SOP: HOW TO USE LAB MANIFEST MODULE IN KENYAEMR

Last updated: 30th August 2022

TASK:	Configure KenyaEMR to receive viral load results, request a viral load from the system, send the manifest and receive VL results
OBJECTIVE:	Allow successful return of VL results to KenyaEMR
WHO:	Facility Admins, Clinicians, Data Staff
REQUIREMENTS:	Functional KenyaEMR V. 18.0.2, Internet Connectivity

SUMMARY:
To ease data exchange with regards to Viral Load and EID results return to KenyaEMR, a number of configuration steps are available from version 18.0.2 of KenyaEMR and above. The goal is to reduce manual data entry thus less transcription errors and faster turnaround time, efficiency and effectiveness.

Activity	Screenshot
CONFIGURING KENYAEMR TO RECEIVE VIRAL LOAD RESULTS – THIS IS A ONE-OFF ADMIN FUNCTION **Step 1:** Log into KenyaEMR and navigate to the Advanced Settings • Use **admin** credentials to log in to KenyaEMR • Click home and Select "Developer" tab • Click on "Legacy admin UI" • Click on "Advanced Settings"	
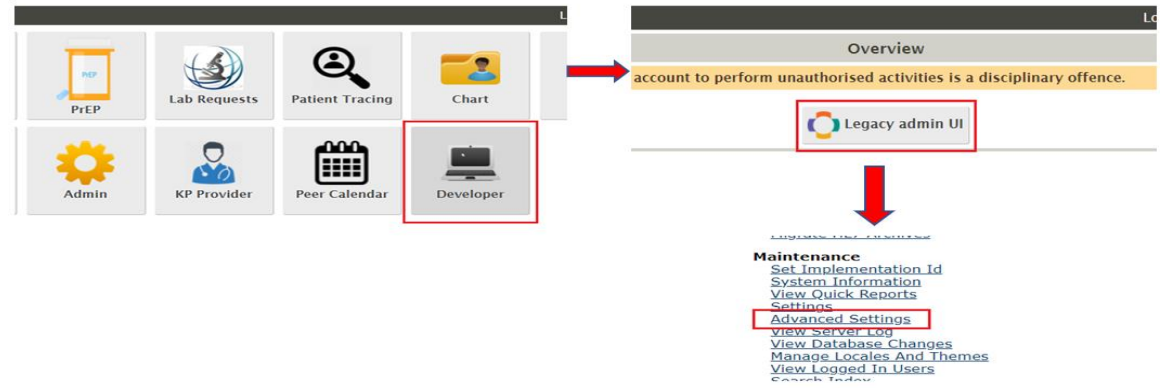
Step 3:
Search (Ctrl+F) for the pre-defined properties. Specify property values for either CHAI or LABWARE endpoints as shown below. and configure the URLs and the following endpoints must be set correctly.

NOTE: Please contact Palladium to obtain valid API tokens.

List of server end-points to various reference labs in Kenya

#	Lab	chai_vl_server_result_url	chai_vl_server_url
1	Kemri Nairobi	https://kemrinairobi.nascop.org/api/function	https://kemrinairobi.nascop.org/api/vl
2	Kemri Kisumu	https://kemrikisumu.nascop.org/api/function	https://kemrikisumu.nascop.org/api/vl
3	Kemri Alupe	https://kemrialupe.nascop.org/api/function	https://kemrialupe.nascop.org/api/vl
4	CPGH	https://cpgh.nascop.org/api/function	https://cpgh.nascop.org/api/vl
5	Walter Reed	https://wrpkericho.nascop.org/api/function	https://wrpkericho.nascop.org/api/vl
6	KNH	https://knh.nascop.org/api/function	https://knh.nascop.org/api/vl
7	Ampath	https://ampath.nascop.org/api/function	https://ampath.nascop.org/api/vl

List of Endpoints to be set in KenyaEMR

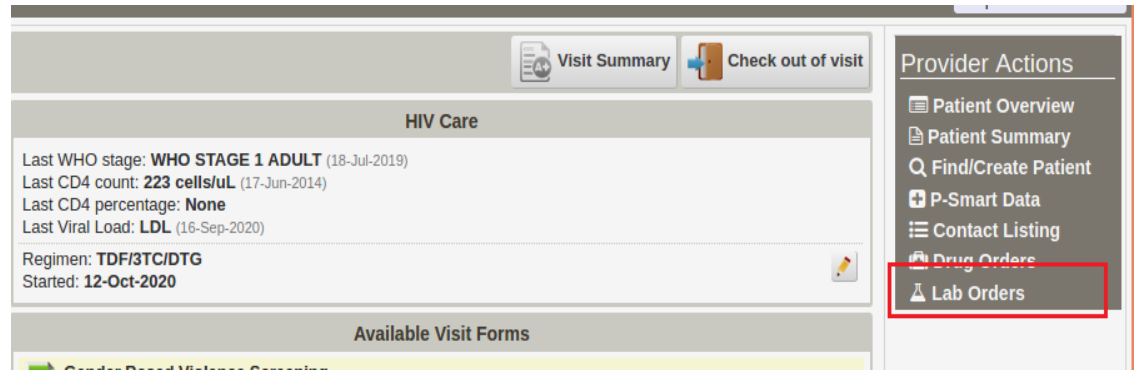| System	Property Name	Description	Default Value
General	kemrorder.labsystem_identifier	The name of the lab system in use. MUST be set to either CHAI or LABWARE. Please note these are case sensitive	CHAI or LABWARE
	kemrorder.ssl_verification_enabled	Defines whether SSL verification is enabled. Should be set to false to disable SSL verification	Yes or No
	local.viral_load_result_end_point	End point for processing viral load results from the lab (should be	http://**KenyaEMR_Server_IP**:8080/openmrs/ws/rest/v1/kemrorder/labresults
	kemrorder.retry_period_for_incomplete_vl_result	Retry period after which updates for incomplete results can be checked. An empty value will default to 2 days	2 days
	kemrorder.viral_load_result_tat_in_days	The turnaround time for VL results in days. This is to avoid premature polling for results. An empty value will default to 4 days	10 days
LABWARE	labware_eid_server_api_token	API token to authenticate communication to the LABWARE EID lab system API. Contact palladium to obtain	Request from Palladium
	labware_eid_server_result_url	The URL for fetching LABWARE EID result	Refer to step 3 for specific lab URL
	labware_eid_server_url	The URL for pushing requests to the LABWARE EID server	Refer to step 3 for specific lab URL
	labware_vl_server_api_token	API token to authenticate communication to the LABWARE VL lab system API	Refer to step 3 for specific lab URL
	labware_vl_server_result_url	The URL for fetching LABWARE VL result	Refer to step 3 for specific lab URL
	labware_vl_server_url	The URL for pushing requests to the LABWARE VL server	Refer to step 3 for specific lab URL
CHAI	chai_eid_server_api_token	API token to authenticate communication to the CHAI EID lab system API. Contact Palladium to obtain	Request from Palladium
	chai_eid_server_result_url	The URL for fetching CHAI EID result	Refer to step 3 for specific lab URL
	chai_eid_server_url	The URL for pushing requests to the CHAI EID server	Refer to step 3 for specific lab URL
	chai_vl_server_api_token	API token to authenticate communication to the CHAI VL lab system API	Refer to step 3 for specific lab URL
	chai_vl_server_result_url	The URL for fetching CHAI VL result	Refer to step 3 for specific lab URL
	chai_vl_server_url	The URL for pushing requests to the CHAI VL server	Refer to step 3 for specific lab URL

NB: If **kemrdorder.labsystem.identifer** property is not specified, an error message will be displayed and you will not be able to create and submit any manifest since each lab identifier expect a different set of payload.

IMPORTANT: Check to ensure the following schedulers are started and that the execution intervals are correctly set.

- `Push Lab Requests to Lab`
- `Pull Viral Load results`

Step 3: Navigate to a patient file and select Lab Orders

Step 4: Complete the VL request and verify you have it under active orders.

VERIFYING AND/OR EDITING REGIMEN LINE – THIS IS A FUNCTION CONDUCTED ONLY ONCE FOR EACH PATIENT AND CAN BE DONE BY EITHER A CLINICIAN OR DATA STAFF

Step 5: Navigate to the clients ARV Regimen History and Ensure the client has a regimen line. If none is available, TAKE NOTE of the current regimen then:

- Undo the Last Regimen Change

- Add **regimen** and be sure to input CORRECT **START DATE**, select correct **regimen line** and save.

ARV Regimen History

Start	En...	Regimen Line	Change Reason
30-Apr-2014	14...		
14-May-2019	12...		
12-Oct-2020			

Undo the last regimen change?

Cancel   OK

Stop the current regimen   Undo the last change

Change Regimen

Change date

15-Sep-2020   00 ▾ : 00 ▾   1

Regimen

Use standard: TDF/3TC/DTG ▾   ☐ Use none standard

Regimen line: Adult First line ▾   2

Reason   Reason (Other)

New drug available (5)   3   ▾

Save   Cancel
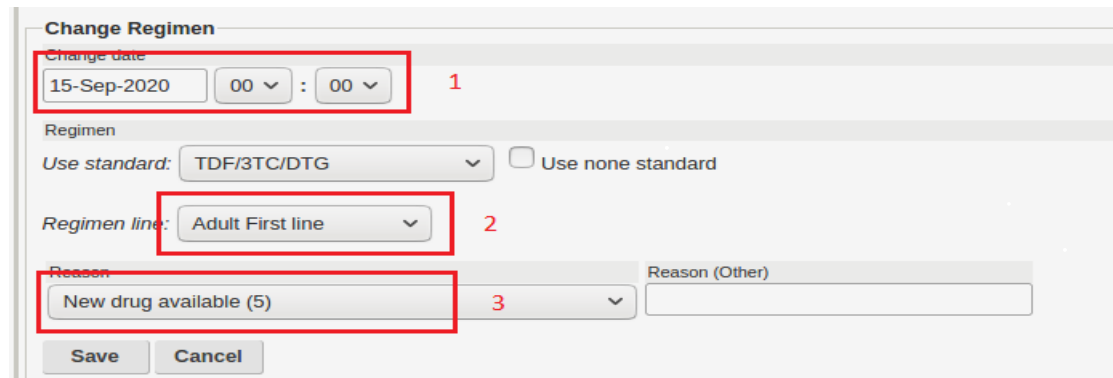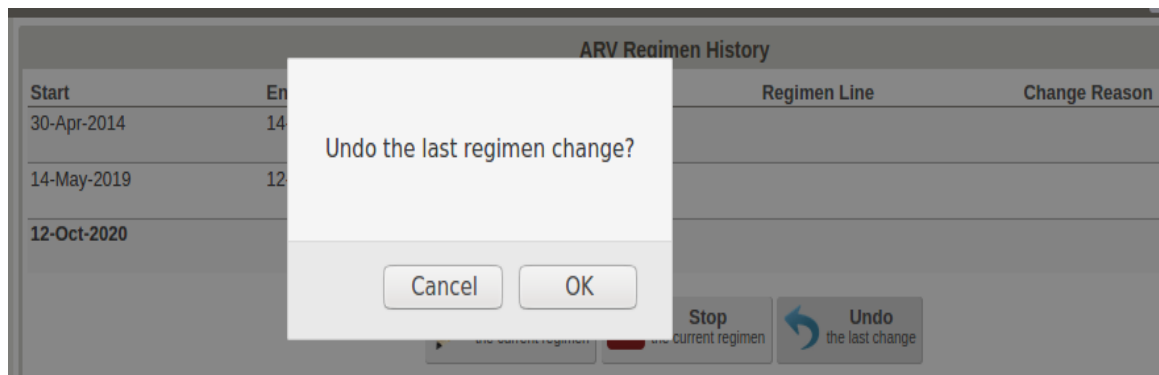
CREATING NEW LAB MANIFEST – THIS IS A ROUTINE FUNCTION AND CAN BE CONDUCTED BY EITHER A LAB TECH, DATA STAFF OR CLINICIAN **Step 6:** Navigate to Lab Manifest tab on the KenyaEMR Homepage	
Click on Add New Manifest.	
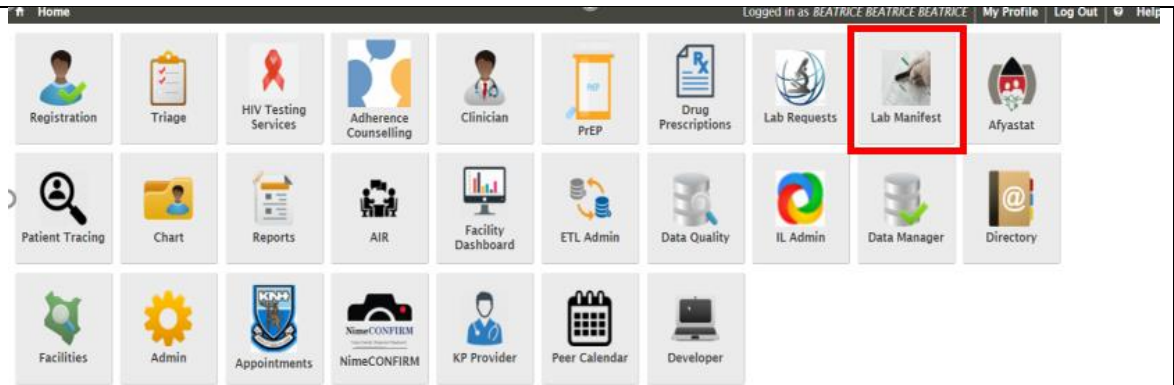
Step 7: Complete the details of the New Manifest taking into special consideration the fields:

- **Date Range** – This is the range for which you will fill Viral Load samples have been collected and for which you require results to be returned.

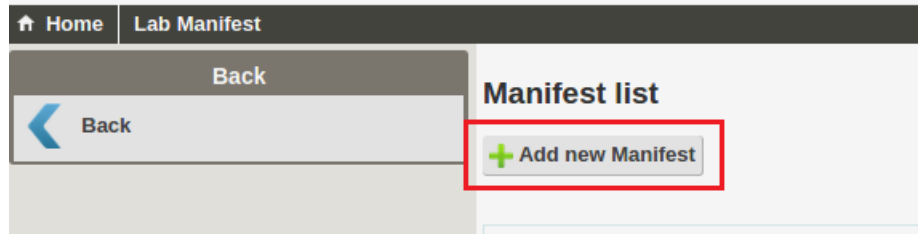- **Manifest Type** – This should be set to either **Viral Load** or **IED** depending on the type of samples expected in the manifest.

- **Manifest Status** – The status should be set to "**Draft**" during the period of adding samples to the manifest. Other options are:
  Ready to Send: Set when all valid samples have been added and ready to be submitted.
  On Hold: This is set if for some reason the manifest should not be submitted yet.

- Once done, click **Create Lab Manifest** to save the manifest.

Home

Edit Lab Manifest

Manifest date range

Start Date	End Date
01-Apr-2021	06-Apr-2021

Manifest type

Type *
Viral Load

Dispatch Details

Dispatch Date	Courier Name	Person handed to
01-Apr-2022		

Address

County	Sub-County
Muranga	gatanga

Facility Email	Facility Phone contact
hhjjkjjk	0713322215

Clinician Name	Clinician Phone contact
jane	0710123456

Lab person Phone number
0710121212

Manifest status

Status *
Draft

Step 8: Add patient records to the Manifest. To do this you will need to navigate to the Manifest List, Click view and Add Patients.	**Manifest list**

+ Add new Manifest

Page 1

Start Date	End Date	Courier	County/Sub-county	Facility Email	Facility Phone	Clinician name	Clinician contact	Lab person contact	Status	Dispatch	Action
01-Jul-2021	13-Jul-2021	Ambulance	Kisumu/Central	email@facility.com	0711222111	His name	0799111222	0790111000	**Draft** *Total samples: 3*	13-Jul-2021	View Edit
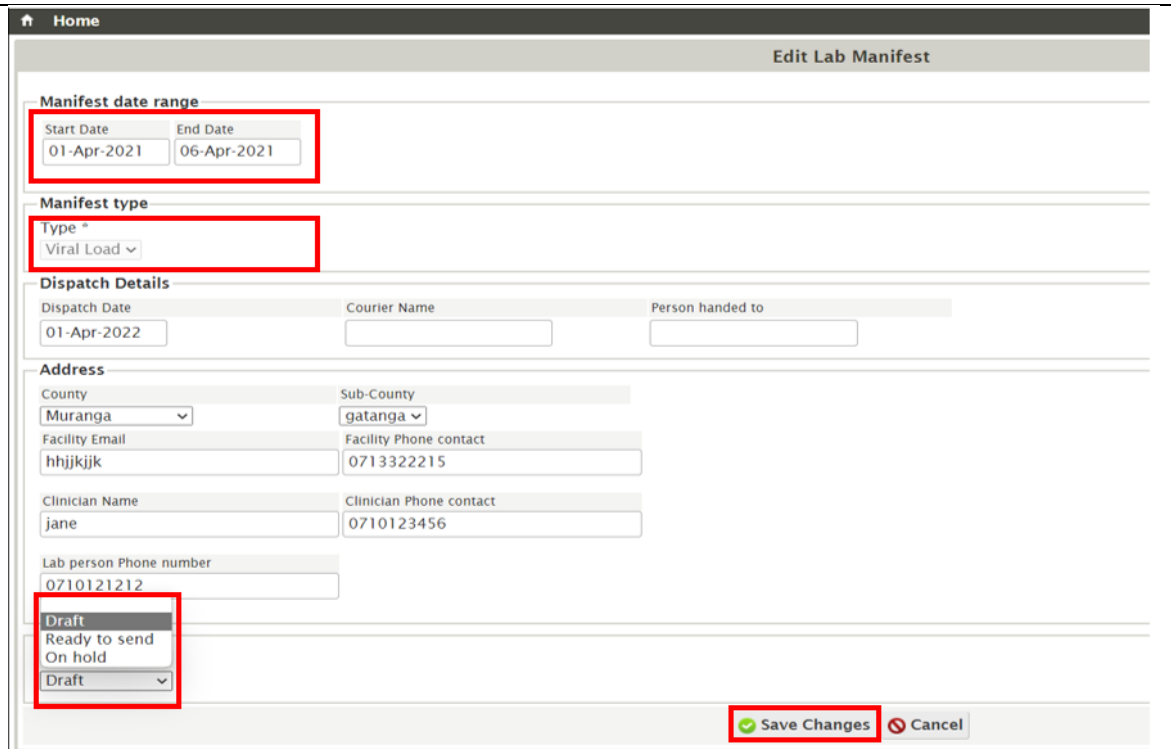
Ensure to add all patients for whom samples are ready for dispatch.	

1302804325	04-Dec-2020	Add to manifest
1302806972	08-Dec-2020	Add to manifest
1302802722	02-Dec-2020	Add to manifest
1302803475	15-Dec-2020	Add to manifest
1302803704	15-Dec-2020	Add to manifest
1302804574	04-Dec-2020	Add to manifest
1302807096	09-Dec-2020	Add to manifest
1302800346	02-Dec-2020	Add to manifest
1687007993	08-Dec-2020	Add to manifest

Step 9: Sending the manifest requires changing the status of the manifest to **"Ready to send"** • Date Range – This is the range for which you will Viral Load samples have been collected and for which you require results to be returned. • Manifest Status – The status should be set to **"Ready to send"** • Save Changes	**Edit Lab Manifest** **Manifest date range** Start Date: 01-Apr-2021 End Date: 06-Apr-2021 **Manifest type** Type *: Viral Load **Dispatch Details** Dispatch Date: 01-Apr-2022 Courier Name: Person handed to: **Address** County: Muranga Sub-County: gatanga Facility Email: hhjjkjjk Facility Phone contact: 0713322215 Clinician Name: jane Clinician Phone contact: 0710123456 Lab person Phone number: 0710121212 Draft Ready to send On hold Draft ✅ Save Changes 🚫 Cancel
VIEWING RESULTS **Step 10:** Navigate to the Manifest list and click on view. If results are back the manifest status should read "Received Results" **Step 11:** View the Status of the individual samples noting the Status and Result columns	**Manifest list** ➕ Add new Manifest

Start Date	End Date	Courier	County/Sub-county	Facility Email	Facility Phone	Clinician name	Clinician contact	Lab person contact	Status	Dispatch	Action	
16-Mar-2021	18-Mar-2021	Test Courier	Kisumu / Seme	faclity@email.org	0711999999	Test provider	0711888888	0781000000	Draft	17-Mar-2021	View	Edit
16-Mar-2021	18-Mar-2021	Courier one	Bungoma / Bukusu	facility@email.com	0700000000	Clinician One	0711111111	0790111111	Submit	18-Mar-2021	View	

Manifest details

Start Date	End Date	Status	Dispatch Date
08-Dec-2020	10-Dec-2020	Received result	10-Dec-2020

Print Manifest

Samples in the manifest

Patient Name	CCC Number	Sample type	Date requested	Status	Result	Result Date	
christine mwamisi mbithe	2111700002	Frozen plasma	16-Mar-2021	Pending	Not ready		Remove Print Label
prudence kavosi ndeva	1848403457	Whole Blood	16-Mar-2021	Pending	Not ready		Remove Print Label

Active requests

Patient Name	CCC Number	Date requested

END