

DWAPI Data Transmission SOP

[Last updated: August 2025]

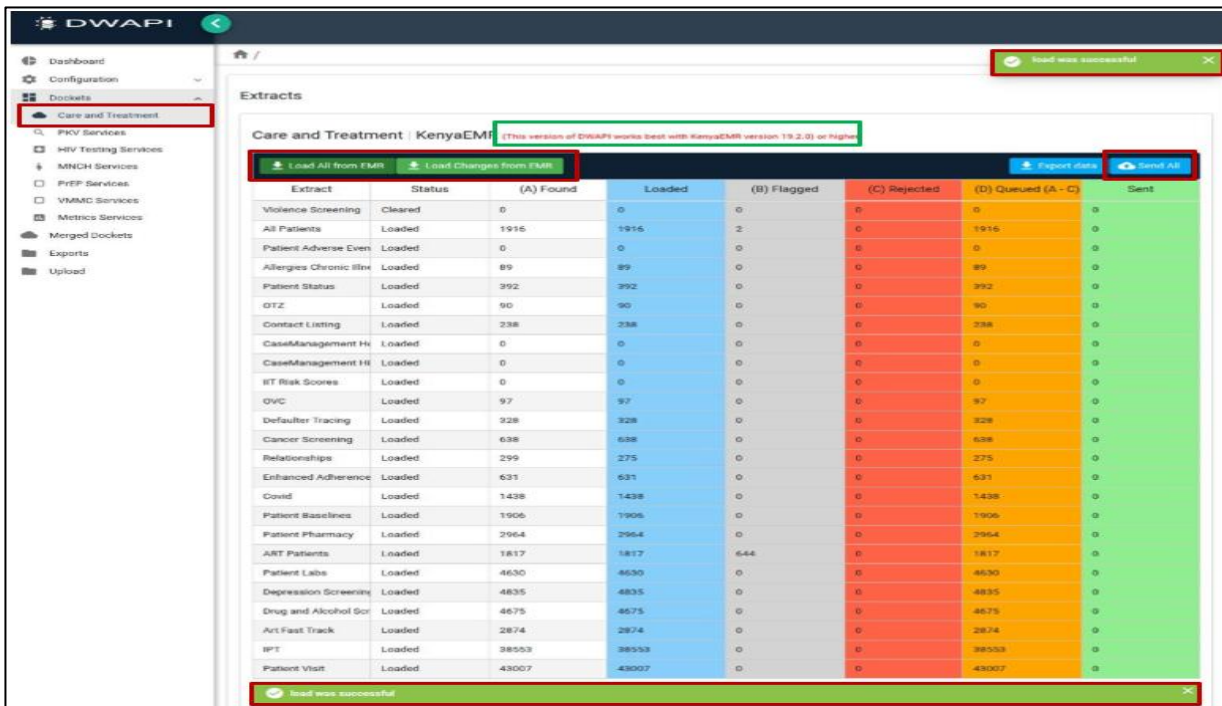
TASK:	Load and send data from the docketets
OBJECTIVE:	How to use DWAPI for differential uploads and sending data to the National Data Warehouse
WHO:	Clinicians/Data Staff
REQUIRED MATERIALS:	Functional DWAPI v 3.1.x and above, Functional TaifaCare EMR Version 19.2.0 and above, Internet Connectivity
SUMMARY: DWAPI is a cross-platform Data Warehouse API client tool designed to connect to EMRs at facility level. It can connect different types of EMR databases supported by PEPFAR to extract data on Care & Treatment and HIV testing. The datasets contain data elements collected by the different program tools and implemented by the EMR. DWAPI runs data quality checks on the data and provides feedback to users. It also Identifies possible duplicate patient records in the EMR and notifies user for rectification. Finally, it provides a secure transmission channel to DWH over the internet.	
UNDERSTANDING DWAPI DASHBOARDS DWAPI provides a comprehensive dashboard that highlights various indicators and metrics about the database and the data extracted in general. These include: • Quality indicators • EMR indicators • DWAPI Metrics • Database connection properties • DWAPI Version The dashboard gives deeper insight into the data being uploaded into NDW and provides better opportunity to take corrective actions where inconsistencies are identified.	

SECTION 1: UNDERSTANDING DWAPI DASHBOARD

Action	Screen shot																									
Quality Indicators - A summary of quality checks is provided under the dashboard to show the status of selected quality indicators. - Green status signifies no user intervention required. - Red status requires urgent attention by the user.	Quality Indicators <table><tr><th>Indicator</th><th>Status</th><th>Checked</th></tr><tr><td>Last EMR Login date</td><td></td><td></td></tr><tr><td>MFL Codes in the database</td><td>Your MFL code is 14081</td><td>15 hours ago</td></tr><tr><td>Last EMR Encounter create date</td><td>You may be uploading an old database. The last EMR encounter create date is 43 days ago. Please confirm you have the latest database.</td><td>15 hours ago</td></tr><tr><td>Last EMR ETL Refresh date</td><td></td><td></td></tr><tr><td>Current on ART</td><td>Your current on ART is 3600</td><td>15 hours ago</td></tr><tr><td>DWAPI Application Version</td><td>You are using the latest version of DWAPI</td><td>15 hours ago</td></tr></table>	Indicator	Status	Checked	Last EMR Login date			MFL Codes in the database	Your MFL code is 14081	15 hours ago	Last EMR Encounter create date	You may be uploading an old database. The last EMR encounter create date is 43 days ago. Please confirm you have the latest database.	15 hours ago	Last EMR ETL Refresh date			Current on ART	Your current on ART is 3600	15 hours ago	DWAPI Application Version	You are using the latest version of DWAPI	15 hours ago				
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DWAPI Application Version	You are using the latest version of DWAPI	15 hours ago																								
EMR Indicators - DWAPI performs basic analysis on selected EMR indicators for the loaded database. The indicators include: HTS, C&T, Retention, last recorded encounter date and the facility MFL code. - Users should verify the values under each indicator for concordance	EMR Indicators <table><tr><th>Indicator</th><th>Value</th><th>Description</th><th>Status</th><th>Period</th></tr><tr><td>HTS TESTED</td><td>16</td><td>Individuals who received a HIV test. Computation : Count of all individuals who received HIV Testing Services (HTS) and received their test results in a given month</td><td>Checked</td><td>Apr 30, 2021</td></tr><tr><td>HTS TESTED POS</td><td>10</td><td>Individuals who tested positive during a HIV test. Computation: Count of all individuals with a positive in a given month</td><td>Checked</td><td>Apr 30, 2021</td></tr><tr><td>HTS INDEX</td><td>1</td><td>Individuals who were identified and tested using Index Testing Services (PNS or contact tracing) and received their results. Computation: Count of all individuals identified and tested using Index Testing Services in a given month</td><td>Checked</td><td>Apr 30, 2021</td></tr><tr><td></td><td></td><td>Individuals who tested</td><td></td><td></td></tr></table>	Indicator	Value	Description	Status	Period	HTS TESTED	16	Individuals who received a HIV test. Computation : Count of all individuals who received HIV Testing Services (HTS) and received their test results in a given month	Checked	Apr 30, 2021	HTS TESTED POS	10	Individuals who tested positive during a HIV test. Computation: Count of all individuals with a positive in a given month	Checked	Apr 30, 2021	HTS INDEX	1	Individuals who were identified and tested using Index Testing Services (PNS or contact tracing) and received their results. Computation: Count of all individuals identified and tested using Index Testing Services in a given month	Checked	Apr 30, 2021			Individuals who tested		
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DWAPI Metrics This acts as facility DWH upload log to indicate which dockets were loaded and which ones were sent to DWH.	DWAPI Metrics <table><thead><tr><th>Docket</th><th>Activity</th><th></th></tr></thead><tbody><tr><td>Care and Treatment</td><td>Loaded</td><td>6 days ago</td></tr><tr><td>Care and Treatment</td><td>Sent</td><td>6 days ago</td></tr><tr><td>HIV Testing Services</td><td>Loaded</td><td>6 days ago</td></tr><tr><td>HIV Testing Services</td><td>Sent</td><td>6 days ago</td></tr><tr><td>PKV Services</td><td>Loaded</td><td></td></tr><tr><td>PKV Services</td><td>Sent</td><td></td></tr></tbody></table>	Docket	Activity		Care and Treatment	Loaded	6 days ago	Care and Treatment	Sent	6 days ago	HIV Testing Services	Loaded	6 days ago	HIV Testing Services	Sent	6 days ago	PKV Services	Loaded		PKV Services	Sent	
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PKV Services	Sent																					
DWAPI Database connection properties: A set of database connection properties that DWAPI relies on to connect to create and access its database. For more information refer to DWAPI configuration SOP	DWAPI Database Connection Database Provider MySQL Server 172.17.0.1 Port 3306 User dwapi Password ***** Verify Server Verify Database Save DWAPI v3.1.07 help@palladiumgroup.on.spiceworks.com 0800-722440																					

SECTION 2: DATA EXTRACTION AND UPLOAD PROCESS

Action	Screen shot
DWAPI DOCKETS It is important to extract and submit datasets from all the datasets.	KEY: - Care and treatment: Extract and send HIV related datasets. - PKV Services: Extracts and submits patient unique identifiers (patient Key Values) - HIV Testing Services: Extracts and submits all HTS related datasets. - MNCH Services: Extracts and submit MNCH related datasets - PrEP Services: Extracts and submits PrEP datasets - VMMC Services: Extracts and submits VMMC datasets - Metric Services:
Loading and sending Care and Treatment Data Step 1: Navigate to Dockets and expand the menu. Step 2: Click on Care and Treatment Step 3: Click on Load from EMR Step 4-8: Review the validations and if corrections are needed kindly do them as per the flagged column. Step 9: Click on “ Send All ” Step 10: Review the sent column	

Loading and Sending Master Patient Index Data

Step 1:

Navigate to Dockets and expand the menu.

Step 2:

Click on **Master Patient Index**

Step 3:

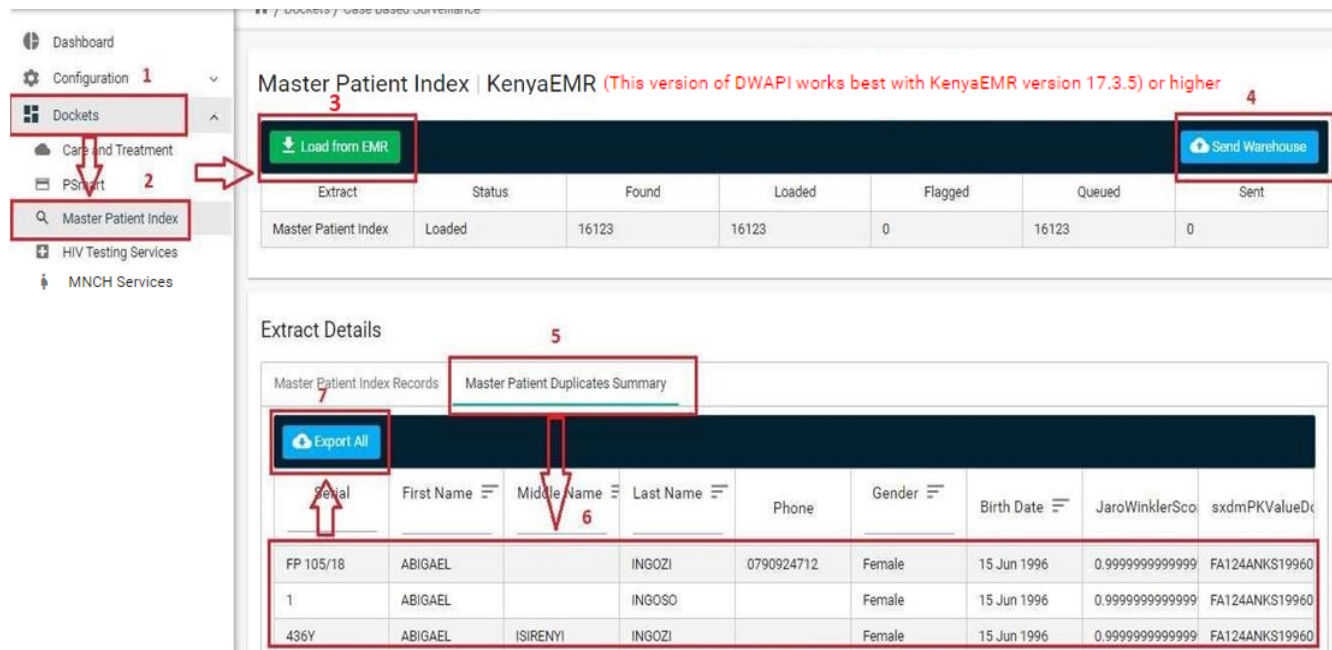
Click on **Load from EMR**

Step 4:

Click on **"Send All"**

Step 5-7:

From the validation summary, review any possible duplicates and export the list to excel for onward cleaning.



Master Patient Index | KenyaEMR (This version of DWAPI works best with KenyaEMR version 17.3.5) or higher

Annotations:

- 1: Configuration menu item
- 2: Master Patient Index menu item
- 3: Load from EMR button
- 4: Send Warehouse button
- 5: Master Patient Duplicates Summary tab
- 6: Middle Name column header
- 7: Export All button

Extract	Status	Found	Loaded	Flagged	Queued	Sent
Master Patient Index	Loaded	16123	16123	0	16123	0

Extract Details

Master Patient Index Records | Master Patient Duplicates Summary

Serial	First Name	Middle Name	Last Name	Phone	Gender	Birth Date	JaroWinklerSco	sxdmPKValueDc
FP 105/18	ABIGAEL		INGOZI	0790924712	Female	15 Jun 1996	0.999999999999	FA124ANKS19960
1	ABIGAEL		INGOSO		Female	15 Jun 1996	0.999999999999	FA124ANKS19960
436Y	ABIGAEL	ISIRENYI	INGOZI		Female	15 Jun 1996	0.999999999999	FA124ANKS19960

Loading and Sending HIV Testing Services Data

Step 1:

Navigate to Dockets and expand the menu.

Step 2:

Click on **HIV Testing Services**

Step 3:

Click on **Load from EMR**

Step 4-8:

Review the validations and if corrections are needed kindly do them as per the flagged column.

Step 9:

Click on Send **"Send All"**

Step 10:

Review the sent column

Extracts

HIV Testing Services | KenyaEMR (This version of DWAPI works best with KenyaEMR version 17.3.5) or higher

3 9

Load from EMR **Send to Warehouse**

Extract	Status	(A) Found	(B) Loaded	(C) Flagged	(D) Rejected	(E) Queued (A	10 Sent
Hts Clients	Loaded	7277	7277	0	0	7277	0
Hts Client Tests	Loaded	7295	7295	219	0	7295	0
Hts Client Linkage	Loaded	50	50	0	0	50	0
Hts Test Kits	Loaded	7297	7297	219	0	7297	0
Hts Client Tracing	Loaded	0	0	0	0	0	0
Hts Partner Tracing	Loaded	0	0	0	0	0	0
Hts Partner Notification Services	Loaded	4	4	0	0	4	0

Loading and Sending MNCH Services Data

Step 1:

Navigate to Dockets and expand the menu.

Step 2:

Click on **MNCH Services**

Step 3:

Click on **Load from EMR**

Step 4-8:

Review the validations and if corrections are needed kindly do them as per the flagged column.

Step 9:

Click on Send "Send All"

Step 10:

Review the sent column

- Dashboard
- Configuration
- 1 Dockets**
- Care and Treatment
- PKV Services
- HIV Testing Services
- 2 MNCH Services**

Extracts

MNCH Services | KenyaEMR (This version of DWAPI works best with KenyaEMR version 17.3.5) or higher

3 Load from EMR

9 Send to Warehouse

Extract	Status	4 (A) Found	5 Loaded	6 (B) Flagged	7 (C) Rejected	8 (D) Queued (A - C)	10 Sent
Mnch Patient	Loaded	124	124	0	0	124	0
Mnch Enrolment	Loaded	32	32	0	0	32	0
Mnch Art	Loaded	124	124	0	0	124	0
Anc Visit	Loaded	0	0	0	0	0	0
Mat Visit	Loaded	0	0	0	0	0	0
Pnc Visit	Loaded	0	0	0	0	0	0
Mother Baby Pair	Loaded	0	0	0	0	0	0
Cwc Enrolment	Loaded	0	0	0	0	0	0
Cwc Visit	Loaded	9	9	0	0	9	0
Hei	Cleared	0	0	0	0	0	0
Mnch Labs	Loading	558	0	0	0	0	0

Loading and Sending VMMC Services Data

Step 1:

Navigate to Dockets and expand the menu.

Step 2:

Click on **VMMC Services**

Step 3:

Click on **Load from EMR**

Step 4-8:

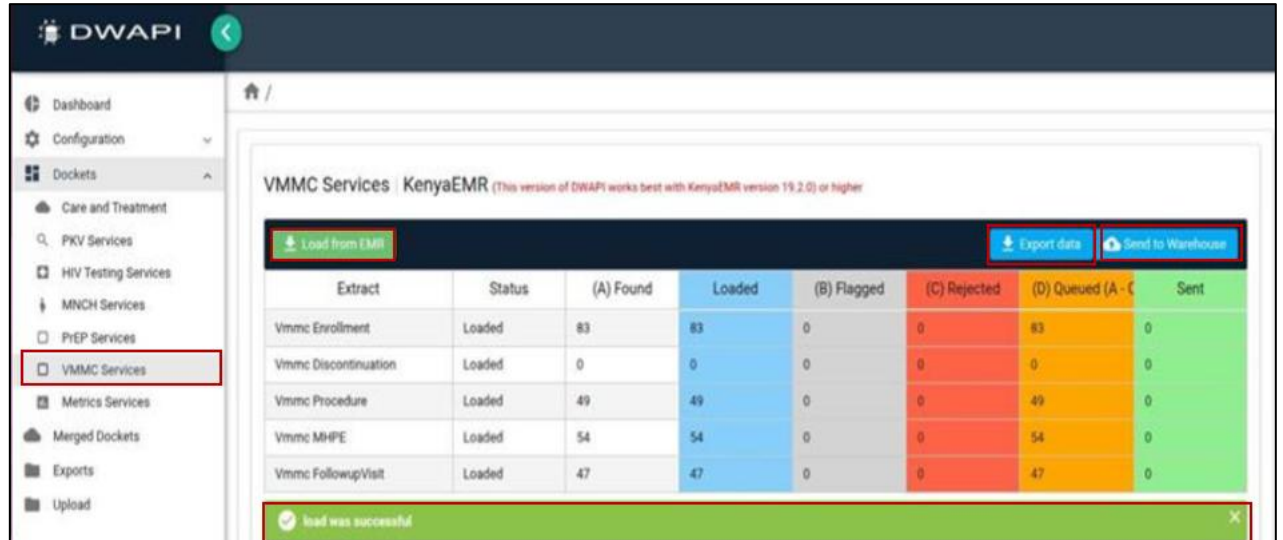
Review the validations and if corrections are needed kindly do them as per the flagged column.

Step 9:

Click on Send **"Send All"**

Step 10:

Review the sent column



DWAPI <

Dashboard
Configuration
Dockets
Care and Treatment
PKV Services
HIV Testing Services
MNCH Services
PrEP Services
VMMC Services
Metrics Services
Merged Dockets
Exports
Upload

VMMC Services KenyaEMR (This version of DWAPI works best with KenyaEMR version 19.2.0) or higher

Load from EMR Export data Send to Warehouse

Extract	Status	(A) Found	Loaded	(B) Flagged	(C) Rejected	(D) Queued (A - C)	Sent
Vmmc Enrollment	Loaded	83	83	0	0	83	0
Vmmc Discontinuation	Loaded	0	0	0	0	0	0
Vmmc Procedure	Loaded	49	49	0	0	49	0
Vmmc MHPE	Loaded	54	54	0	0	54	0
Vmmc Followup/Visit	Loaded	47	47	0	0	47	0

load was successful

Loading and Sending PrEP Services Data

Step 1:

Navigate to Dockets and expand the menu.

Step 2:

Click on **PrEP Services**

Step 3:

Click on **Load from EMR**

Step 4-8:

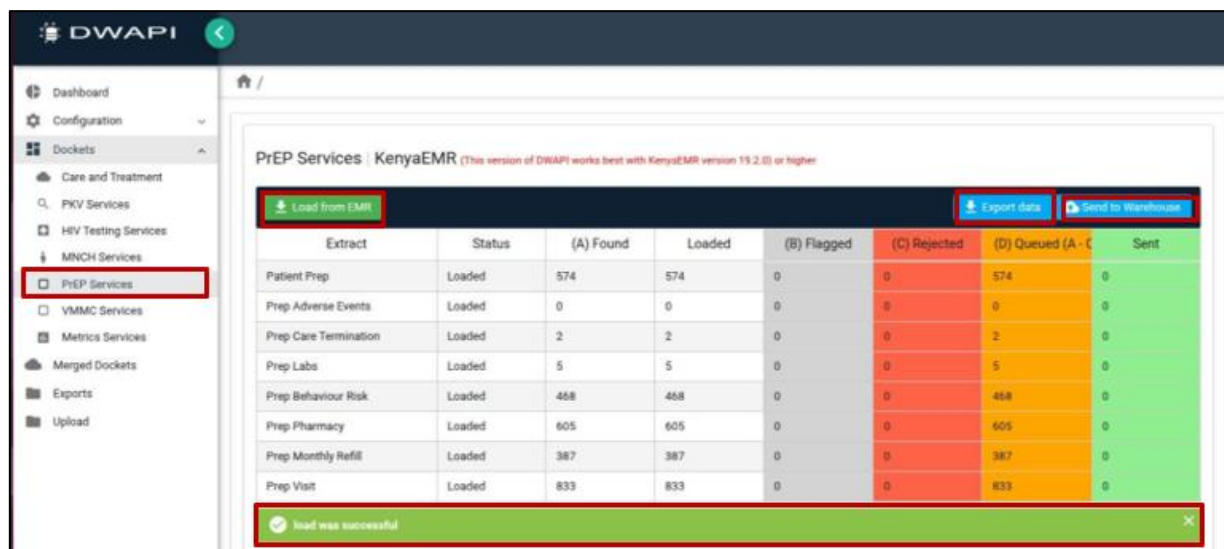
Review the validations and if corrections are needed kindly do them as per the flagged column.

Step 9:

Click on Send "Send All"

Step 10:

Review the sent column



The screenshot shows the DWAPI interface with the 'PrEP Services' menu item selected in the left sidebar. The main area displays a table titled 'PrEP Services: KenyaEMR' with columns: Extract, Status, (A) Found, Loaded, (B) Flagged, (C) Rejected, (D) Queued (A - C), and Sent. The table lists various services like Patient Prep, Prep Adverse Events, etc., with their respective counts. A 'Load from EMR' button is highlighted in the top left, and a 'Send to Warehouse' button is in the top right. A green banner at the bottom indicates 'Load was successful'.

Extract	Status	(A) Found	Loaded	(B) Flagged	(C) Rejected	(D) Queued (A - C)	Sent
Patient Prep	Loaded	574	574	0	0	574	0
Prep Adverse Events	Loaded	0	0	0	0	0	0
Prep Care Termination	Loaded	2	2	0	0	2	0
Prep Labs	Loaded	5	5	0	0	5	0
Prep Behaviour Risk	Loaded	468	468	0	0	468	0
Prep Pharmacy	Loaded	605	605	0	0	605	0
Prep Monthly Refill	Loaded	387	387	0	0	387	0
Prep Visit	Loaded	833	833	0	0	833	0

Dwapi Differential Uploads process

Step 1:

- On the left pane, select Care and treatment docket.
- Once the Care and Treatment option is selected, click load from EMR button to load care and treatment data and wait for the process to complete.
- Once loading is complete, a green flag will be displayed to notify you of successful Care and treatment data load and total number of records loaded will be displayed under Loaded.

NOTE:

For the Differential Upload feature to work effectively the following conditions have to be met:

- A facility has to Send All data atleast once before using the differnetial feature in subesequent uploads. This applies also to new KenyaEMR and DWAPI installations and Reinstallations.*
- ETL has to be recreated prior to extracting data into DWAPI*
- For offsite (boadroom) DWAPI uploads, ETL table MUST be recreated prior to data extraction into DWAPI.*
- REST Endpoints MUST be correctly set under KenyaEMR Protocols (see EMR settings)*

Step 2:

- Click on the send all button to upload the whole datasets to the National Datawarehouse (This is done during the initial/first time upload, after installation or upgrade of dwapi)

Step 3:

- Click on the load from EMR button under care and treatment Docket.
- Once the upload is done click on the send changes only button to upload part datasets.
- Only new or updated records in the EMR will be uploaded to the national data warehouse.

Care and Treatment | KenyaEMR (This version of DWAPI works best with KenyaEMR version 17.3.5) or higher

Load from EMR step 1 step 2 Send All Send Changes Only step 3							
Extract	Status	(A) Found	Loaded	(B) Flagged	(C) Rejected	(D) Queued (A - C)	Sent
All Patients	Sent	12591	12591	2	0	99	12492
ART Patients	Sent	10526	10526	1245	0	0	10526
Patient Baselines	Sent	12355	12355	0	0	0	12355
Patient Status	Sent	6976	6976	0	0	0	6976
Patient Labs	Sent	100395	100395	0	0	0	100395
Patient Pharmacy	Sent	30451	30451	0	0	0	30451
Patient Visit	Sent	709874	709874	0	0	0	709874
Patient Adverse Events	Sent	0	0	0	0	0	0

Differential loading for specific docket

Differential Loading for CT docket

Care and Treatment KenyaEMR (This version of EMR works best with KenyaEMR version 18.4 (1) or higher)

Extract	Status	(A) Found	Loaded	(B) Flagged	(C) Rejected	(D) Queued (A - C)	Sent
All Patients	Loaded	14765	14765	9	0	14765	0
OVC	Loaded	0	0	0	0	0	0
Defaulter Tracing	Loaded	0	0	0	0	0	0
OTZ	Loaded	0	0	0	0	0	0
Patient Adverse Events	Loaded	0	0	0	0	0	0
Contact Listing	Loaded	0	0	0	0	0	0
Enhanced Adherence C	Loaded	0	0	0	0	0	0
Depression Screening	Loaded	0	0	0	0	0	0
Covid	Loaded	0	0	0	0	0	0

Warning checks on Use of differential loading without initial all load and transmit

Care and Treatment KenyaEMR 18.3.0-SNAPSHOT (This version of EMR works best with KenyaEMR version 18.3.0 or higher)

Extract	Status	(A) Found	Loaded	(B) Flagged	(C) Rejected	(D) Queued (A - C)	Sent
All Patients	Loaded	3065	3065	2	0	3065	0
ART Patients	Loaded	2522	2522	1397	0	2522	0
Patient Baselines	Loaded	2752	2752	0	0	2752	0
Patient Status	Loaded	1666	1666	0	0	1666	0
Patient Labs	Loaded	11290	11294	0	0	11294	0
Patient Pharmacy	Loaded	11963	11923	0	0	11923	0
Patient Visit	Loaded	36333	36225	0	0	36225	0
Patient Adverse Ev	Loaded	0	0	0	0	0	0
Allergies Chronic Ill	Loaded	7	7	0	0	7	0

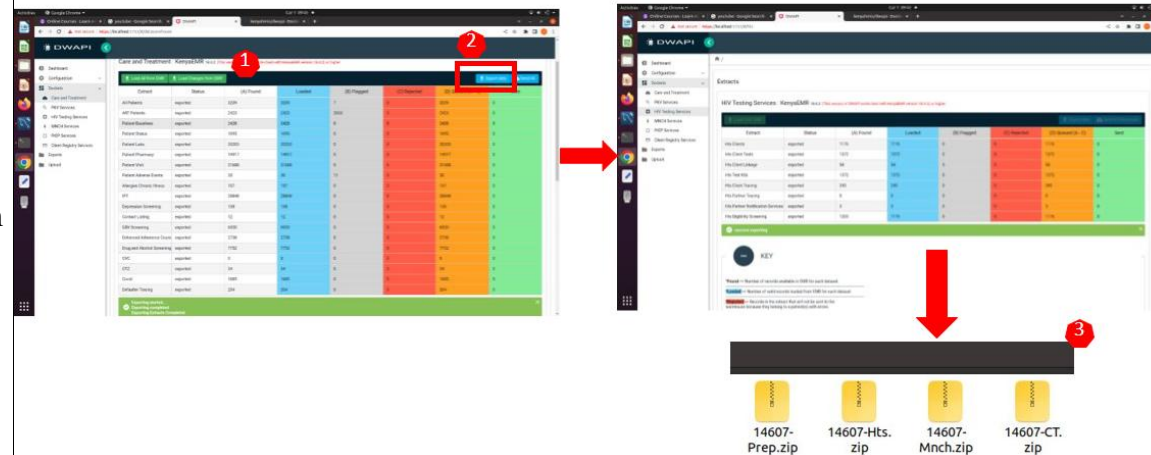
- Supports loading of changes only since the last transmission
- Reduces bandwidth required for DWH uploads
 - Saves internet bundles
 - Faster loading and transmission process
 - Reduces transmission of stale DBs
 - Promotes DWH uploads at facility level

Boardroom uploads

- Recommended for facilities without internet connectivity or where internet services are intermittent.
- Supports data loading at facility level while transmission can be done at a location with internet connectivity.
- Data Security is implemented both at rest and transmission.

Facilities that are unable to transmit data can use boardroom uploads where the extracts are first exported to a zip file.

DWAPI: Boardroom Uploads

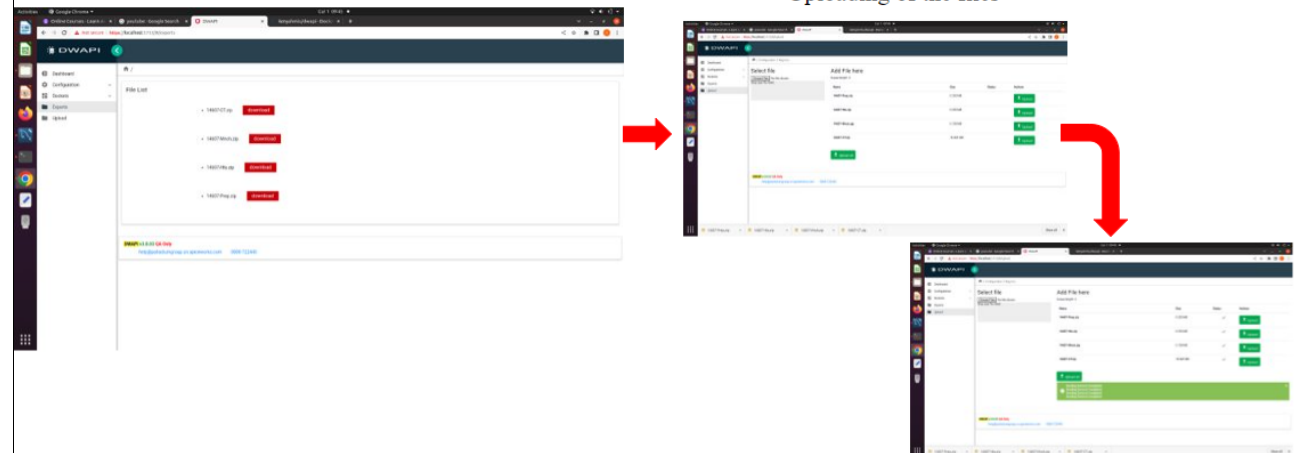


Boardroom upload process:

DWAPI : Boardroom Uploads

The files can then be picked by downloading the zip files

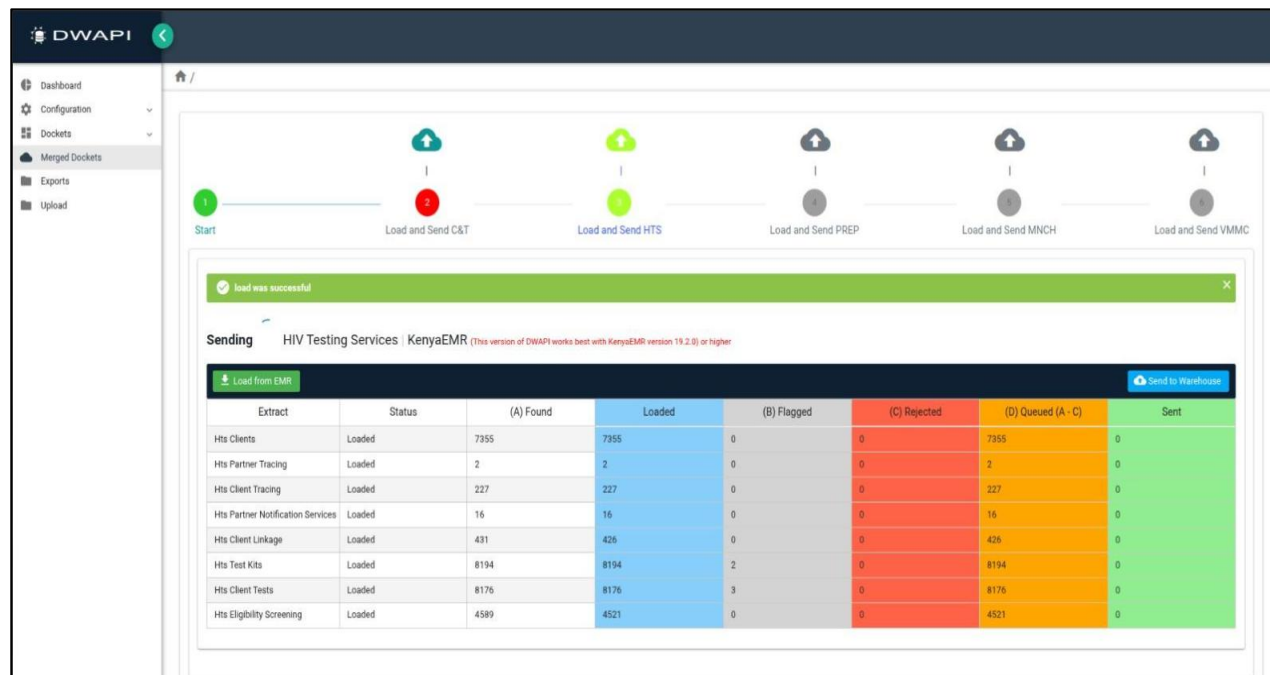
Uploading of the files



Merged Dockets Upload Process:

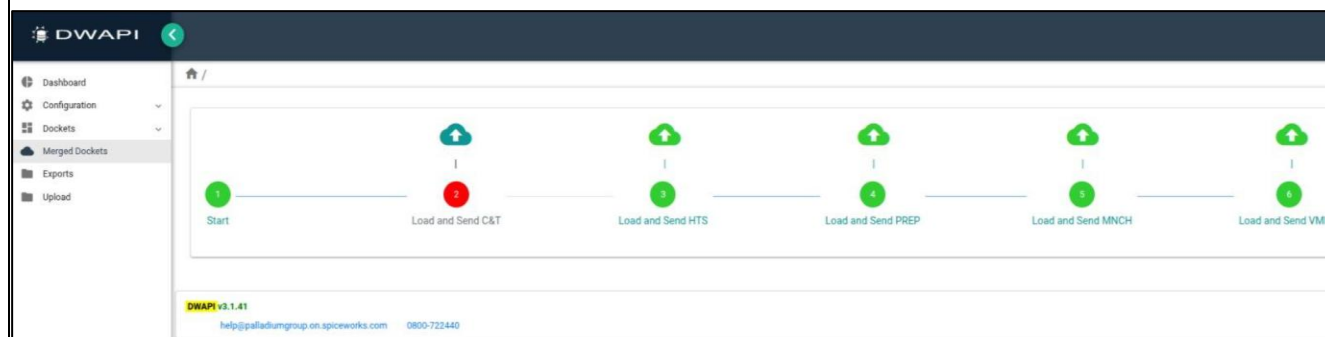
This supports unified loading and transmission of merged docket data.

- Supports data loading and transmission from a single click.
- Users can monitor the progress of each docket submission aided by an intuitive color-coding process.



The screenshot shows the DWAPI interface with a progress bar at the top. The progress bar has six steps: Start (green), Load and Send C&T (red), Load and Send HTS (green), Load and Send PREP (grey), Load and Send MNCH (grey), and Load and Send VMMC (grey). Below the progress bar, a green notification bar states "load was successful". The main content area is titled "Sending HIV Testing Services | KenyaEMR" and includes a table with the following data:

Extract	Status	(A) Found	Loaded	(B) Flagged	(C) Rejected	(D) Queued (A - C)	Sent
Hts Clients	Loaded	7355	7355	0	0	7355	0
Hts Partner Tracing	Loaded	2	2	0	0	2	0
Hts Client Tracing	Loaded	227	227	0	0	227	0
Hts Partner Notification Services	Loaded	16	16	0	0	16	0
Hts Client Linkage	Loaded	431	426	0	0	426	0
Hts Test Kits	Loaded	8194	8194	2	0	8194	0
Hts Client Tests	Loaded	8176	8176	3	0	8176	0
Hts Eligibility Screening	Loaded	4589	4521	0	0	4521	0



The screenshot shows the DWAPI interface with a progress bar at the top. The progress bar has six steps: Start (green), Load and Send C&T (red), Load and Send HTS (green), Load and Send PREP (green), Load and Send MNCH (green), and Load and Send VMMC (green). Below the progress bar, a yellow notification bar states "load was successful". The main content area is titled "Sending HIV Testing Services | KenyaEMR" and includes a table with the following data:

Extract	Status	(A) Found	Loaded	(B) Flagged	(C) Rejected	(D) Queued (A - C)	Sent
Hts Clients	Loaded	7355	7355	0	0	7355	0
Hts Partner Tracing	Loaded	2	2	0	0	2	0
Hts Client Tracing	Loaded	227	227	0	0	227	0
Hts Partner Notification Services	Loaded	16	16	0	0	16	0
Hts Client Linkage	Loaded	431	426	0	0	426	0
Hts Test Kits	Loaded	8194	8194	2	0	8194	0
Hts Client Tests	Loaded	8176	8176	3	0	8176	0
Hts Eligibility Screening	Loaded	4589	4521	0	0	4521	0

Data Extract Details (DQA)

Note: It is important to send all docket data whenever data is being uploaded to the Data Warehouse.

All flagged records should be cleaned. However, it does not prevent the user from sending data and continuously carrying out data cleaning.

For data cleaning processes, refer to Section 5 of the **DWAPI Data Cleaning Job Aid**

Extract Details

All PatientsART PatientsPatient BaselinesPatient StatusPatient LabsPatient PharmacyPatient Visits

File Extracts Navigation Panel

ART Patients RecordsART Patients Validation SummaryART Patients Send SummaryValidation Summary panel

Export

Extract	Field	Type	Summary	Date Generated	Patient PK	Facility Id	Patient ID
TempPatientArtExtracts	DOB	Logical	DOB greater than StartARTDate	2018-09-10T16:15:06.19	1908	754	4437
TempPatientArtExtracts	StartARTDate	Logical	StartARTDate after last visit date	2018-09-10T16:15:06.383	73505	754	13028-07037
TempPatientArtExtracts	StartARTDate	Logical	StartARTDate before patient registered	2018-09-10T16:15:06.413	71495	754	13028-07003

<< < 1 2 3 4 5 > >>

THE END