#)

Concept: -> [FINAL STATUS OF EXPOSED INFANT \(99121\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
N/BF -> [NEGATIVE AND BREAST FEEDING \(99122\)](#)
Dead -> [DEAD \(99112\)](#)
U -> [UNKNOWN \(1067\)](#)

Concept: -> [PATIENT UNIQUE IDENTIFIER \(90263\)](#) Answer: Text

EXPOSED INFANT SET (99078)

Concept: -> [EXPOSED INFANT IDENTITY \(99077\)](#) Answer: Text

Concept: -> [DATE OF BIRTH \(90261\)](#) Answer: Date

Concept: -> [INFANT FEEDING METHOD \(1151\)](#) Answers: EBF -> [BREASTFED EXCLUSIVELY \(5526\)](#)
RF -> [REPLACEMENT FEEDING \(99089\)](#)
MF -> [MIXED FEEDING \(6046\)](#)

Concept: -> [COTRIMOXAZOLE AT 3 MONTHS \(99076\)](#) Answers: Y -> [YES \(90003\)](#)
N -> [NO \(90004\)](#)

Concept: -> [HIV TEST \(99080\)](#) Answers: Ab -> [ANTIBODY HIV TEST \(99079\)](#)
PCR -> [HIV DNA POLYMERASE CHAIN REACTION \(844\)](#)

Concept: -> [HIV TEST RESULT OF INFANT \(99153\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
U -> [UNKNOWN \(90001\)](#)

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N -> [HIV- \(90167\)](#)
N/BF -> [NEGATIVE AND BREAST FEEDING \(99122\)](#)
Dead -> [DEAD \(99112\)](#)
U -> [UNKNOWN \(1067\)](#)

Concept: -> [PATIENT UNIQUE IDENTIFIER \(90263\)](#) Answer: Text

EXPOSED INFANT SET (99078)

Concept: -> [EXPOSED INFANT IDENTITY \(99077\)](#) Answer: Text

Concept: -> [DATE OF BIRTH \(90261\)](#) Answer: Date

Concept: -> [INFANT FEEDING METHOD \(1151\)](#) Answers: EBF -> [BREASTFED EXCLUSIVELY \(5526\)](#)
RF -> [REPLACEMENT FEEDING \(99089\)](#)
MF -> [MIXED FEEDING \(6046\)](#)

Concept: -> [COTRIMOXAZOLE AT 3 MONTHS \(99076\)](#) Answers: Y -> [YES \(90003\)](#)
N -> [NO \(90004\)](#)

Concept: -> [HIV TEST \(99080\)](#) Answers: Ab -> [ANTIBODY HIV TEST \(99079\)](#)
PCR -> [HIV DNA POLYMERASE CHAIN REACTION \(844\)](#)

Concept: -> [HIV TEST RESULT OF INFANT \(99153\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)

U -> [UNKNOWN \(90001\)](#)

P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)

Concept: -> [FINAL STATUS OF EXPOSED INFANT \(99121\)](#) Answers: N/BF -> [NEGATIVE AND BREAST FEEDING \(99122\)](#)
Dead -> [DEAD \(99112\)](#)
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Concept: -> [PATIENT UNIQUE IDENTIFIER \(90263\)](#) Answer: Text

EXPOSED INFANT SET (99078)

Concept: -> [EXPOSED INFANT IDENTITY \(99077\)](#) Answer: Text

Concept: -> [DATE OF BIRTH \(90261\)](#) Answer: Date

EBF -> [BREASTFED EXCLUSIVELY \(5526\)](#)

Concept: -> [INFANT FEEDING METHOD \(1151\)](#) Answers: RF -> [REPLACEMENT FEEDING \(99089\)](#)
MF -> [MIXED FEEDING \(6046\)](#)

Concept: -> [COTRIMOXAZOLE AT 3 MONTHS \(99076\)](#) Answers: Y -> [YES \(90003\)](#)
N -> [NO \(90004\)](#)

Concept: -> [HIV TEST \(99080\)](#) Answers: Ab -> [ANTIBODY HIV TEST \(99079\)](#)
PCR -> [HIV DNA POLYMERASE CHAIN REACTION \(844\)](#)

P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
U -> [UNKNOWN \(90001\)](#)

Concept: -> [HIV TEST RESULT OF INFANT \(99153\)](#) Answers: P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)
U -> [UNKNOWN \(90001\)](#)

P -> [HIV+ \(90166\)](#)
N -> [HIV- \(90167\)](#)

Concept: -> [FINAL STATUS OF EXPOSED INFANT \(99121\)](#) Answers: N/BF -> [NEGATIVE AND BREAST FEEDING \(99122\)](#)
Dead -> [DEAD \(99112\)](#)
U -> [UNKNOWN \(1067\)](#)

Concept: -> [PATIENT UNIQUE IDENTIFIER \(90263\)](#) Answer: Text

Concept: -> [PRIOR ART \(99055\)](#) Answers: Yes -> [YES \(90003\)](#)
None -> [NO \(90004\)](#)

PEP SET (99066)

Concept: -> [POST EXPOSURE PROPHYLAXIS \(99056\)](#) Answer: PEP: -> [YES \(90003\)](#)

Concept: -> [PEP REGIMEN START DATE \(99154\)](#) Answer: Date

Concept: Where: -> [POST EXPOSURE PROPHYLAXIS FACILITY \(99057\)](#) Answer: Text

AZT-3TC -> [AZT-3TC \(630\)](#)
AZT-FTC -> [AZT-FTC \(99276\)](#)
TDF-3TC -> [TDF-3TC \(99275\)](#)
TDF-FTC -> [TDF-FTC \(99277\)](#)
d4T-3TC -> [d4T-3TC \(99278\)](#)
d4T-FTC -> [d4T-FTC \(99279\)](#)

Concept: ARVs -> [PEP REGIMEN \(99130\)](#) Answers: AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
D4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
AZT-3TC-LPV/r -> [AZT-3TC-LPV/r \(99046\)](#)
AZT-3TC-NFV -> [AZT-3TC-NFV \(99280\)](#)
d4T-3TC-LPV/r -> [d4T-3TC-LPV/r \(99281\)](#)
Other -> [OTHER SPECIFY \(90002\)](#)

Concept: Specify other: -> [PEP REGIMEN OTHER \(99159\)](#) Answer: Text

PMTCT SET (99067)

Concept: -> [PMTCT \(90012\)](#) Answer: PMTCT Only: -> [YES \(90003\)](#)

Concept: -> [PMTCT REGIMEN START DATE \(99155\)](#) Answer: Date

Concept: Where: -> [PMTCT FACILITY \(99058\)](#) Answer: Text

NVP -> [NEVIRAPINE \(631\)](#)
AZT -> [PROGUANIL \(97\)](#)
3TC -> [LAMIVUDINE \(628\)](#)
AZT-3TC -> [AZT-3TC \(630\)](#)
AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
Other -> [OTHER SPECIFY \(90002\)](#)

Concept: ARVs -> [PMTCT REGIMEN \(99131\)](#) Answers: AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
Other -> [OTHER SPECIFY \(90002\)](#)

Concept: Specify other: -> [PMTCT REGIMEN OTHER \(99158\)](#) Answer: Text

EARLIER ARV NOT TRANSFER SET (99068)

Concept: -> [PRIOR ART NOT TRANSFER \(99059\)](#) Answer: Earlier ARV not transfer: -> [YES \(90003\)](#)

Concept: -> [EARLIER ARV NOT TRANSFER REGIMEN START DATE \(99156\)](#) Answer: Date

Concept: Where: -> [PLACE WHERE RECEIVED ARVS FROM -NOT TRANSFER \(99060\)](#) Answer: Text

d4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
d4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)

Concept: ARVs -> [EARLIER ARV NOT TRANSFER \(99129\)](#) Answers: AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)

TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 ABC-ddl(250)-LPV/r -> [ABC-DDI\(250\)-LPV/R \(99007\)](#)
 ABC-ddl(400)-LPV/r -> [ABC-DDI\(400\)-LPV/R \(99008\)](#)
 TDF-3TC-LPV/r -> [TDF-3TC-LPV/r \(99044\)](#)
 TDF-FTC-LPV/r -> [TDF-FTC-LPV/r \(99043\)](#)
 ZDV-ddl(250)-LPV/r -> [AZT-DDI\(250\)-LPV/r \(99282\)](#)
 ZDV-ddl(400)-LPV/r -> [AZT-DDI\(400\)-LPV/r \(99283\)](#)
 ZDV-3TC-LPV/r -> [AZT-3TC-LPV/r \(99046\)](#)
 ABC-ddl-LPV/r -> [ABC-DDI-LPV/R \(99017\)](#)
 ABC-ddl-NFV -> [ABC-DDI-NFV \(99018\)](#)
 ABC-ddl-SQV/r -> [ABC-DDI-SQV/R \(99019\)](#)
 ZDV-ddl-LPV/r -> [AZT-DDI-LPV/r \(99045\)](#)
 ZDV-ABC-LPV/r -> [AZT-ABC-LPV/r \(99284\)](#)
 ABC-ddl-ATV/r -> [ABC-DDI-ATV/r \(99285\)](#)
 ZDV-3TC-ATV/r -> [AZT-3TC-ATV/r \(99286\)](#)
 Other -> [OTHER SPECIFY \(90002\)](#)

Concept: Specify other: -> [EARLIER ARV NOT TRANSFER OTHER \(99157\)](#) **Answer:** Text

Concept: Confirmed HIV+ test: -> [DATE POSITIVE HIV TEST CONFIRMED \(90267\)](#) **Answer:** Date

Concept: -> [HIV TEST \(99080\)](#) **Answers:** Ab -> [ANTIBODY HIV TEST \(99079\)](#)
 PCR -> [HIV TEST \(99080\)](#)

Concept: Where -> [HIV TEST FACILITY \(99081\)](#) **Answer:** Text

Concept: -> [TRANSFER IN \(99110\)](#) **Answer:** HIV care transfer in from -> [YES \(90003\)](#)

Concept: -> [TRANSFER IN PLACE \(99109\)](#) **Answer:** Text

Concept: Eligible for ART: -> [DATE DETERMINED MEDICALLY ELIGIBLE TO START ART \(90297\)](#) **Answer:** Date

Concept: -> [ELIGIBLE FOR ART STAGE \(99083\)](#) **Answers:** 1 -> [WHO STAGE 1 ADULT \(1204\)](#)
 2 -> [WHO STAGE 2 ADULT \(1205\)](#)
 3 -> [WHO STAGE 3 ADULT \(1206\)](#)
 4 -> [WHO STAGE 4 ADULT \(1207\)](#)

Concept: -> [ELIGIBLE FOR ART CD4 \(99082\)](#) **Answer:** Numeric

Concept: Eligible and Ready: -> [DATE DETERMINED MEDICALLY ELIGIBLE AND READY TO START ART \(90299\)](#) **Answer:** Date

Concept: -> [PRESUMPTIVE DIAGNOSIS OF HIV \(99123\)](#) **Answer:** Boolean

Concept: -> [PCR INFANT \(99149\)](#) **Answer:** Boolean

MEDICATION ALLERGY (90230)

Concept: -> [ALLERGY \(142\)](#) **Answer:** Text

Concept: -> [ALLERGY \(142\)](#) **Answer:** Text

Concept: -> [ALLERGY \(142\)](#) **Answer:** Text

Concept: -> [ALLERGY \(142\)](#) **Answer:** Text

Concept: -> [ALLERGY \(142\)](#) **Answer:** Text

RELEVANT MEDICAL CONDITION (99104)

Concept: 1. -> [OTHER MEDICAL CONDITIONS \(99111\)](#) **Answer:** Text

Concept: 2. -> [OTHER MEDICAL CONDITIONS \(99111\)](#) **Answer:** Text

Concept: 3. -> [OTHER MEDICAL CONDITIONS \(99111\)](#) **Answer:** Text

Concept: 4. -> [OTHER MEDICAL CONDITIONS \(99111\)](#) **Answer:** Text

Concept: 5. -> [OTHER MEDICAL CONDITIONS \(99111\)](#) **Answer:** Text

TRANSFER IN REGIMEN SET (99065)

Concept: -> [TRANSFER IN REGIMEN START DATE \(99160\)](#) **Answer:** Date

Concept: Transfer from: -> [NAME OF LOCATION TRANSFERRED FROM \(90206\)](#) **Answer:** Text

Concept: ARVs -> [TRANSFER IN REGIMEN \(99064\)](#) **Answers:**

d4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
 d4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
 AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
 AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
 TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
 TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 ABC-ddl(250)-LPV/r -> [ABC-DDI\(250\)-LPV/R \(99007\)](#)
 ABC-ddl(400)-LPV/r -> [ABC-DDI\(400\)-LPV/R \(99008\)](#)
 TDF-3TC-LPV/r -> [TDF-3TC-LPV/r \(99044\)](#)
 TDF-FTC-LPV/r -> [TDF-FTC-LPV/r \(99043\)](#)

ZDV-ddl(250)-LPV/r -> [AZT-DDI\(250\)-LPV/r \(99282\)](#)
 ZDV-ddl(400)-LPV/r -> [AZT-DDI\(400\)-LPV/r \(99283\)](#)
 ZDV-3TC-LPV/r -> [AZT-3TC-LPV/r \(99046\)](#)
 ABC-ddl-LPV/r -> [ABC-DDI-LPV/R \(99017\)](#)
 ABC-ddl-NFV -> [ABC-DDI-NFV \(99018\)](#)
 ABC-ddl-SQV/r -> [ABC-DDI-SQV/R \(99019\)](#)
 ZDV-ddl-LPV/r -> [AZT-DDI-LPV/r \(99045\)](#)
 ZDV-ABC-LPV/r -> [AZT-ABC-LPV/r \(99284\)](#)
 ABC-ddl-ATV/r -> [ABC-DDI-ATV/r \(99285\)](#)
 ZDV-3TC-ATV/r -> [AZT-3TC-ATV/r \(99286\)](#)
 Other -> [OTHER SPECIFY \(90002\)](#)

Concept: Specify: -> [TRANSFER IN REGIMEN OTHER \(99269\)](#) **Answer:** Text

BASELINE REGIMEN SET (99162)

Concept: -> [BASELINE REGIMEN START DATE \(99161\)](#) **Answer:** Date

AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
 AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
 D4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
 D4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
 TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
 TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 OTHER -> [OTHER FIRST LINE REGIMEN \(99143\)](#)

Concept: Specify: -> [BASELINE REGIMEN OTHER \(99268\)](#) **Answer:** Text

Concept: Wt -> [BASELINE WEIGHT \(99069\)](#) **Answer:** Numeric

Concept: Stage: -> [BASELINE STAGE \(99070\)](#) **Answers:**
 1 -> [WHO STAGE 1 ADULT \(1204\)](#)
 2 -> [WHO STAGE 2 ADULT \(1205\)](#)
 3 -> [WHO STAGE 3 ADULT \(1206\)](#)
 4 -> [WHO STAGE 4 ADULT \(1207\)](#)

Concept: Cd4: -> [BASELINE CD4 \(99071\)](#) **Answer:** Numeric

Concept: -> [BASELINE PREGNANCY \(99072\)](#) **Answers:** Y -> [YES \(1065\)](#)
 N -> [NO \(1066\)](#)

FIRST LINE REGIMEN SET (99062)

Concept: -> [FIRST LINE REGIMEN SUBSTITUTION DATE \(99163\)](#) **Answer:** Date

d4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
 d4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
 AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
 AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
 TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
 TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 Other -> [OTHER FIRST LINE REGIMEN \(99143\)](#)

Concept: Specify other: -> [OTHER FIRST LINE REGIMEN SPECIFY \(99146\)](#) **Answer:** Text

Concept: Why -> [REASON FOR SUBSTITUTION WITHIN REGIMEN \(90246\)](#) **Answers:**
 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 2.Preg -> [PREGNANT \(90041\)](#)
 3.RiskPreg -> [RISK OF PREGNANCY \(90042\)](#)
 4.NewTB -> [NEWLY DIAGNOSED TB \(90043\)](#)
 5.NewDrug -> [AVAILABILITY OF NEW DRUG \(90044\)](#)
 6.DrugStock -> [DRUG STOCK-OUT \(90045\)](#)
 7.Other -> [OTHER SPECIFY \(90002\)](#)
 8.Clinical -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 9.Immuno -> [IMMUNOLOGIC FAILURE \(90047\)](#)

FIRST LINE REGIMEN SET (99062)

Concept: -> [FIRST LINE REGIMEN SUBSTITUTION DATE \(99163\)](#) **Answer:** Date

d4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
 d4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
 AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
 AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
 TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
 TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 Other -> [OTHER FIRST LINE REGIMEN \(99143\)](#)

Concept: Specify other: -> [OTHER FIRST LINE REGIMEN SPECIFY \(99146\)](#) **Answer:** Text

Concept: Why -> [REASON FOR SUBSTITUTION WITHIN REGIMEN \(90246\)](#) **Answers:**
 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 2.Preg -> [PREGNANT \(90041\)](#)
 3.RiskPreg -> [RISK OF PREGNANCY \(90042\)](#)
 4.NewTB -> [NEWLY DIAGNOSED TB \(90043\)](#)
 5.NewDrug -> [AVAILABILITY OF NEW DRUG \(90044\)](#)
 6.DrugStock -> [DRUG STOCK-OUT \(90045\)](#)
 7.Other -> [OTHER SPECIFY \(90002\)](#)

- 8.Clinical -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 9.Immuno -> [IMMUNOLOGIC FAILURE \(90047\)](#)

FIRST LINE REGIMEN SET (99062)

Concept: -> [FIRST LINE REGIMEN SUBSTITUTION DATE \(99163\)](#) **Answer:** Date

d4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
 d4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
 AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
 AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
 TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
 TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 Other -> [OTHER FIRST LINE REGIMEN \(99143\)](#)

Concept: New Reg: -> [CURRENT ARV REGIMEN \(90315\)](#) **Answers:**

Concept: Specify other: -> [OTHER FIRST LINE REGIMEN SPECIFY \(99146\)](#) **Answer:** Text

Concept: Why -> [REASON FOR SUBSTITUTION WITHIN REGIMEN \(90246\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.RiskPreg -> [RISK OF PREGNANCY \(90042\)](#)
 - 4.NewTB -> [NEWLY DIAGNOSED TB \(90043\)](#)
 - 5.NewDrug -> [AVAILABILITY OF NEW DRUG \(90044\)](#)
 - 6.DrugStock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Other -> [OTHER SPECIFY \(90002\)](#)
 - 8.Clinical -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 9.Immuno -> [IMMUNOLOGIC FAILURE \(90047\)](#)

FIRST LINE REGIMEN SET (99062)

Concept: -> [FIRST LINE REGIMEN SUBSTITUTION DATE \(99163\)](#) **Answer:** Date

d4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
 d4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
 AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
 AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
 TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
 TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 Other -> [OTHER FIRST LINE REGIMEN \(99143\)](#)

Concept: New Reg: -> [CURRENT ARV REGIMEN \(90315\)](#) **Answers:**

Concept: Specify other: -> [OTHER FIRST LINE REGIMEN SPECIFY \(99146\)](#) **Answer:** Text

Concept: Why -> [REASON FOR SUBSTITUTION WITHIN REGIMEN \(90246\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.RiskPreg -> [RISK OF PREGNANCY \(90042\)](#)
 - 4.NewTB -> [NEWLY DIAGNOSED TB \(90043\)](#)
 - 5.NewDrug -> [AVAILABILITY OF NEW DRUG \(90044\)](#)
 - 6.DrugStock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Other -> [OTHER SPECIFY \(90002\)](#)
 - 8.Clinical -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 9.Immuno -> [IMMUNOLOGIC FAILURE \(90047\)](#)

SECOND LINE REGIMEN SET (99063)

Concept: -> [SECOND LINE REGIMEN SWITCH DATE \(99164\)](#) **Answer:** Date

ABC-ddl(250)-LPV/r -> [ABC-DDI\(250\)-LPV/R \(99007\)](#)
 ABC-ddl(400)-LPV/r -> [ABC-DDI\(400\)-LPV/R \(99008\)](#)
 TDF-3TC-LPV/r -> [TDF-3TC-LPV/r \(99044\)](#)
 TDF-FTC-LPV/r -> [TDF-FTC-LPV/r \(99043\)](#)
 ZDV-ddl(250)-LPV/r -> [AZT-DDI\(250\)-LPV/r \(99282\)](#)
 ZDV-ddl(400)-LPV/r -> [AZT-DDI\(400\)-LPV/r \(99283\)](#)
 ZDV-3TC-LPV/r -> [AZT-3TC-LPV/r \(99046\)](#)
 ABC-ddl-LPV/r -> [ABC-DDI-LPV/R \(99017\)](#)
 ABC-ddl-NFV -> [ABC-DDI-NFV \(99018\)](#)
 ABC-ddl-SQV/r -> [ABC-DDI-SQV/R \(99019\)](#)
 ZDV-ddl-LPV/r -> [AZT-DDI-LPV/r \(99045\)](#)
 ZDV-ABC-LPV/r -> [AZT-ABC-LPV/r \(99284\)](#)
 ABC-ddl-ATV/r -> [ABC-DDI-ATV/r \(99285\)](#)
 ZDV-3TC-ATV/r -> [AZT-3TC-ATV/r \(99286\)](#)
 Other -> [OTHER SECOND LINE REGIMEN \(99144\)](#)

Concept: New Reg: -> [CURRENT ARV REGIMEN \(90315\)](#) **Answers:**

Concept: Specify other: -> [OTHER SECOND LINE REGIMEN SPECIFY \(99147\)](#) **Answer:** Text

Concept: Why -> [REASON FOR SWITCH TO NEW REGIMEN \(90247\)](#) **Answers:**

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.RiskPreg -> [RISK OF PREGNANCY \(90042\)](#)
 - 4.NewTB -> [NEWLY DIAGNOSED TB \(90043\)](#)
 - 5.NewDrug -> [AVAILABILITY OF NEW DRUG \(90044\)](#)
 - 6.DrugStock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Other -> [OTHER SPECIFY \(90002\)](#)
 - 8.Clinical -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 9.Immuno -> [IMMUNOLOGIC FAILURE \(90047\)](#)

SECOND LINE REGIMEN SET (99063)

Concept: -> [SECOND LINE REGIMEN SWITCH DATE \(99164\)](#) **Answer:** Date

Concept: New Reg: -> [CURRENT ARV REGIMEN \(90315\)](#) **Answers:** ABC-ddl(250)-LPV/r -> [ABC-DDI\(250\)-LPV/R \(99007\)](#)

ABC-ddl(400)-LPV/r -> [ABC-DDI\(400\)-LPV/R \(99008\)](#)
 TDF-3TC-LPV/r -> [TDF-3TC-LPV/r \(99044\)](#)
 TDF-FTC-LPV/r -> [TDF-FTC-LPV/r \(99043\)](#)
 ZDV-ddl(250)-LPV/r -> [AZT-DDI\(250\)-LPV/r \(99282\)](#)
 ZDV-ddl(400)-LPV/r -> [AZT-DDI\(400\)-LPV/r \(99283\)](#)
 ZDV-3TC-LPV/r -> [AZT-3TC-LPV/r \(99046\)](#)
 ABC-ddl-LPV/r -> [ABC-DDI-LPV/R \(99017\)](#)
 ABC-ddl-NFV -> [ABC-DDI-NFV \(99018\)](#)
 ABC-ddl-SQV/r -> [ABC-DDI-SQV/R \(99019\)](#)
 ZDV-ddl-LPV/r -> [AZT-DDI-LPV/r \(99045\)](#)
 ZDV-ABC-LPV/r -> [AZT-ABC-LPV/r \(99284\)](#)
 ABC-ddl-ATV/r -> [ABC-DDI-ATV/r \(99285\)](#)
 ZDV-3TC-ATV/r -> [AZT-3TC-ATV/r \(99286\)](#)
 Other -> [OTHER SECOND LINE REGIMEN \(99144\)](#)

Concept: Specify other -> [OTHER SECOND LINE REGIMEN SPECIFY \(99147\)](#) **Answer:** Text

- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
- 2.Preg -> [PREGNANT \(90041\)](#)
- 3.RiskPreg -> [RISK OF PREGNANCY \(90042\)](#)
- 4.NewTB -> [NEWLY DIAGNOSED TB \(90043\)](#)
- 5.NewDrug -> [AVAILABILITY OF NEW DRUG \(90044\)](#)
- 6.DrugStock -> [DRUG STOCK-OUT \(90045\)](#)
- 7.Other -> [OTHER SPECIFY \(90002\)](#)
- 8.Clinical -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
- 9.Immuno -> [IMMUNOLOGIC FAILURE \(90047\)](#)

Concept: Why -> [REASON FOR SWITCH TO NEW REGIMEN \(90247\)](#) **Answers:**

SECOND LINE REGIMEN SET (99063)

Concept: -> [SECOND LINE REGIMEN SWITCH DATE \(99164\)](#) **Answer:** Date

ABC-ddl(250)-LPV/r -> [ABC-DDI\(250\)-LPV/R \(99007\)](#)
 ABC-ddl(400)-LPV/r -> [ABC-DDI\(400\)-LPV/R \(99008\)](#)
 TDF-3TC-LPV/r -> [TDF-3TC-LPV/r \(99044\)](#)
 TDF-FTC-LPV/r -> [TDF-FTC-LPV/r \(99043\)](#)
 ZDV-ddl(250)-LPV/r -> [AZT-DDI\(250\)-LPV/r \(99282\)](#)
 ZDV-ddl(400)-LPV/r -> [AZT-DDI\(400\)-LPV/r \(99283\)](#)
 ZDV-3TC-LPV/r -> [AZT-3TC-LPV/r \(99046\)](#)
 ABC-ddl-LPV/r -> [ABC-DDI-LPV/R \(99017\)](#)
 ABC-ddl-NFV -> [ABC-DDI-NFV \(99018\)](#)
 ABC-ddl-SQV/r -> [ABC-DDI-SQV/R \(99019\)](#)
 ZDV-ddl-LPV/r -> [AZT-DDI-LPV/r \(99045\)](#)
 ZDV-ABC-LPV/r -> [AZT-ABC-LPV/r \(99284\)](#)
 ABC-ddl-ATV/r -> [ABC-DDI-ATV/r \(99285\)](#)
 ZDV-3TC-ATV/r -> [AZT-3TC-ATV/r \(99286\)](#)
 Other -> [OTHER SECOND LINE REGIMEN \(99144\)](#)

Concept: Specify other -> [OTHER SECOND LINE REGIMEN SPECIFY \(99147\)](#) **Answer:** Text

- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
- 2.Preg -> [PREGNANT \(90041\)](#)
- 3.RiskPreg -> [RISK OF PREGNANCY \(90042\)](#)
- 4.NewTB -> [NEWLY DIAGNOSED TB \(90043\)](#)
- 5.NewDrug -> [AVAILABILITY OF NEW DRUG \(90044\)](#)
- 6.DrugStock -> [DRUG STOCK-OUT \(90045\)](#)
- 7.Other -> [OTHER SPECIFY \(90002\)](#)
- 8.Clinical -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
- 9.Immuno -> [IMMUNOLOGIC FAILURE \(90047\)](#)

Concept: Why -> [REASON FOR SWITCH TO NEW REGIMEN \(90247\)](#) **Answers:**

Concept: -> [ART TREATMENT INTERRUPTION \(99132\)](#) **Answers:** Stopped -> [STOPPED \(1363\)](#)
Lost -> [MISSED DRUG PICK UP APPOINTMENT \(99133\)](#)

Concept: -> [ART TREATMENT INTERRUPTION \(99132\)](#) **Answers:** Stopped -> [STOPPED \(1363\)](#)
Lost -> [MISSED DRUG PICK UP APPOINTMENT \(99133\)](#)

Concept: -> [ART TREATMENT INTERRUPTION \(99132\)](#) **Answers:** Stopped -> [STOPPED \(1363\)](#)
Lost -> [MISSED DRUG PICK UP APPOINTMENT \(99133\)](#)

Concept: -> [ART TREATMENT INTERRUPTION \(99132\)](#) **Answers:** Stopped -> [STOPPED \(1363\)](#)
Lost -> [MISSED DRUG PICK UP APPOINTMENT \(99133\)](#)

Concept: -> [ART TREATMENT INTERRUPTION \(99132\)](#) **Answers:** Stopped -> [STOPPED \(1363\)](#)
Lost -> [MISSED DRUG PICK UP APPOINTMENT \(99133\)](#)

Concept: -> [ART TREATMENT INTERRUPTION \(99132\)](#) **Answers:** Stopped -> [STOPPED \(1363\)](#)
Lost -> [MISSED DRUG PICK UP APPOINTMENT \(99133\)](#)

ARV STOP SET (99086)

Concept: -> [ARV STOP DATE \(99084\)](#) **Answer:** Date

Concept: -> [REASON ANTIRETROVIRALS STOPPED \(1252\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.Tx -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 4.Adhe -> [POOR ADHERENCE \(90049\)](#)
 - 5.Ill -> [ILLNESS OR HOSPITALIZATION \(90050\)](#)
 - 6.Stock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Finan -> [PATIENT LACKED SUFFICIENT FINANCIAL RESOURCES \(90051\)](#)

- 8.Pdecn -> [PATIENT DECISION \(90052\)](#)
- 9.Tx intpn -> [PLANNED TREATMENT INTERRUPTION \(90066\)](#)
- 10.Other -> [OTHER SPECIFY \(90002\)](#)
- 11.Ex HIV -> [EXCLUDED HIV INFECTION IN INFANT \(99289\)](#)

Concept: -> [ARV RESTART DATE \(99085\)](#) **Answer:** Date

ARV STOP SET (99086)

Concept: -> [ARV STOP DATE \(99084\)](#) **Answer:** Date

Concept: -> [REASON ANTIRETROVIRALS STOPPED \(1252\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.Tx -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 4.Adhe -> [POOR ADHERENCE \(90049\)](#)
 - 5.Ill -> [ILLNESS OR HOSPITALIZATION \(90050\)](#)
 - 6.Stock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Finan -> [PATIENT LACKED SUFFICIENT FINANCIAL RESOURCES \(90051\)](#)
 - 8.Pdecn -> [PATIENT DECISION \(90052\)](#)
 - 9.Tx intpn -> [PLANNED TREATMENT INTERRUPTION \(90066\)](#)
 - 10.Other -> [OTHER SPECIFY \(90002\)](#)
 - 11.Ex HIV -> [EXCLUDED HIV INFECTION IN INFANT \(99289\)](#)

Concept: -> [ARV RESTART DATE \(99085\)](#) **Answer:** Date

ARV STOP SET (99086)

Concept: -> [ARV STOP DATE \(99084\)](#) **Answer:** Date

Concept: -> [REASON ANTIRETROVIRALS STOPPED \(1252\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.Tx -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 4.Adhe -> [POOR ADHERENCE \(90049\)](#)
 - 5.Ill -> [ILLNESS OR HOSPITALIZATION \(90050\)](#)
 - 6.Stock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Finan -> [PATIENT LACKED SUFFICIENT FINANCIAL RESOURCES \(90051\)](#)
 - 8.Pdecn -> [PATIENT DECISION \(90052\)](#)
 - 9.Tx intpn -> [PLANNED TREATMENT INTERRUPTION \(90066\)](#)
 - 10.Other -> [OTHER SPECIFY \(90002\)](#)
 - 11.Ex HIV -> [EXCLUDED HIV INFECTION IN INFANT \(99289\)](#)

Concept: -> [ARV RESTART DATE \(99085\)](#) **Answer:** Date

ARV STOP SET (99086)

Concept: -> [ARV STOP DATE \(99084\)](#) **Answer:** Date

Concept: -> [REASON ANTIRETROVIRALS STOPPED \(1252\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.Tx -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 4.Adhe -> [POOR ADHERENCE \(90049\)](#)
 - 5.Ill -> [ILLNESS OR HOSPITALIZATION \(90050\)](#)
 - 6.Stock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Finan -> [PATIENT LACKED SUFFICIENT FINANCIAL RESOURCES \(90051\)](#)
 - 8.Pdecn -> [PATIENT DECISION \(90052\)](#)
 - 9.Tx intpn -> [PLANNED TREATMENT INTERRUPTION \(90066\)](#)
 - 10.Other -> [OTHER SPECIFY \(90002\)](#)
 - 11.Ex HIV -> [EXCLUDED HIV INFECTION IN INFANT \(99289\)](#)

Concept: -> [ARV RESTART DATE \(99085\)](#) **Answer:** Date

ARV STOP SET (99086)

Concept: -> [ARV STOP DATE \(99084\)](#) **Answer:** Date

Concept: -> [REASON ANTIRETROVIRALS STOPPED \(1252\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.Tx -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 4.Adhe -> [POOR ADHERENCE \(90049\)](#)
 - 5.Ill -> [ILLNESS OR HOSPITALIZATION \(90050\)](#)
 - 6.Stock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Finan -> [PATIENT LACKED SUFFICIENT FINANCIAL RESOURCES \(90051\)](#)
 - 8.Pdecn -> [PATIENT DECISION \(90052\)](#)
 - 9.Tx intpn -> [PLANNED TREATMENT INTERRUPTION \(90066\)](#)
 - 10.Other -> [OTHER SPECIFY \(90002\)](#)
 - 11.Ex HIV -> [EXCLUDED HIV INFECTION IN INFANT \(99289\)](#)

Concept: -> [ARV RESTART DATE \(99085\)](#) **Answer:** Date

ARV STOP SET (99086)

Concept: -> [ARV STOP DATE \(99084\)](#) **Answer:** Date

Concept: -> [REASON ANTIRETROVIRALS STOPPED \(1252\)](#)

- Answers:**
- 1.Toxi -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)
 - 2.Preg -> [PREGNANT \(90041\)](#)
 - 3.Tx -> [CLINICAL TREATMENT FAILURE \(90046\)](#)
 - 4.Adhe -> [POOR ADHERENCE \(90049\)](#)
 - 5.Ill -> [ILLNESS OR HOSPITALIZATION \(90050\)](#)
 - 6.Stock -> [DRUG STOCK-OUT \(90045\)](#)
 - 7.Finan -> [PATIENT LACKED SUFFICIENT FINANCIAL RESOURCES \(90051\)](#)
 - 8.Pdecn -> [PATIENT DECISION \(90052\)](#)

9.Tx intpn -> [PLANNED TREATMENT INTERRUPTION \(90066\)](#)
10.Other -> [OTHER SPECIFY \(90002\)](#)
11.Ex HIV -> [EXCLUDED HIV INFECTION IN INFANT \(99289\)](#)

Concept: -> [ARV RESTART DATE \(99085\)](#) Answer: Date

TRANSFER OUT SET (99166)

Concept: -> [TRANSFERED OUT TO ANOTHER FACILITY \(90306\)](#) Answer: Transfer out: -> [YES \(90003\)](#)

Concept: -> [TRANSFER OUT DATE \(99165\)](#) Answer: Date

Concept: Where -> [NAME OF LOCATION TRANSFERRED TO \(90211\)](#) Answer: Text

LOST TO FOLLOWUP SET (99167)

Concept: -> [LOST TO FOLLOWUP \(5240\)](#) Answer: Lost to follow-up (drop): -> [YES \(90003\)](#)

Concept: -> [DATE LOST TO FOLLOWUP \(90209\)](#) Answer: Date

PATIENT DEATH SET (99168)

Concept: -> [DEAD \(99112\)](#) Answer: Dead: -> [YES \(90003\)](#)

Concept: -> [DATE OF DEATH \(90272\)](#) Answer: Date

Encounter Page

Concept: -> [SCHEDULED PATIENT VISIT \(90069\)](#) Answer: Boolean

Concept: Return date: -> [RETURN VISIT DATE \(5096\)](#) Answer: Date

Concept: Duration: -> [ART DURATION \(99024\)](#) Answer: Numeric

Concept: Duration: -> [CURRENT ART DURATION \(99025\)](#) Answer: Numeric

Concept: Wt(kg): -> [BODY WEIGHT \(90236\)](#) Answer: Numeric

Concept: Ht(cm): -> [HEIGHT \(CM\) \(5090\)](#) Answer: Numeric

Concept: oedema: -> [OEDEMA \(460\)](#) Answers: + -> [YES \(90003\)](#)
- -> [NO \(90004\)](#)

Concept: -> [PREGNANT \(90041\)](#) Answer: Pregnant -> [YES \(1065\)](#)

Concept: -> [ESTIMATED DATE OF CONFINEMENT \(5596\)](#) Answer: Date

Concept: -> [PMTCT \(90012\)](#) Answer: PMTCT -> [YES \(1065\)](#)

Concept: Gestatn Wks: -> [NUMBER OF WEEKS PREGNANT \(1279\)](#) Answer: Numeric

Concept: ANC #: -> [ANTENATAL NUMBER \(99026\)](#) Answer: Text

Concept: -> [FAMILY PLANNING STATUS \(90238\)](#) Answer: Yes -> [NOT PREGNANT AND ON FAMILY PLANNING \(90082\)](#)

Concept: -> [FAMILY PLANNING STATUS \(90238\)](#) Answer: No -> [NOT PREGNANT AND NOT ON FAMILY PLANNING \(90081\)](#)

Concept: -> [METHOD OF FAMILY PLANNING \(374\)](#) Answer: 1.Condoms -> [CONDOMS \(190\)](#)

Concept: -> [METHOD OF FAMILY PLANNING \(374\)](#) Answer: 2.Oral C.. -> [ORAL CONTRACEPTION \(780\)](#)

Concept: -> [METHOD OF FAMILY PLANNING \(374\)](#) Answer: 3.Hormone -> [INJECTABLE CONTRACEPTIVES \(5279\)](#)

Concept: -> [METHOD OF FAMILY PLANNING \(374\)](#) Answer: 4.Diaphragm -> [DIAPHRAGM \(5278\)](#)

Concept: -> [METHOD OF FAMILY PLANNING \(374\)](#) Answer: 5.IUD -> [INTRAUTERINE DEVICE \(5275\)](#)

Concept: -> [METHOD OF FAMILY PLANNING \(374\)](#) Answer: 6.Vas/Tub.. -> [VASECTOMY HYSTERECTOMY TUBAL LIGATION \(99265\)](#)

Concept: MUAC: -> [MID-UPPER ARM CIRCUMFERENCE-CODE \(99030\)](#) Answers: Green -> [GREEN \(99027\)](#)
Red -> [RED \(99028\)](#)
Yellow -> [YELLOW \(99029\)](#)

Concept: Age(months): -> [AGE IN MONTHS \(99270\)](#) Answer: Numeric

Concept: -> [TUBERCULOSIS STATUS \(90216\)](#) Answer: 1. No signs -> [NO SIGNS OR SYMPTOMS SUGGESTING TB \(90079\)](#)

Concept: -> [TUBERCULOSIS STATUS \(90216\)](#) Answer: 2. Supect -> [SUSPECTED TB SPUTUMS SENT FOR ANALYSIS \(90073\)](#)

Concept: -> [TUBERCULOSIS STATUS \(90216\)](#) Answer: 3. Tb Rx -> [CURRENTLY ON TB TREATMENT \(90071\)](#)

Concept: Start Date: -> [TUBERCULOSIS TREATMENT START DATE \(90217\)](#) Answer: Date

Concept: Stop Date: -> [TUBERCULOSIS TREATMENT STOP DATE \(90310\)](#) Answer: Date

Concept: District TB reg #: -> [DISTRICT TUBERCULOSIS NUMBER \(99031\)](#) Answer: Text

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: AB -> [ABDOMINAL PAIN \(90100\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Anaemia -> [ANEMIA \(90099\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: BN -> [BURNING \(90095\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: CNS -> [DIZZINESS \(90117\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Diarrhoea -> [DIARRHOEA \(90092\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: FAT -> [FAT DISTRIBUTION CHANGES \(90116\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Fatigue -> [FATIGUE \(90093\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Headache -> [HEADACHE \(90094\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Jaundice -> [JAUNDICE \(90115\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Nausea -> [NAUSEA \(90091\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Rash -> [RASH \(90098\)](#)

Concept: -> [MEDICATION OR OTHER SIDE EFFECTS \(90227\)](#) Answer: Other specify: -> [OTHER SPECIFY \(90002\)](#)

Concept: -> [OTHER SIDE EFFECTS \(99113\)](#) Answer: Text

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Cough -> [COUGH \(90132\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: DB -> [BREATHING DIFFICULTY \(90133\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Dementia -> [DEMENTIA \(90128\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Enceph -> [ENCEPHALITIS \(90129\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Fever -> [FEVER \(90131\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: GUD -> [GENITAL ULCER DISEASE \(90138\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Headache -> [HEADACHE \(90094\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: IRIS -> [IMMUNE RECONSTITUTION INFLAMMATORY SYNDROME \(90134\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Malaria -> [MALARIA \(123\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Pneumonia -> [PNEUMONIA \(90127\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: PID -> [PELVIC INFLAMMATORY DISEASE \(90137\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: RTI -> [RESPIRATORY TRACT INFECTION, NOS \(999\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Thrush -> [THRUSH \(90130\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: UD -> [URETHRAL DISCHARGE \(90136\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Ulcers -> [ULCERS \(90139\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: URTI -> [RESPIRATORY TRACT INFECTION, UPPER \(106\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Weight loss -> [WEIGHT LOSS \(90135\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Zoster -> [ZOSTER \(90126\)](#)

Concept: -> [SYMPTOM, DIAGNOSIS, OR OPPORTUNISTIC INFECTION \(90251\)](#) Answer: Other specify: -> [OTHER SPECIFY \(90002\)](#)

Concept: -> [OPPORTUNISTIC INFECTION NOT OTHERWISE SPECIFIED \(99032\)](#) Answer: Text

Concept: Nutritional Problems: -> [MALNUTRITION \(68\)](#) Answers: MAM -> [MODERATE ACUTE MALNUTRITION \(99271\)](#)
SAM -> [SEVERE ACUTE MALNUTRITION \(99272\)](#)
SAMO -> [SEVERE ACUTE MALNUTRITION WITH OEDEMA \(99273\)](#)
PWG/PA -> [POOR WEIGHT GAIN / POOR APPETITE \(99274\)](#)

Concept: Status: -> [HISTORY OF FUNCTIONAL STATUS \(90235\)](#) Answers: Amb -> [AMBULATORY \(90037\)](#)
Work -> [WORKING \(90038\)](#)
Bed -> [BEDRIDDEN \(90039\)](#)

Concept: Stage: -> [WHO HIV CLINICAL STAGE \(90203\)](#) Answers: 1 -> [HIV WHO CLINICAL STAGE 1 \(90033\)](#)
2 -> [HIV WHO CLINICAL STAGE 2 \(90034\)](#)
3 -> [HIV WHO CLINICAL STAGE 3 \(90035\)](#)
4 -> [HIV WHO CLINICAL STAGE 4 \(90036\)](#)
T1 -> [HIV WHO CLINICAL STAGE T1 \(90293\)](#)
T2 -> [HIV WHO CLINICAL STAGE T2 \(90294\)](#)
T3 -> [HIV WHO CLINICAL STAGE T3 \(90295\)](#)
T4 -> [HIV WHO CLINICAL STAGE T4 \(90296\)](#)

Concept: Adherence: -> [ADHERENCE TO COTRIMOXZOLE \(90220\)](#) Answers: Good -> [GOOD ADHERENCE \(90156\)](#)
Fair -> [FAIR ADHERENCE \(90157\)](#)
Poor -> [POOR ADHERENCE \(90158\)](#)

Concept: # Pills: -> [TRIMETHOPRIM AND SULFAMETHOXAZOLE DOSAGE \(99037\)](#) Answer: Numeric

Concept: Days: -> [TRIMETHOPRIM AND SULFAMETHOXAZOLE DAYS DISPENSED \(99033\)](#) Answer: Numeric

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Amitriptiline -> [AMITRYPTILINE \(931\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Amoxicillin -> [AMOXICILLIN \(265\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Cetrizine -> [CETIRIZINE \(779\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Ciprofloxacin -> [CIPROFLOXACIN \(740\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Cloxacillin -> [CLOXACILLIN \(922\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Coartem -> [ARTEMETHER/LUMEFANTRINE \(99266\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Dapsone -> [DAPSONE \(90171\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Doxycycline -> [DOXYCYCLINE \(95\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: EH -> [ETHAMBUTOL AND ISONIAZID \(1108\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Erythromycin -> [ERYTHROMYCIN \(272\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Fluconazole -> [FLUCONAZOLE \(747\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Ibuprofen -> [IBUPROFEN \(912\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Ketoconazole -> [KETOCONAZOLE \(926\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Mebendazole -> [MEBENDAZOLE \(244\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Metronidazole -> [METRONIDAZOLE \(237\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Multivitamins -> [MULTIVITAMIN \(461\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Nutrition Support -> [NUTRITION SUPPORT AND INFANT FEEDING \(99054\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Nystatin -> [NYSTATIN \(919\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Paracetamol -> [PARACETAMOL \(89\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: RH -> [RIFAMPICIN AND ISONIAZID \(1194\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: RHE -> [RIFAMPICIN ISONIAZID AND ETHAMBUTOL \(99127\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: RHZ -> [RIFAMPICIN ISONIAZID AND PYRAZINAMIDE \(768\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: RHZE -> [RIFAMPICIN ISONIAZID PYRAZINAMIDE AND ETHAMBUTOL \(1131\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: RHZES -> [RIFAMPICIN ISONIAZID PYRAZINAMIDE ETHAMBUTOL AND STREPTOMYCIN \(99128\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Septrin -> [TRIMETHOPRIM AND SULFAMETHOXAZOLE \(916\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Vit B Complex -> [VITAMIN B COMPLEX \(329\)](#)

Concept: -> [CURRENT DRUGS USED \(1193\)](#) Answer: Other specify: -> [OTHER SPECIFY \(90002\)](#)

Concept: -> [OTHER MEDICATIONS DISPENSED \(99035\)](#) Answer: Text

Concept: Adherence: -> [ANTI-RETROVIRAL DRUG ADHERENCE ASSESSMENT CODE \(90221\)](#) Answers: Good -> [GOOD ADHERENCE \(90156\)](#)
Fair -> [FAIR ADHERENCE \(90157\)](#)
Poor -> [POOR ADHERENCE \(90158\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 1.Toxicity -> [TOXICITY OR SIDE-EFFECTS \(90040\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 2.Shared -> [DRUG SHARING \(90146\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 3.Forgot -> [FORGETFULNESS \(90147\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 4.Felt better -> [FELT BETTER \(90148\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 5.Too ill -> [PATIENT TOO ILL \(90149\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 6.Stigma -> [STIGMA \(90150\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 7.Stock out -> [DRUG STOCK-OUT \(90045\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 8.Lost pills -> [PILLS RAN OUR OR WERE LOST \(90151\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 9.Travel problems -> [DELIVERY OR TRAVEL PROBLEMS \(90152\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 10.Inability to pay -> [PATIENT LACKED SUFFICIENT FINANCIAL RESOURCES \(90051\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 11.Alcohol -> [ALCOHOL \(90153\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 12.Depression -> [DEPRESSION \(90154\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 13.Pill burden -> [PILL BURDEN \(90155\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 14.Lacked food -> [LACK OF FOOD \(99049\)](#)

Concept: -> [REASON FOR MISSING ANTI-RETROVIRAL DRUG ADMINISTRATION SCHEDULE \(90223\)](#) Answer: 15.Other Specify: -> [OTHER SPECIFY \(90002\)](#)

Concept: -> [OTHER REASON FOR MISSING ARV \(99125\)](#) Answer: Text

d4T-3TC-NVP -> [D4T-3TC-NVP \(99015\)](#)
 d4T-3TC-EFV -> [D4T-3TC-EFV \(99016\)](#)
 AZT-3TC-NVP -> [AZT-3TC-NVP \(99005\)](#)
 AZT-3TC-EFV -> [AZT-3TC-EFV \(99006\)](#)
 TDF-3TC-NVP -> [TDF-3TC-NVP \(99039\)](#)
 TDF-3TC-EFV -> [TDF-3TC-EFV \(99040\)](#)
 TDF-FTC-NVP -> [TDF-FTC-NVP \(99041\)](#)
 TDF-FTC-EFV -> [TDF-FTC-EFV \(99042\)](#)
 ABC-ddl(250)-LPV/r -> [ABC-DDI\(250\)-LPV/R \(99007\)](#)
 ABC-ddl(400)-LPV/r -> [ABC-DDI\(400\)-LPV/R \(99008\)](#)
 TDF-3TC-LPV/r -> [TDF-3TC-LPV/r \(99044\)](#)
 TDF-FTC-LPV/r -> [TDF-FTC-LPV/r \(99043\)](#)
 ZDV-ddl(250)-LPV/r -> [AZT-DDI\(250\)-LPV/r \(99282\)](#)
 ZDV-ddl(400)-LPV/r -> [AZT-DDI\(400\)-LPV/r \(99283\)](#)
 ZDV-3TC-LPV/r -> [AZT-3TC-LPV/r \(99046\)](#)
 ABC-ddl-LPV/r -> [ABC-DDI-LPV/R \(99017\)](#)
 ABC-ddl-NFV -> [ABC-DDI-NFV \(99018\)](#)
 ABC-ddl-SQV/r -> [ABC-DDI-SQV/R \(99019\)](#)
 ZDV-ddl-LPV/r -> [AZT-DDI-LPV/r \(99045\)](#)
 ZDV-ABC-LPV/r -> [AZT-ABC-LPV/r \(99284\)](#)
 ABC-ddl-ATV/r -> [ABC-DDI-ATV/r \(99285\)](#)
 ZDV-3TC-ATV/r -> [AZT-3TC-ATV/r \(99286\)](#)
 Other -> [OTHER SPECIFY \(90002\)](#)

Concept: Regimen: -> [CURRENT ARV REGIMEN \(90315\)](#) **Answers:**

Concept: Specify -> [CURRENT REGIMEN OTHER \(99126\)](#) **Answer:** Text

Concept: # Pills: -> [AR REGIMEN DOSE \(99038\)](#) **Answer:** Numeric

Concept: Days: -> [ARV REGIMEN DAYS DISPENSED \(99036\)](#) **Answer:** Numeric

Concept: CD4: -> [CD4 COUNT \(5497\)](#) **Answer:** Numeric

Concept: CD4%: -> [CD4% \(730\)](#) **Answer:** Numeric

Concept: -> [CD4% CLASSIFICATION FOR INFANTS \(99151\)](#) **Answers:** + -> [SEVERE SEVERITY \(90125\)](#)
 - -> [NOT SEVERE \(99150\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** CBC -> [COMPLETE BLOOD COUNT \(1019\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** RPR -> [RAPID PLASMA REAGIN \(99152\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** CXR -> [X-RAY, CHEST \(12\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** Hgb -> [HEMOGLOBIN \(21\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** Cd4 -> [CD4 PANEL \(657\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** VL -> [HIV VIRAL LOAD \(856\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** Sputums -> [SPUTUM FOR ACID FAST BACILLI \(307\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** Infant Ab/PCR -> [PCR INFANT \(99149\)](#)

Concept: -> [TESTS ORDERED \(1271\)](#) **Answer:** Other specify: -> [OTHER SPECIFY \(90002\)](#)

Concept: -> [OTHER TESTS ORDERED \(99114\)](#) **Answer:** Text

Concept: Hb: -> [HEMOGLOBIN \(21\)](#) **Answer:** Numeric

Concept: Viral load: -> [HIV VIRAL LOAD \(856\)](#) **Answer:** Numeric

LAB RESULT SET (99292)

Concept: Other Results: -> [TEST RESULT TYPE \(99290\)](#) **Answers:** CBC -> [COMPLETE BLOOD COUNT \(1019\)](#)
 RPR -> [RAPID PLASMA REAGIN \(99152\)](#)
 CXR -> [X-RAY, CHEST \(12\)](#)
 Sputums -> [SPUTUM FOR ACID FAST BACILLI \(307\)](#)
 PCR -> [PCR INFANT \(99149\)](#)

Concept: -> [LAB RESULT TXT \(99291\)](#) **Answer:** Text

Concept: -> [NUTRITION SUPPORT AND INFANT FEEDING \(99054\)](#) **Answer:** Thera Feeding -> [THERAPEUTIC FEEDING \(99053\)](#)

Concept: -> [NUTRITION SUPPORT AND INFANT FEEDING \(99054\)](#) **Answer:** Infant F C -> [INFANT FEEDING COUNSELING \(99051\)](#)

Concept: -> [NUTRITION SUPPORT AND INFANT FEEDING \(99054\)](#) **Answer:** Nutron C -> [NUTRITION COUNSELLING ONLY >2YRS \(99052\)](#)

Concept: -> [NUTRITION SUPPORT AND INFANT FEEDING \(99054\)](#) **Answer:** Food Support -> [FOOD SUPPORT \(99050\)](#)

Concept: Other referral: -> [OTHER REFERRAL ORDERED \(99267\)](#) **Answer:** Text

Concept: -> [INFANT FEEDING METHOD \(1151\)](#) **Answers:** EBF -> [BREASTFED EXCLUSIVELY \(5526\)](#)
RF -> [REPLACEMENT FEEDING \(99089\)](#)
MF -> [MIXED FEEDING \(6046\)](#)

Concept: Hospitalized days: -> [NUMBER OF HOSPITAL DAYS SINCE LAST OUTPATIENT VISIT \(90224\)](#) **Answer:** Numeric