ELECTRONIC

case-based surveillance system

USERS STEP-BY-STEP GUIDE

MILDRED

Let your data tell the story.
System built just for you.

1 CONTENTS

2 System Overview

The electronic case-based surveillance system holds two independent systems.

1. A Training and Education Resource Portal (TERP).

2. A Patient Management and Reporting System (PMRS).

The **training and education resource portal** uses role-based authentication and authorization. Meaning that a user assigned a role can access all the functionalities of that role.

There are four main modules of the training portal defined as roles

- ***Developer:*** The functionalities within this role control users' account creation and management, training workshop creation, and supervision.

- ***Facilitator:*** The Facilitator can upload training resources, write training notes, create training announcements, create a training schedule, create participants' schedules, grant session access to participants, host live training sessions, create and proctor assessments, and grade assessments, and provide feedback.

- ***Guest***: The functionalities within this role allow users to join a live session, watch recorded sessions, and access training workshop resources and announcements.

- ***Participant***: The functionalities within this role allow users to join a live session, watch recorded sessions, take an assessment, view assessment feedback, and access training workshop resources and announcements.

The **Patient Management and Reporting System** uses role-based authentication and permission-based authorization. There are three main modules of this system defined as roles.

- ***Administration***: Functionalities within this role are consistent with the job description of I.T. staff, administrators, and

supervisors. Permission exists for user account creation and management, system configuration, client's address change, risk and pregnancy history tracking, and supervision of data entry.

- *Screenings and Management:* Functionalities within this role are best suited for VCT providers, Laboratories, STI / IDC Care and Management Clinic Team, ANC clinics, central medical stores, pharmacies, counselors, and Hospitals.

- *Monitoring and Reporting:* Functionalities within this role are best suited for surveillance officers and statisticians. The system automatically analyzes all data collected in real-time, creating visual reports of aggregated and disaggregated data.

The three roles of the patient management and reporting system consist of fine-grained permissions that allow or restrict users' access to a group of related functionalities.

3 Getting Started Information

Users should receive an activation email on account creation (Figures 1 and 2). The email holds the activation/password setting link (Figures 3 and 4). Check the spam before contacting the supervisor if an email is not received.

Users must access the email for the following reasons:

1. The activation email allows users to set their password; without the password, users cannot log into the system.

2a. The activation link also holds the confidentiality agreement for the Patient Management and Reporting System. Sign the confidentiality agreement electronically by selecting the 'I agree' option and create your password before accessing the patient system (Figure 5).

2b. The activation link holds the password setting form for the training portal. Create a password click on continue to set the password and activate the account (Figure 6).

To log in to the ***patient management and reporting system***, click the icon at the top-right of the home page to reveal the log-in link (Figure 7). Click on the 'Login to Patient Management & Reporting System.' Fill out the Log-in form in the content area with the email address and the password set on account activation (Figure 8).

4 Account Activation and Password setting

All users should get an activation email (Figures 1 and 2). The email contains a link (Figures 3 and 4) to sign the confidentiality agreement (for the patient management system only) and set the password (Figures 5 and 6). This process activates the user's account. On successful activation, the system redirects the user to the log-in page.

To log in to the ***training portal***, click the icon at the top-right of the home page to reveal the log-in link (Figure 7). Click on the 'Log-in to Training.' Fill out the Log-in form in the content area with the email address and the password set on account activation (Figure 9).

4.1 Account Activation

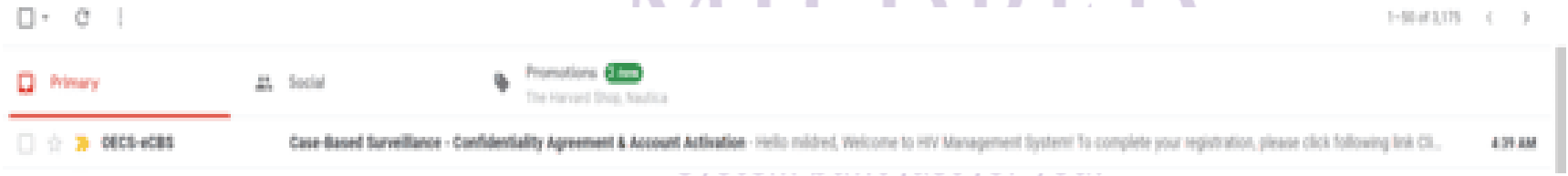


Figure 1: Image of the account activation email received from the patient management and reporting system

Figure 2: Image of the account activation email received from the training portal

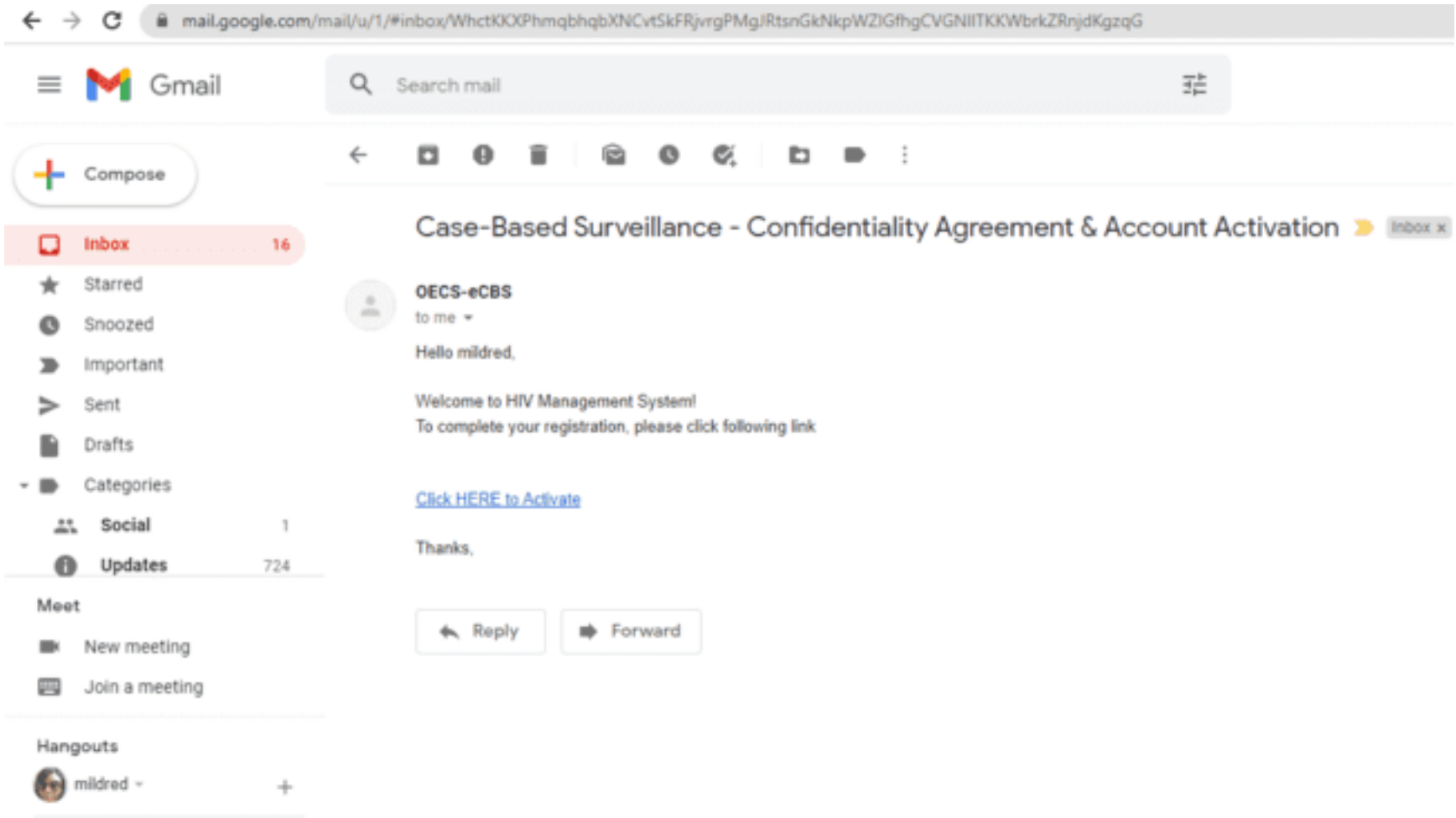


Figure 3: Image of the content of the activation email, showing the link to activate the account for the patient management and reporting system.

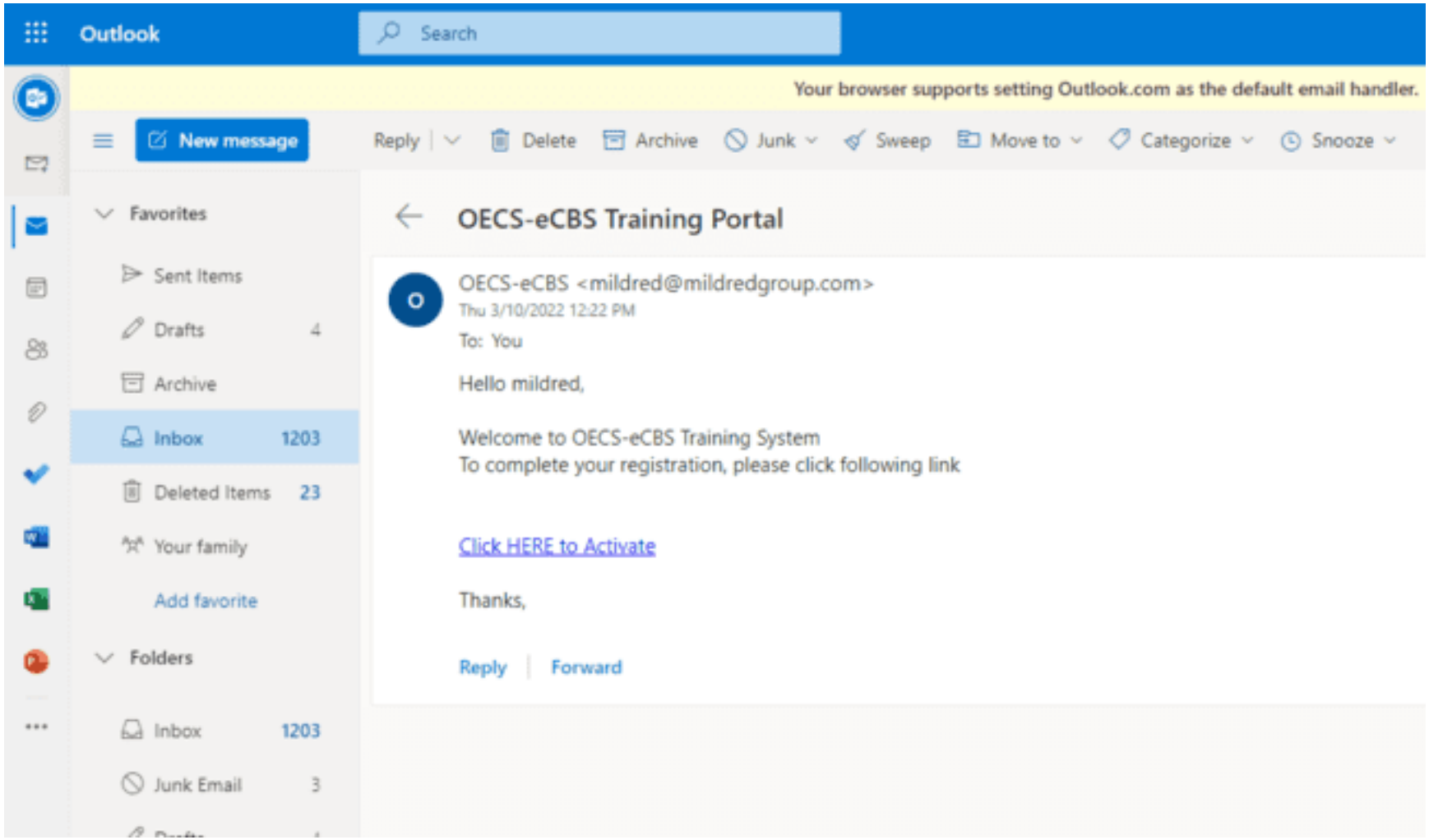


Figure 4: Image of the content of the account activation email showing the link to activate the account for the training system.

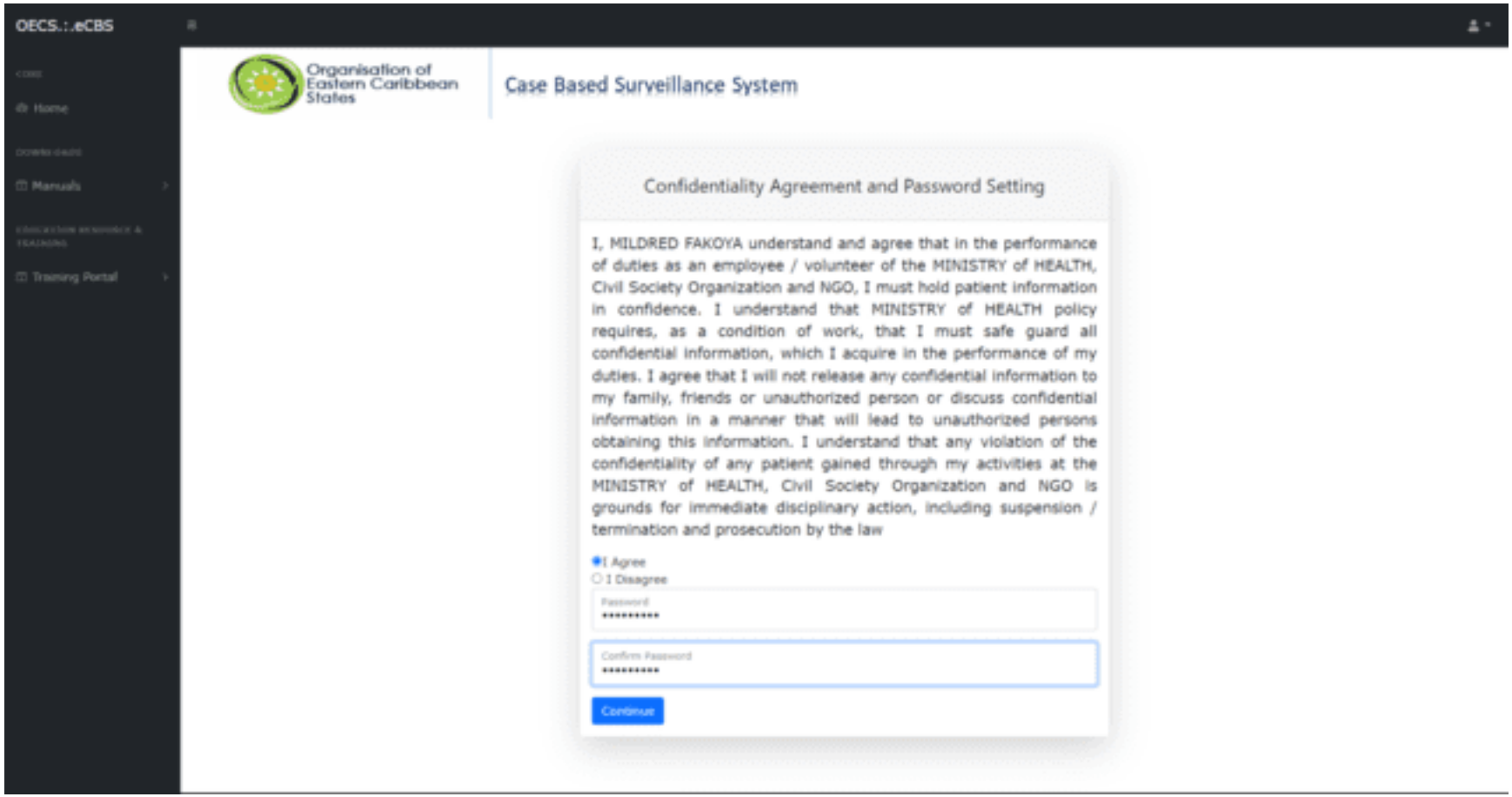


Figure 5: Image of the page after clicking on the account activation link for the patient management and reporting system

NOTE: The system does not enforce password criteria. It is up to the user to create a secured and strong password, and users can use sentences backward to form a strong password as a suggestion. Using the same password across systems is not a good idea, and it subjects the system users' security to the weakest link's security failures.

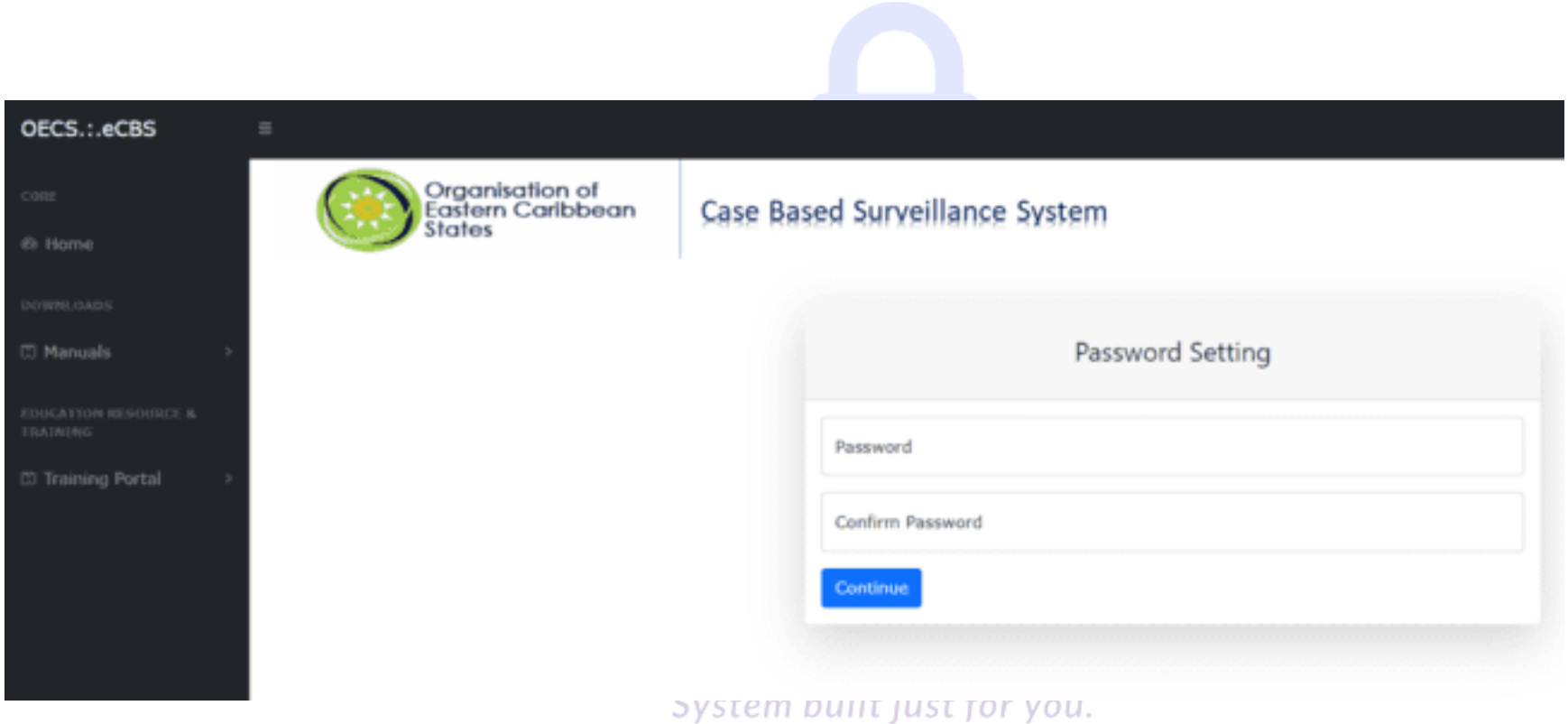


Figure 6: Image of the page after clicking the account activation link for the training portal. Create a password and click continue to activate the account.

4.2 Log in to the system

At the top-right corner of the home page is the user icon. Click on the icon to reveal the menu. The menu holds the links to Login to Patient Management & Reporting System and Login to Training (Figure 7).

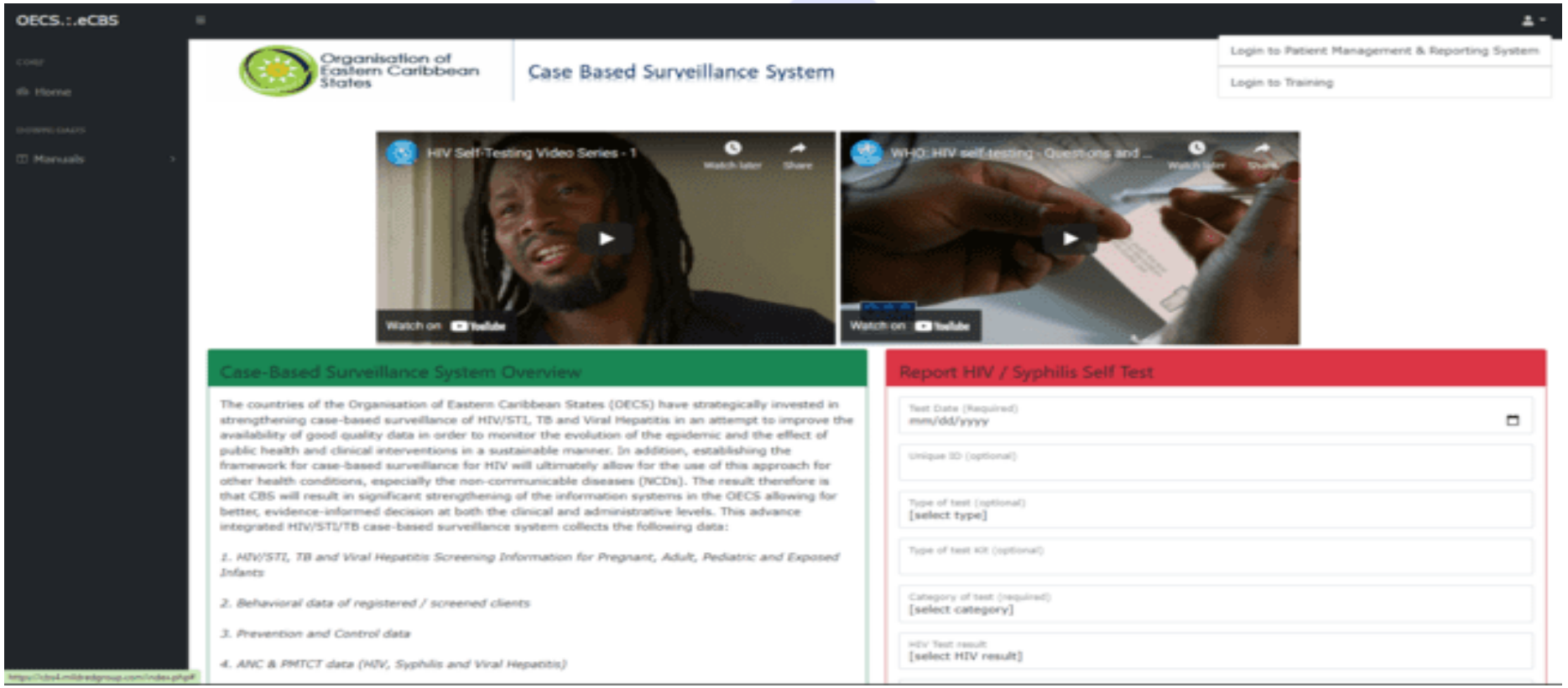


Figure 7: Image of the home page showing the log-in links at the top-right of the page and a form where clients can report their self-test results.

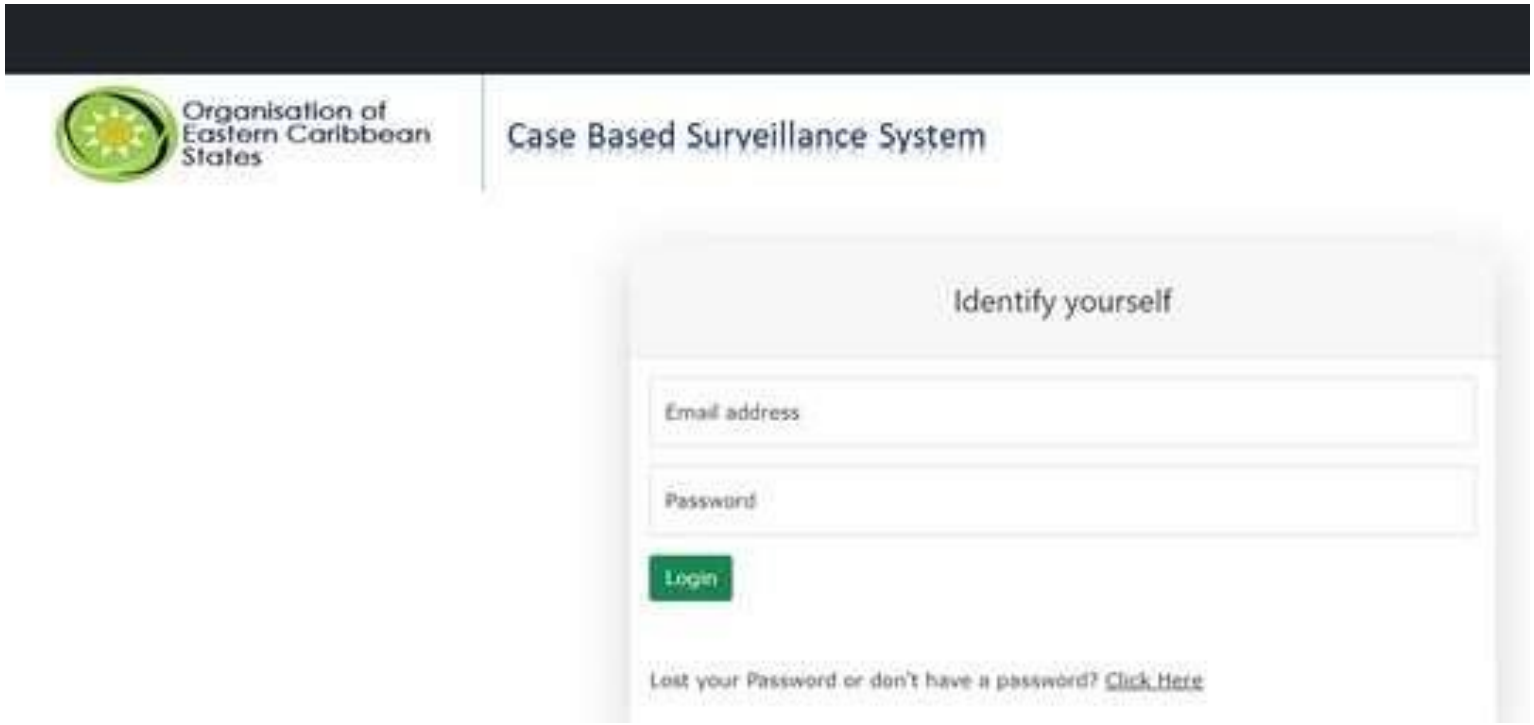


Figure 8: Image of the 'login to patient management and reporting system' page

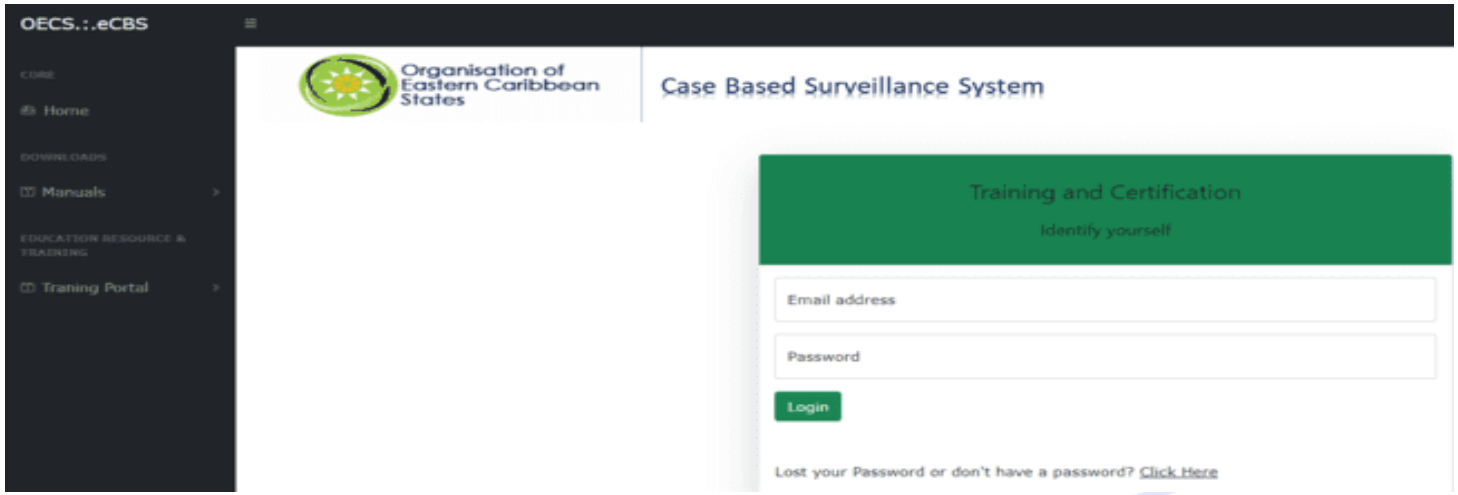


Figure 9: Image of the 'login to training' page

4.3 PASSWORD RESET

The Log-in page holds the forgotten password page link (Figure 10). When a user clicks on this link, enters the email, and clicks on the send link button (Figure 11), the system sends an email to the email entered (if valid). The email contains the password reset link. Click on the link and enter the new password.

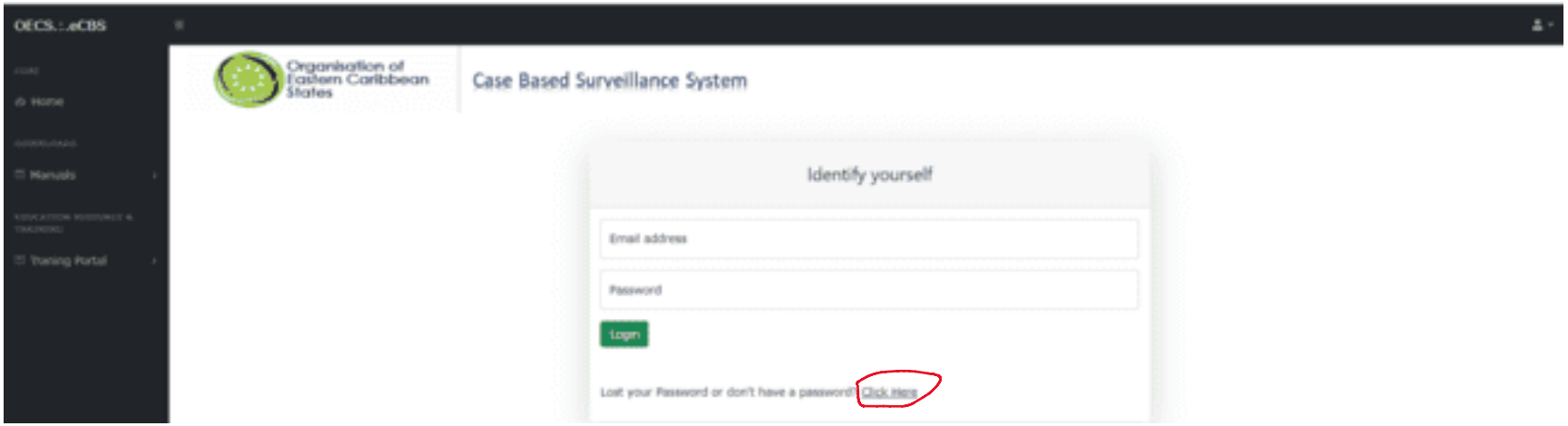


Figure 10: Image showing a link to reset the password for the patient management and reporting system - circled in red

Do not use the password reset link before account activation.

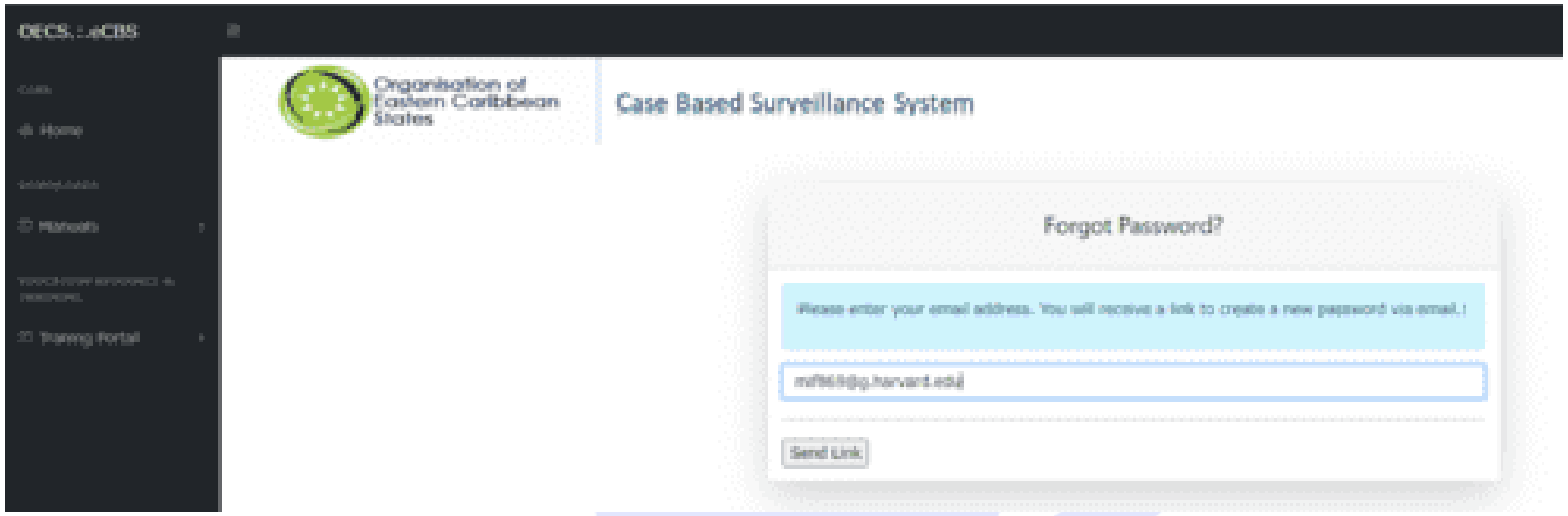


Figure 11: Image of the password reset page after clicking on the forgot password link from image 10

This process is the same for the Training portal.

Note that the password resets for both systems are different. If users use the reset on the Patient Management & Reporting System, the reset applies only to that system. The password change applies only to that system if users use the reset on the Training portal log-in form.

5 PATIENT MANAGEMENT & REPORTING SYSTEM

After successful authentication (login), the authorization process begins. The functionalities available to the user depend on the permission(s) granted. On successful login to the Patient Management and Reporting System, the user is redirected to the home page of their assigned role.

5.1 THE ADMINISTRATION ROLE

The administration role holds functionalities for system configuration, user account creation and management, supervision, client history tracking, and client account retrieval. This role is best suited for I.T. staff, superusers, and supervisors. A user assigned this role is authenticated and redirected to the administration homepage of the system. The system checks the permissions assigned to the authenticated user and authorizes their respective functionalities based on the permissions.

5.1.1 The Administration Role Permissions

system_configuration: This permission allows a user to configure the system with dynamic variables before initial system use and update the information as they change in the future. It also holds the forms for entry of surveillance supporting variables. All users assigned this permission can access a Configuration sub-menu included in the Pages menu Items.

user_account: This permission allows a user to create a user's account, manage users' accounts (view account info, update account info, grant and revoke permissions), register a pharmacist, retrieve the client's missing unique I.D., update the client's personal information and assign users to a site.

supervise_screenings: This permission allows supervisors to supervise data entry per site and get exportable tables of reports on pending care registration, list of clients in care, all T.B., HIV, Syphilis, and other routine screening recorded on the system, all ANC - HIV, T.B., Syphilis, Hepatitis, and other screenings, all exposed infant screenings, and registration information, and all prevention materials distributed(self-test result recorded, self-test kits given, condoms given).

history_tracking: This permission allows a user to track a client's screenings and pregnancy and address change histories.

5.1.2 The Administration Role Functionalities

The left side menu on the administration home page holds the manuals and links to functionalities. This role has four permissions, linking to a group of related functionalities. A user's log-in authenticates a user to the home page of their assigned role; permission authorizes the user to perform the functionalities controlled by the permissions.

5.1.2.1 Configuration

For all users granted the system_configuration permission, expanding the pages menu reveals a Configuration sub-menu.

The Configuration sub-menu, when expanded, reveals links to do the following:

a. Testing and Management sites: Create/update all the testing and management sites/hospitals/clinics for HIV, T.B., Viral Hepatitis, ANC, and other STIs.

The configuration menu's testing and management sites sub-menu links to a page that holds the creation update and delete form.

On the left of the main content is a form to create new sites. Use the 'Add Row' button to add new rows. After adding the

sites, click the 'Save' button to save all the entries. To the page's right is a form that lists all the saved sites for update/delete. (See figure 12). Deleting an entry should be the last option due to the undesirable effect it might produce.

To update an entry, make the changes in the field and click on the green edit button. Click on the red trash sign beside the row to delete the entry. This should be done a row at a time.

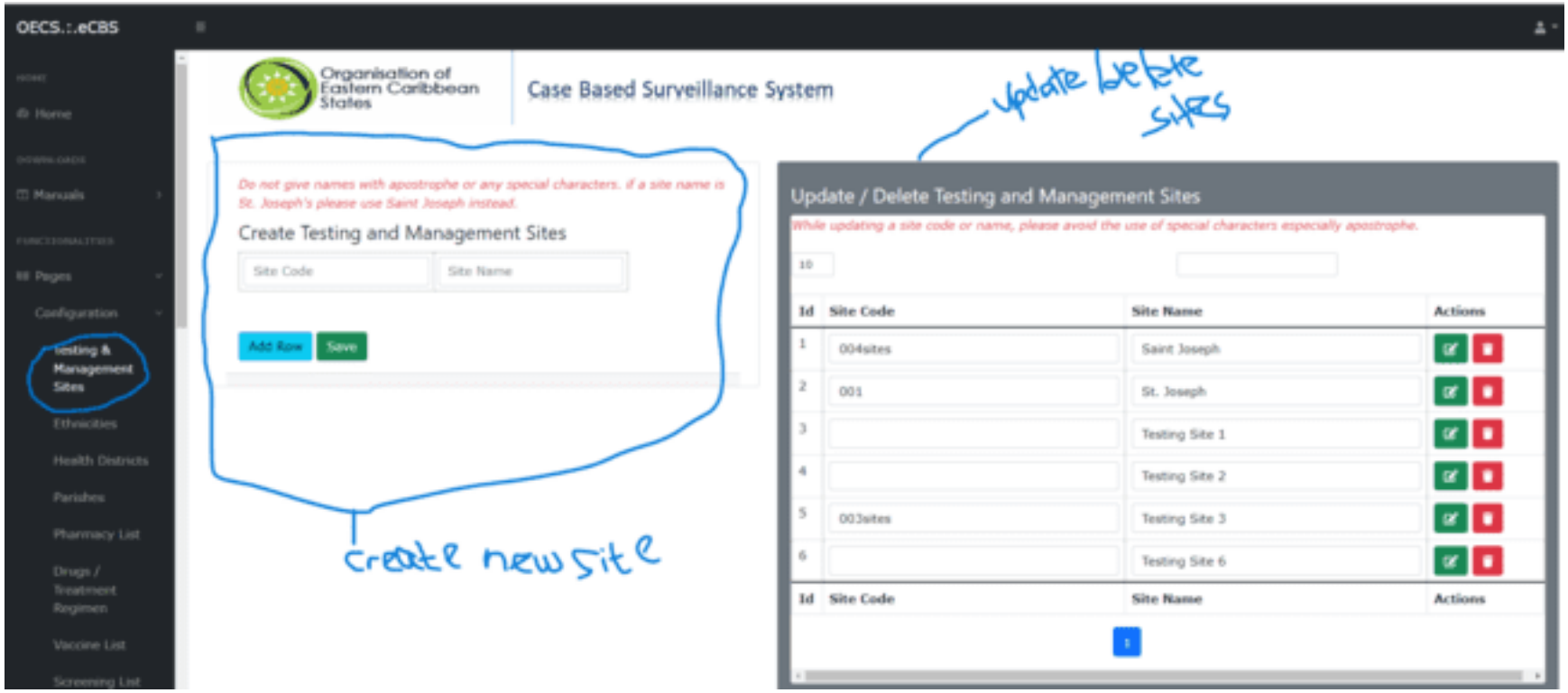


Figure 12: Image showing the testing and management site configuration page

b. **Ethnicities:** Create/update all the recognized ethnicities in the country.

The creation, update and delete of ethnicities follow the same pattern as the testing and management sites. Click on the Ethnicities sub-menu of the configuration menu to display the page similar to the testing and management sites and follow the same procedure.

c. **Health District:** Create/update all the health districts in the country.

Health districts' creation, update and delete follow the same pattern as the testing and management sites. Click on the Health District sub-menu of the configuration menu to display the page similar to the testing and management sites and follow the same procedure.

d. **Parishes:** The creation, update and delete of Parishes follow the same pattern as the testing and management sites. Click on the Parishes sub-menu of the configuration menu to display the page similar to the testing and management sites and follow the same procedure.

e. **Gender identity list:** The creation, update and delete of gender identity follow the same pattern as the testing and management sites. Click on the Gender Identity List sub-menu of the configuration menu to display the page similar to the testing and management sites and follow the same procedure.

The following are the rest of the configuration links; they follow the same pattern as explained above.

f. **Pharmacy List:** Enter the names of all participating pharmacies in the country.

g. **Drugs/Treatment Regimen:** For the drug/treatment regimen, enter an exhaustive list of treatment options for

HIV, T.B., Syphilis, Viral Hepatitis, and other STDs. See the table below to guide the Drugs/Treatment list configuration.

Drug	Regimen
Isoniazid (INH)	First Line - TB
Rifampicin (RIF)	First Line - TB
Pyrazinamide (PZA)	First Line - TB
Ethambutol (EMB)	First Line - TB
Streptomycin (SM)	First Line - TB
Ofloxacin (OFX)	Second Line – TB
Levofloxacin (LEV)	Second Line – TB
Moxifloxacin (MOX)	Second Line – TB
Ciprofloxacin (CIP)	Second Line – TB
2HRZE	Intensive phase
4HR	Continuation phase
2HRZES + 1HRZE	Intensive phase
5HRE	Continuation phase
4HRE	Continuation phase
pyridoxine	Other medication

Gatifloxacin	Second line – TB
Kanamycin	Second line – TB
Prothionamide	Second line – TB
Clofazimine	Second line – TB
Amikacin	Second line – TB
Cycloserine	Second line – TB
Ethionamide	Second line – TB
Capreomycin	Second line – TB
Ethionamide / Prothionamide	Second line – TB
Cycloserine / Terizidone	Second line – TB
Linezolid	Second line – TB
Clofazimine	Second line – TB
Bedaquiline	Other Medication
Delamanid	Other Medication
p-aminosalicylic acid	Other Medication
Imipenem-cilastatin4	Other Medication
Meropenem	Other Medication

Amoxicillin-clavulanate	Other Medication
Thioacetazone	Other Medication
TDF+FTC+EFV (300+200+600)	First Line – HIV
TDF+3TC+EFV (300+300+600)	First Line - HIV
AZT + 3TC + EFV (300+300+600)	First Line – HIV
AZT + FTC + EFV (300+200+600)	First Line – HIV
AZT+3TC+DTG (300+300+50)	First Line – HIV
AZT+FTC+DTG (300+200+50)	First Line – HIV
TDF+3TC+EFV (300+300+400)	First Line – HIV
TDF+FTC+EFV(300+200+400)	First Line – HIV
TDF+FTC+NVP(300+200+200)	First Line – HIV
TDF+3TC+NVP(300+300+200)	First Line – HIV
ABC+3TC+NVP(600+300+200)	First Line – HIV
ABC+FTC+NVP(600+200+200)	First Line – HIV
AZT/3TC/ATV/r	Second Line – HIV
AZT/3TC/LPV/r	Second Line – HIV
AZT/3TC/DRVr	Second Line – HIV

AZT/3TC/RAL/LPVr	Second Line – HIV
ABC/3TC/LPVr	Second Line - HIV
ABC/3TC/ATV/r	Second Line – HIV
TDF/FTC/LPV/r	Second Line – HIV
TDF/FTC/ATV/r	Second Line – HIV
TDF/3TC/LPV/r	Second Line – HIV
TDF/3TC/ATV/r	Second Line – HIV
DRV/R + DTG + AZT+3TC	Third Line – HIV
DRV/R + DTG + ABC/3TC	Third Line – HIV
DRV/R + DTG + TDF + FTC	Third Line – HIV
Abacavir (ABC)	Other medication
Emtricitabine (FTC)	Other Medication
Lamivudine (3TC)	Other Medication
Zidovudine (AZT)	Other Medication
Tenofovir (TDF)	Other Medication
Efavirenz (EFV)	Other Medication
Etravirine (ETV)	Other Medication

Nevirapine (NVP)	Other Medication
Atazanavir plus ritonavir (ATV/r)	Other Medication
Darunavir plus ritonavir (DRV/r)	Other Medication
Fosamprenavir plus ritonavir (FPV/r)	Other Medication
Lopinavir/ritonavir (LPV/r)	Other Medication
Rifabutin	Other medication
Clarithromycin	Other medication
Ketoconazole	Other medication
Fluconazole	Other medication
Itraconazole	Other medication
Ethinyl estradiol	Other medication
Carbamazepin phenytoin	Other medication
Simvastatin lovastatin	Other medication
Atorvastatin	Other medication
Pravastatin	Other medication
Co-trimoxazole	Other medication
Pentamidine	Other medication

Primaquine	Other medication
Clindamycin	Other medication
Dapsone	Other medication
Atovaquone	Other medication
Pyrimethamine	Other medication
Sulfadiazine	Other medication
Leucovorin	Other medication
TMP-SMX	Other medication
Nitazoxanide	Other medication
Paromomycin	Other medication
Fumagillin	Other medication
Itraconazole	Other medication
TNP-470	Other medication
Ceftriaxone	Other medication
Cefotaxime	Other medication
Doxycycline	Other medication
Benzathine Penicillin	Other medication

Aqueous crystalline penicillin	Other medication
Posaconazole	Other medication
Voriconazole	Other medication
Peginterferon alfa-2a	Other medication
Ganciclovir	Other medication
Cidofovir	Other medication
Foscarnet	Other medication
Valganciclovir	Other medication
Topical Trifluridine	Other medication
Topical imiquimod	Other medication
Valganciclovir	Other medication
Acyclovir	Other medication
Valacyclovir	Other medication
Famciclovir	Other medication
Podophyllotoxin	Other medication
Imiquimod 5% cream	Other medication
Sinecatechins 15% Ointment	Other medication

Peginterferon alfa 2b	Other medication
Prednisone	Other medication
Dexamethasone	Other medication
Metronidazole	Other medication
Trichloroacetic acid	Other medication
Bichloroacetic acid cauterization 80-90% aqueous solution	Other medication

Add other drugs used in the country that are not on the list and remove drugs that are not in use.

3TC = Lamivudine, ABC = Abacavir, AZT = Zidovudine, DTG = dolutegravir, EFV = Efavirenz, FTC = emtricitabine, NVP = nevirapine, TDF = tenofovir

If drugs used to treat HIV are used to treat other conditions, e.g., Lamivudine for HBV, let the doctors select Lamivudine and Other medication as the treatment regimen.

h. **Vaccine List:** Use the table below to guide the creation of the vaccination list

S/N	Vaccine
1.	Bacille Calmette Guerin (BCG)
2.	Pneumoccocal 13-valent conjugate (PCV 13)
3.	Pneumoccocal (polysaccharide) (PPSV23)
4.	Hepatitis B
5.	Tetanus, diptheria, pertussis (Td/Tdap)
6.	HPV
7.	Zoster
8.	Measles, mumps, and rubella (MMR)
9.	Varicella
10.	Hepatitis A
11.	Meningococcal 4 valent conjugate (MenACWY)
12	Pfizer-BioNTech (Comirnaty)
13.	Moderna (Spikevax)
14.	Johnson & Johnson (Janssen)
15.	Novavax (Nuvaxovid)

16.	Novavax (Covovax)
17.	Oxford-AstraZeneca
18.	Diphtheria, Tetanus & Acellular Pertussis (DTap)
19.	Diptheria, Pertusis, Tetanus Toxoid (DPT)
20.	Inactivated Poliovirus (IPV)
21.	Influenza (IIV)
22.	Influenza (LAIV4)
23.	Meningococcal B
24.	Oral Polio Vaccine (OPV)
25.	Inactivated Polio Vaccine (IPV)
26.	Pentavalent vaccine (Diphtheria, Pertussis, Tetanus, Hepatitis B, HiB)
27.	Rotavirus (RV1)
28.	Rotavirus (RV5)
29.	Tetanus, Toxoid, Diphtheria (T.D.)

Add other vaccines given in the country to the list or exclude types of the vaccine on the table that are not in use within the country.

i. **Screening List:** Create/update the types and categories of screenings/lab tests. The system classifies all screenings into four groups. HIV, T.B., Syphilis, and Routine. List any not HIV, Syphilis, or T.B. screening as routine screening. When listing the screenings, ensure that the following are listed thus (ensure the same capitalization and spacing)

Screening Name	Category
TPPA	Syphilis
TPHA	Syphilis
RPR	Syphilis
Syphilis Rapid Test	Syphilis
VDRL	Syphilis
FTA-ABS	Syphilis
Xpert MTB/RIF	TB
Mantoux	TB
TST	TB

Add an exhaustive list of screenings as collected from the labs. Ensure that the list on the tab is entered and named precisely as on the table.

j. **Test modalities:** There is a standard list of testing modalities for HIV testing. Consider adding the following to the list

S/N	Modality	Indicator type
1.	VCT – NGO	Testing indicator
2.	VCT – Mobile Facility	Testing indicator
3.	VCT – Public	Testing indicator
4.	Community	Testing indicator
5.	PITC	Testing indicator
6.	T.B.	Testing indicator
7.	PMTCT(ANC 1)	Testing indicator
8.	HTS_SELF	Testing indicator
9.	VCT – Private	Testing indicator
10.	HTS_RECENT (Confirmatory Test)	Testing indicator

k. **Create vaccination schedule:** Each country has a different vaccination schedule. Enter the Vaccination schedule for the country. (i.e., the vaccine name, the series, and age or space between doses).

l. National census population by sex and age group

m. National census population by division* (optional)

n. Economic variables* (optional)

o. National births by sex

p. National births by census division* (optional)

q. Mortality by age group and sex

r. mortality by census division and sex* (optional)

s. **child mortality* (optional):** This collects mortality of children less than one day old, one day old, 1-6 days old, 7-28 days old, one-year-old, two years old, three years old, and four years old.

The configuration also holds links to export tables of configured information; the links are:

Export sites

Export ethnicities

Export health districts

Export parishes

Export pharmacy

Export regimen

Export vaccine list

Export screening list

Export modalities

Export vaccination schedule

Export permissions and their associated roles

CONFIGURATION NOTES

- The System configuration is the first step to implementation. The configuration collects all the required variables that all other system functionalities depend on to populate dynamic drop-down menu choices.

- While entering variables names, avoid the use of aprostrophe (for instance if you have a site named Gray's clinic, use grays clinic instead). The use of special character will cause undesirable effects on the screening and management pages.

- While creating the screenings list, ensure that the following screenings are named with same capitalizations and spacing thus:

VDRL

RPR

Syphilis Rapid Test

Mantoux

TST

TPPA

TPHA

FTA-ABS

Xpert MTB/RIF

- While entering the drug/treatment regimen, ensure that you enter an exhaustive list of all drugs and select the appropriate regimen. For drugs that are not used to treat HIV or TB, select other medication as the regimen option. Below is a list of medications that should be entered along with any medication used in the country not on the list.

5.1.2.2 Users & Accounts

For all users granted the **user_account** permission, expanding the pages menu reveals a Users & Accounts sub-menu (figure 13).

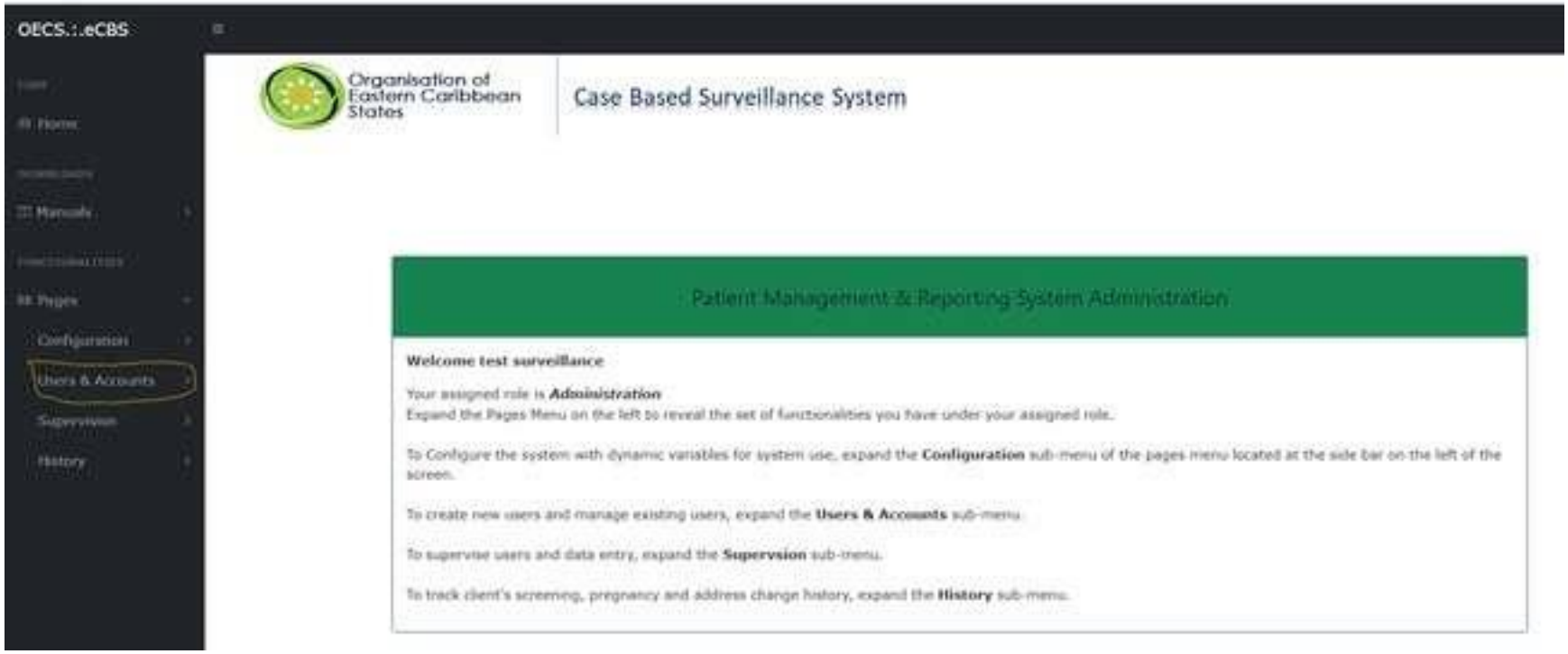


Figure 13: Image of the users and accounts sub-menu highlighted in yellow

Expansion of the Users & Accounts sub-menu reveals links to the following functionalities :

5.1.2.2.1 Create a new user

Enter the user's first name, last name, and email address, select a role and assign permissions within the role. The left side of the form (within the main content area) gives a detailed description of the functionalities within each permission (See Figure 14). After filling out the form and clicking the create button, the system generates an activation email. It sends the email to the email account specified on the form. A success message is displayed if the account creation is successful (See Figure 15).

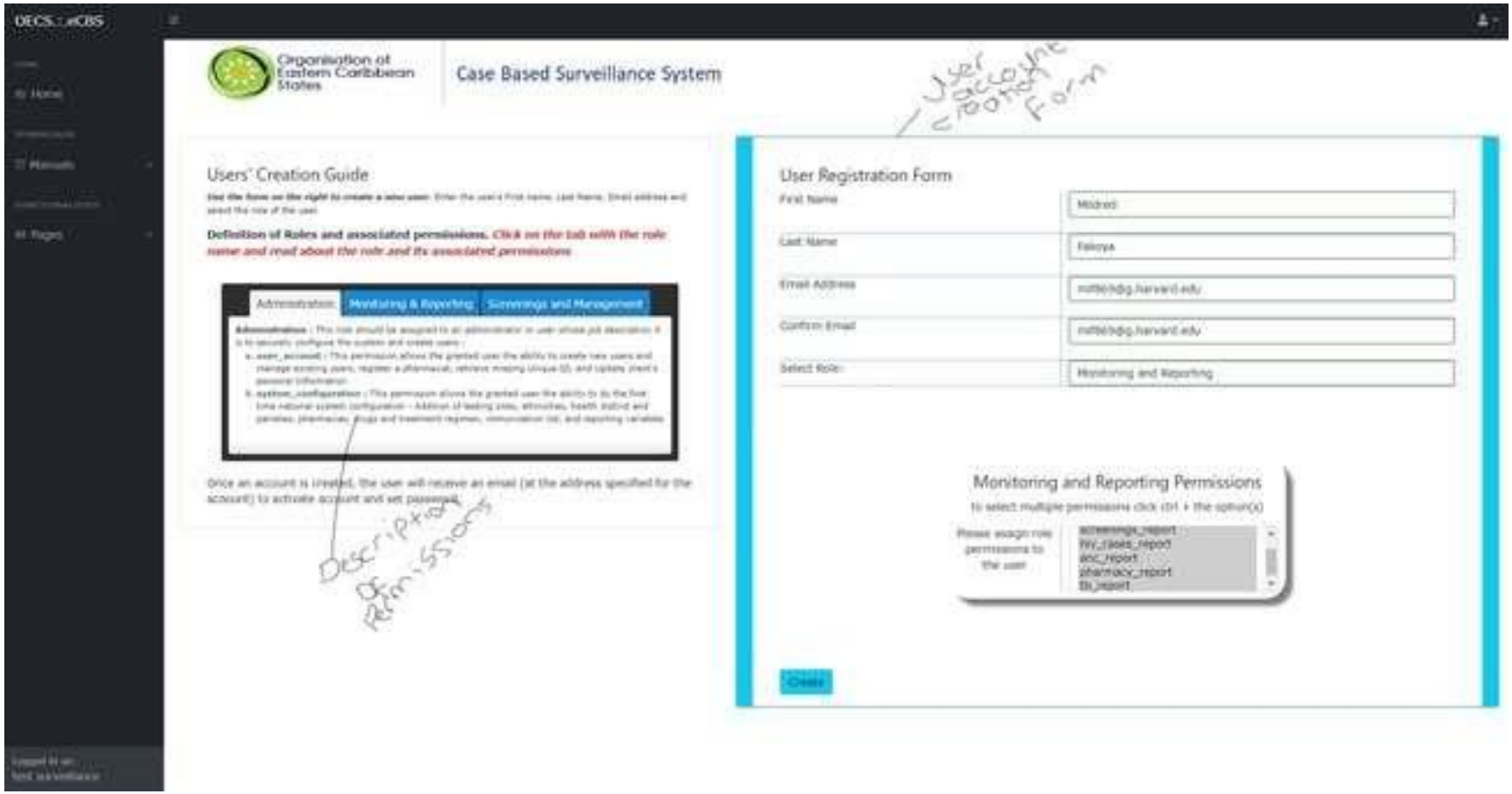


Figure 14: Annotated user account creation form

Let your data tell the story.
System built just for you.

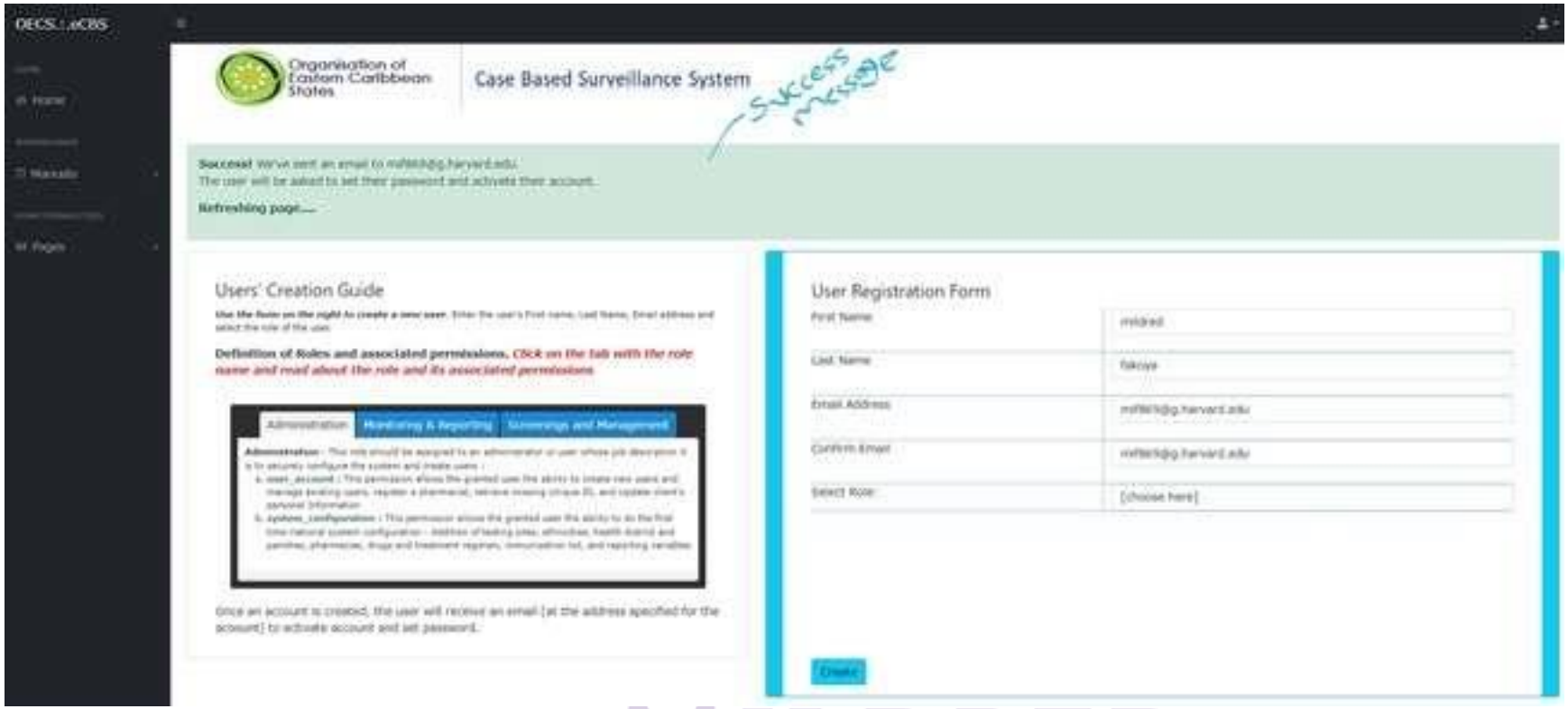


Figure 15: Image showing the user account creation form with a success message

5.1.2.2.2 Manage Existing users

To manage a user's accounts, click the "Manage Existing User" link and enter the user's email address. Suppose the email address is an email of a registered user. In that case, a container with three tabbed pages displays below the form.

Tab 1: Manage Users: This tab holds a form that allows deletion of a user's account or updating a user's first name,

last name, role, and account deactivation. (for account deactivation, change the activation status from activated to not activated).

Tab 2: View Users: This tab holds a form that displays the user's first name, last name, email, role, activation status, and last date and time of successful login.

Tab 3: Set and Edit permissions: This tab holds a form to delete previously assigned permission and allows the update of permissions or assignment of new permission(s). To delete permissions, click on the delete permissions button. Select the permissions and click on the reset permissions button to update permissions.

5.1.2.2.3 Register a Pharmacist

To assign a user to a pharmacy, select the "Register a pharmacist" link, enter the user's email address, and click the get form button. Select a pharmacy on the form displayed and click the Register button. The table to the right of the page holds all the users with the assigned pharmacy. Use the same process to reassign or detach a user from a pharmacy.

Note: the user must have the pharmacy permission granted before pharmacy assignment.

5.1.2.2.4 Attach users to testing and management sites

Select the "Attach users to testing and management sites" link. Select the user's email address from the drop-down menu and a site from the menu and click on the assign site button. The table to the right of the page holds the users and their assigned sites in updatable form. To delete an assignment, click on the red trash sign on the assignment's row. Select a new site from the drop-down menu and click on the green edit sign to update an assignment.

The drop-down menu populates with emails of unassigned users. An empty drop-down menu indicates the complete assignment of all registered users.

5.1.2.2.5 View all users

The view all users link displays an exportable table of all registered users' credentials, roles assigned, permissions granted, and account activation status.

5.1.2.2.6 Find Missing Unique ID

This link displays a form to search for a client's unique I.D. by either the first name, last name, or testing code. The search is successful if the account creator entered the client's first name, last name, and testing code during creation.

On successful search, a table displays below the form. The table holds information for all matches found. Where more than one match is found, use the other details on the table to verify the correct unique I.D. of the intended client.

5.1.2.2.7 Update Client's Personal Information

This link allows the update or entry of the client's security information. The information considered security information for a client are: Client names, biological sex, date of birth, testing code, ethnicity, country of birth, and unique I.D. of the client.

- WHEN ASSIGNING A PHARMACY TO A USER, THE USER MUST HAVE THE PHARMACY PERMISSION GRANTED FIRST. ALL USERS GRANTED THE PHARMACY PERMISSION, CAN SELF ASSIGN.

- WHEN ASSIGNING TESTING SITES TO USERS, THE DROP-DOWN MENU POPULATES WITH EMAILS OF UNASSIGNED USERS.

- WHEN TRYING TO RETRIEVE A MISSING/FORGOTTEN UNIQUE ID, THE SEARCH IS ONLY SUCCESSFUL IF EITHER THE FIRST NAME, LAST NAME OR TESTING CODE WAS ENTERED DURING THE CLIENT'S ACCOUNT CREATION.

- CLIENT'S NAMES, BIOLOGICAL SEX, DATE OF BIRTH, COUNTRY OF BIRTH, ETHNICITY, AND UNIQUE ID ARE CONSIDERED THE CLIENT'S SECURITY INFORMATION

5.1.2.3 Supervision

A user assigned the **supervise_screenings** permission can access the Supervision sub-menu of the page menu. The supervisor has access to the following functionalities:

5.1.2.3.1 Get Screening Information by Site

Clicking this link presents a form that allows the user to select a site and get screening information for the selected site. Once a site is selected and the GET button is clicked, a table holding a list of information accessed/entered by date, user, and client is displayed. Beside each row of information is a GET DATA button. Click on this button to get the screening information recorded by the user for the client on the indicated date.

Suppose no information populates in the tabs presented. In that case, the user accessed the files for other reasons but did not make changes or enter screening information. New information found populates in their respective tabs.

5.1.2.3.2 Pending care registration

This links to a page that holds three exportable tables listing clients referred for care registration of HIV, T.B., other STIs, and prevention but not in care. The columns of each table contain the unique id, category, name of the referrer, and the date of referral of each client.

5.1.2.3.3 View Clients in Care

This links to a page that displays three exportable tables containing a list of HIV, T.B., other STI, and prevention clients in care. The columns of each table contain the unique id, category, name of the referrer, and the date of referral of each client.

5.1.2.3.4 Get all HIV Screenings

This links to a page that displays an exportable table of all recorded HIV screenings. Please note that it does not hold unique screenings but all the recorded changes for a screening. The table columns contain the Unique ID, the date of the screening/sample collection, the screening site, the reporter's name, the type of test, the test modality used, and the result.

5.1.2.3.5 Get All T.B. Screenings

This links to a page that displays an exportable table of all recorded tuberculosis screenings. Please note that it does not hold unique screenings, but all the recorded changes for a screening. The table columns hold the Unique ID, the date of the screening/sample collection, the screening site, the reporter's name, the type of test, the induration (for TST), and the result.

5.1.2.3.6 Get all Syphilis Screenings

This links to a page that displays an exportable table of all recorded Syphilis screenings. Note that it does not hold unique screenings, but all the recorded changes for a screening. The table columns hold the Unique ID, the date of the screening/sample collection, the screening site, the reporter's name, the type of test, the titre, and the result.

5.1.2.3.7 Get other recorded screening

This links to a page that displays an exportable table of all other routine screenings. Note that it does not hold unique screenings but all the recorded changes. The table columns hold the Unique ID, the date of the screening/sample collection, the screening site, the reporter's name, the type of test, the result, and other information.

5.1.2.3.8 ANC HIV Screenings

This links to a page that holds an exportable table of recorded HIV screenings for an antenatal client. Please note

that it does not hold unique screenings but all recorded screenings and changes. The table columns hold the Unique ID, Pregnancy ID, Gestation age at screening, screening site, type of test, result, and screening/sample collection date.

5.1.2.3.9 ANC TB Screenings

This links to a page displaying an exportable table of all recorded tuberculosis screenings for an antenatal client. Note that it does not hold unique screenings but all recorded changes to the screening results. The table columns contain the unique I.D., pregnancy I.D., gestation age, screening site, type of test, induration (for TST), result, and screening/sample collection date.

5.1.2.3.10 ANC Syphilis screenings

This links to a page displaying an exportable table of all recorded syphilis screenings for an antenatal client. Note that it does not hold unique screenings but all the changes resulting from screenings. The table columns contain the unique I.D., pregnancy I.D., gestation age, screening site, type of test, titre, result, and screening/sample collection date.

5.1.2.3.11 ANC Hepatitis screenings

This links to a page displaying an exportable table of all recorded hepatitis screenings for an antenatal client. Please note that it does not hold unique screenings but all recorded changes to the screening results. The table columns contain the unique I.D., pregnancy I.D., gestation age, screening site, type of test, result, and screening/sample collection date.

5.1.2.3.12 Other ANC Screenings

This links to a page that displays an exportable table of all other routine screenings recorded for an antenatal client. Please note that it does not hold unique screenings but all the recorded changes. The table columns contain the unique I.D., pregnancy I.D., Gestation age at screening, screening site, type of test, result, other result information, and date of screening/sample collection.

5.1.2.3.13 Exposed Infant HIV Screenings

This links to a page that holds an exportable table of HIV screenings for Exposed infants. The columns of the table contain information on:

the unique id, the date and type of test done, the age at the screening, and the month/year of the record.

5.1.2.3.14 Exposed Infant Registration Information

This links to a page containing an exportable table of exposed infant information. The columns hold the child's unique I.D., the mother's unique Id, the date of birth, the sex, the exposure (HIV, Syphilis, or Hepatitis), and the month and year of the registration.

5.1.2.3.15 Prevention distribution

This links to a page that holds three exportable tables;

Table 1. The self-test results recorded (the type of test kit, the serial no., the category of the test, the HIV result, the Syphilis result, comment, and date of the test)

Table 2. The self-test kits distributed

Table 3. The condoms distributed (no. of male condoms, no. of female condoms, the date given, and the site of distribution)

5.1.2.4 History

All users assigned the history_tracking permission can access the page's History sub-menu. This menu holds the below links

5.1.2.4.1 Track Client's Screening History

This links to a form that collects the client's unique id. A successful search returns rows of screening records in groups of the types of screenings in exportable tables.

5.1.2.4.2 Track Client's Pregnancy History

This links to a form that collects the unique I.D. of the client. A successful search returns rows of pregnancy records (pregnancy I.D., registration date, and the registration site).

5.1.2.4.3 Track Client's Address Change History

This links to a form that collects the client's unique I.D. Enter the unique I.D. of the client. If found, the client's address and address change histories populate in a search result box.

5.2 The Screenings and Management Role

Users assigned the screenings and management role are authenticated on their log-in credentials and redirected to the screenings and management home page—the functionalities displayed under the ***pages*** menu depend on the permissions assigned to the user.

The screenings and management role consists of functionalities for the VCT providers, the Laboratories (private and public), rapid testers, antenatal clinics, clinical care nurses and physicians, social workers / psycho-social and adherence counselors, pharmacists, and every other person involved in HIV/STI, T.B., and Hepatitis screenings and management.

Take a look at the workflows from figures 16 – 20. Refer to the workflow after reviewing all the screenings and management role functionalities.

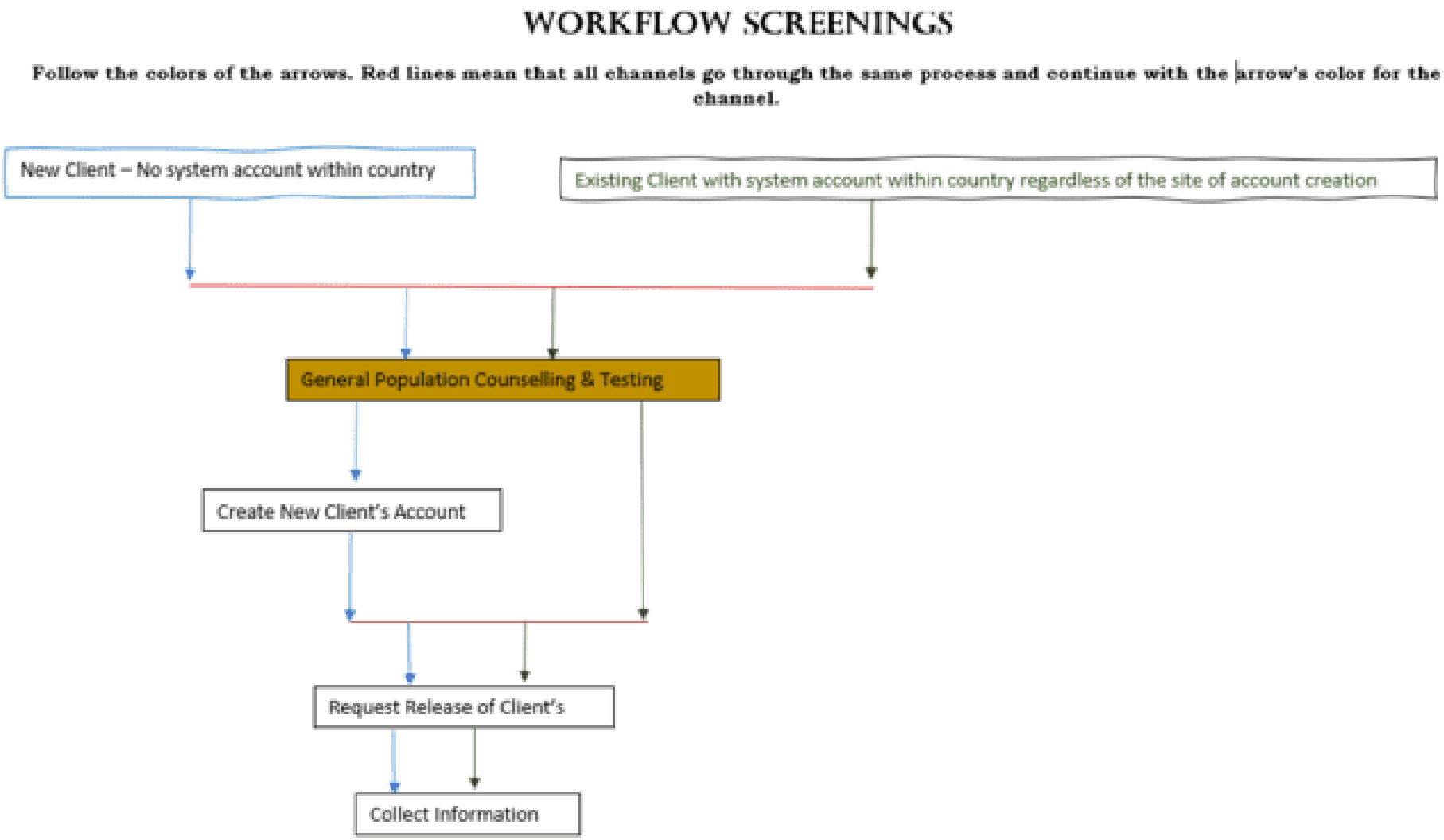


Figure 16: Screenings workflow

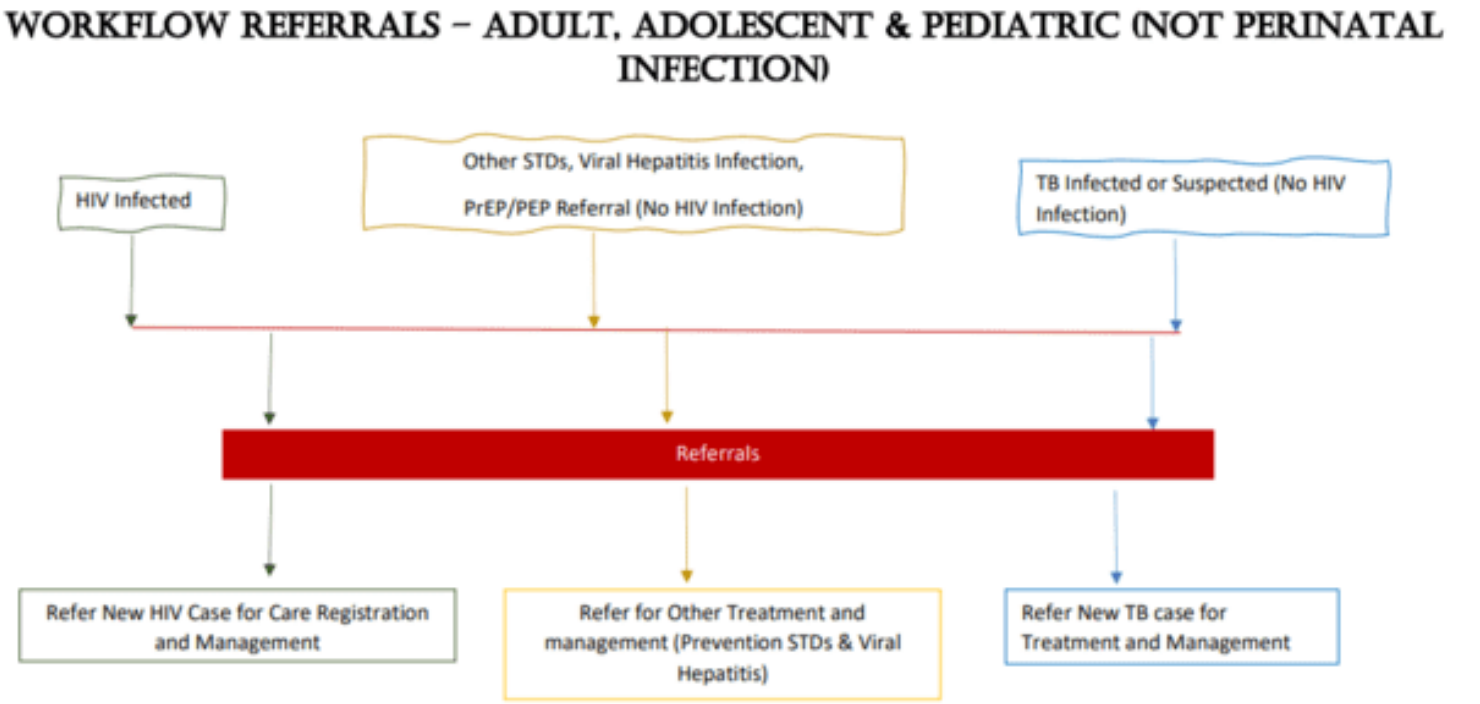


Figure 17: Referrals workflow

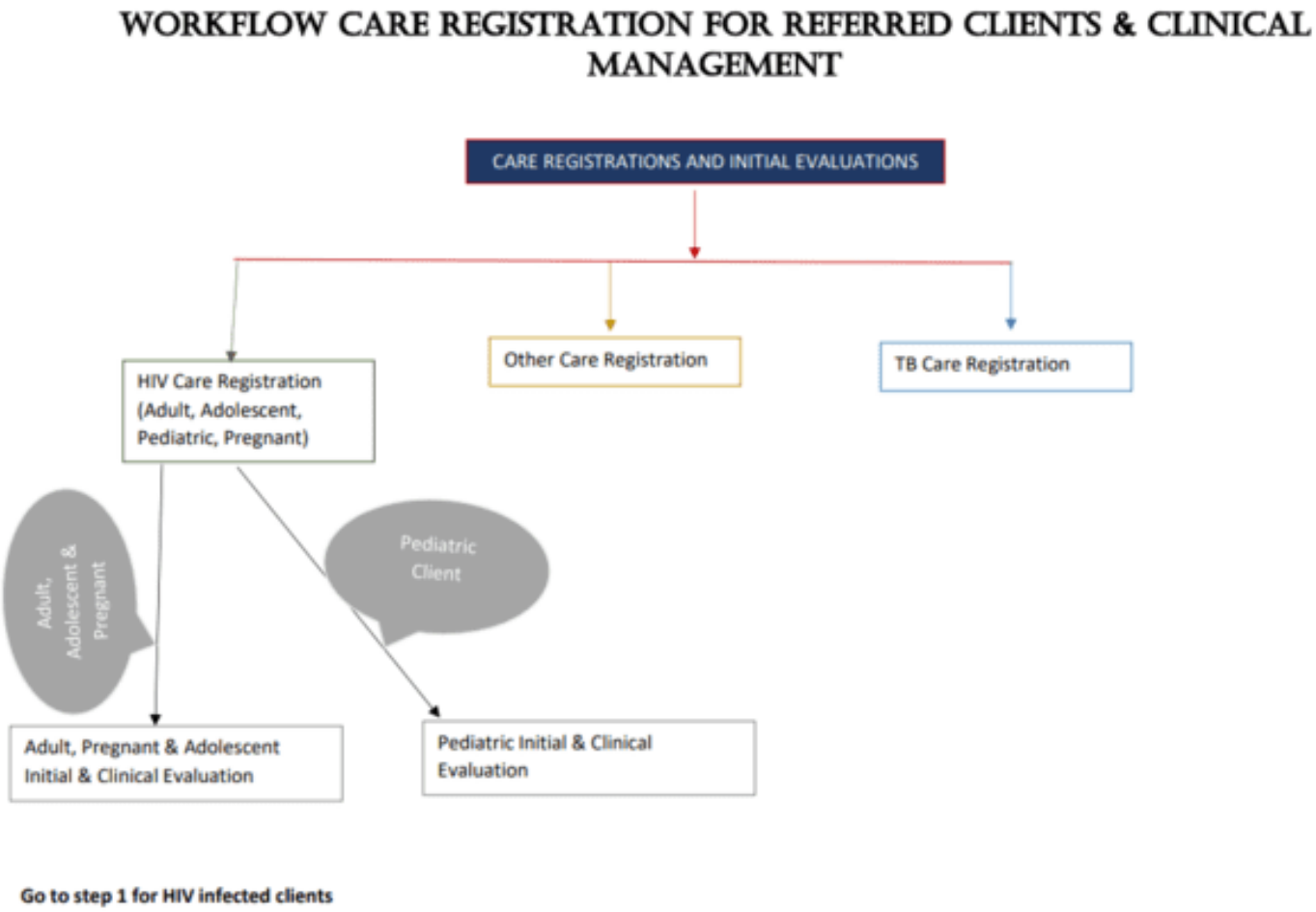


Figure 18: workflow - care registration for referred pediatric, adolescent, adult, and pregnant clients.

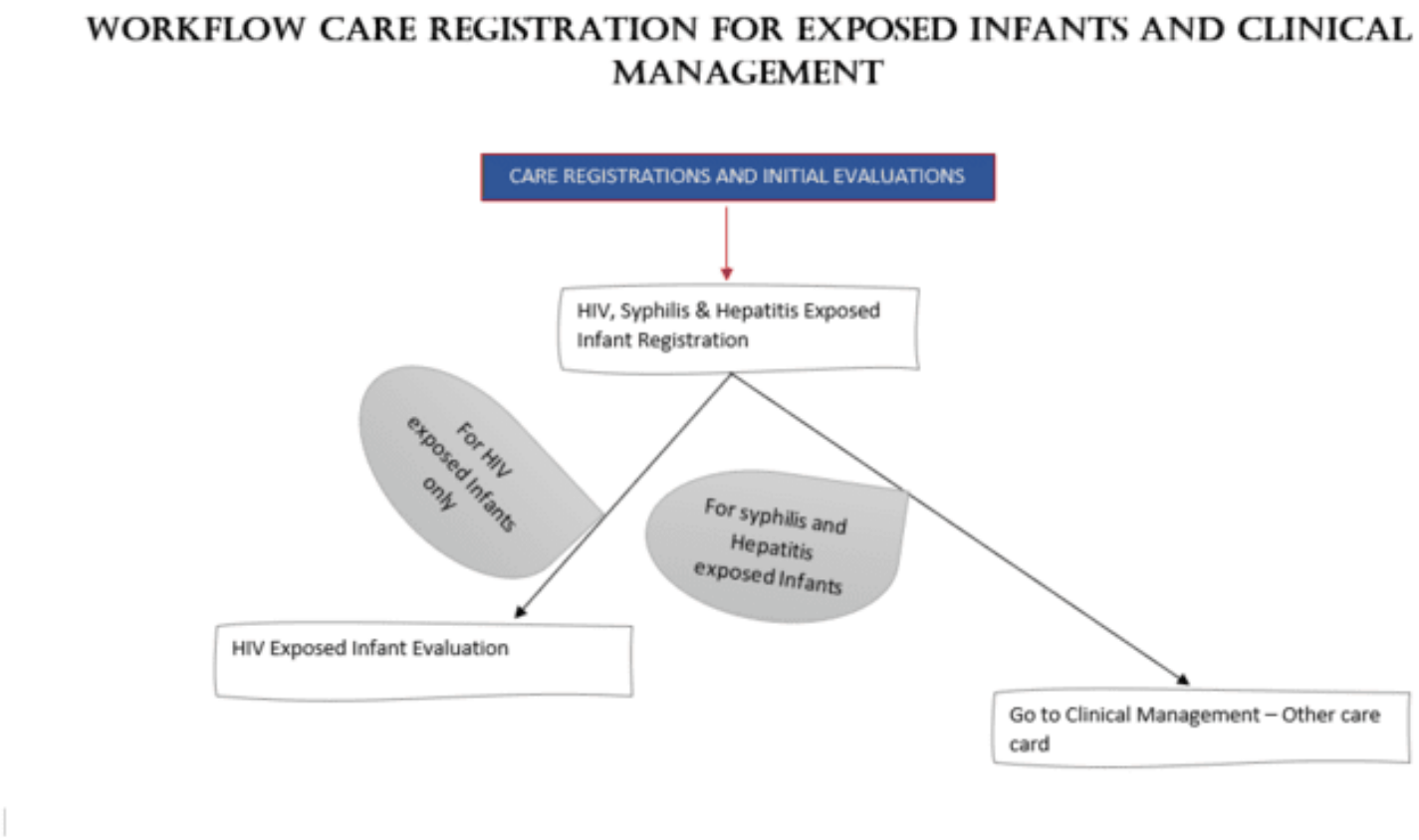


Figure 19: workflow care registration for exposed infants

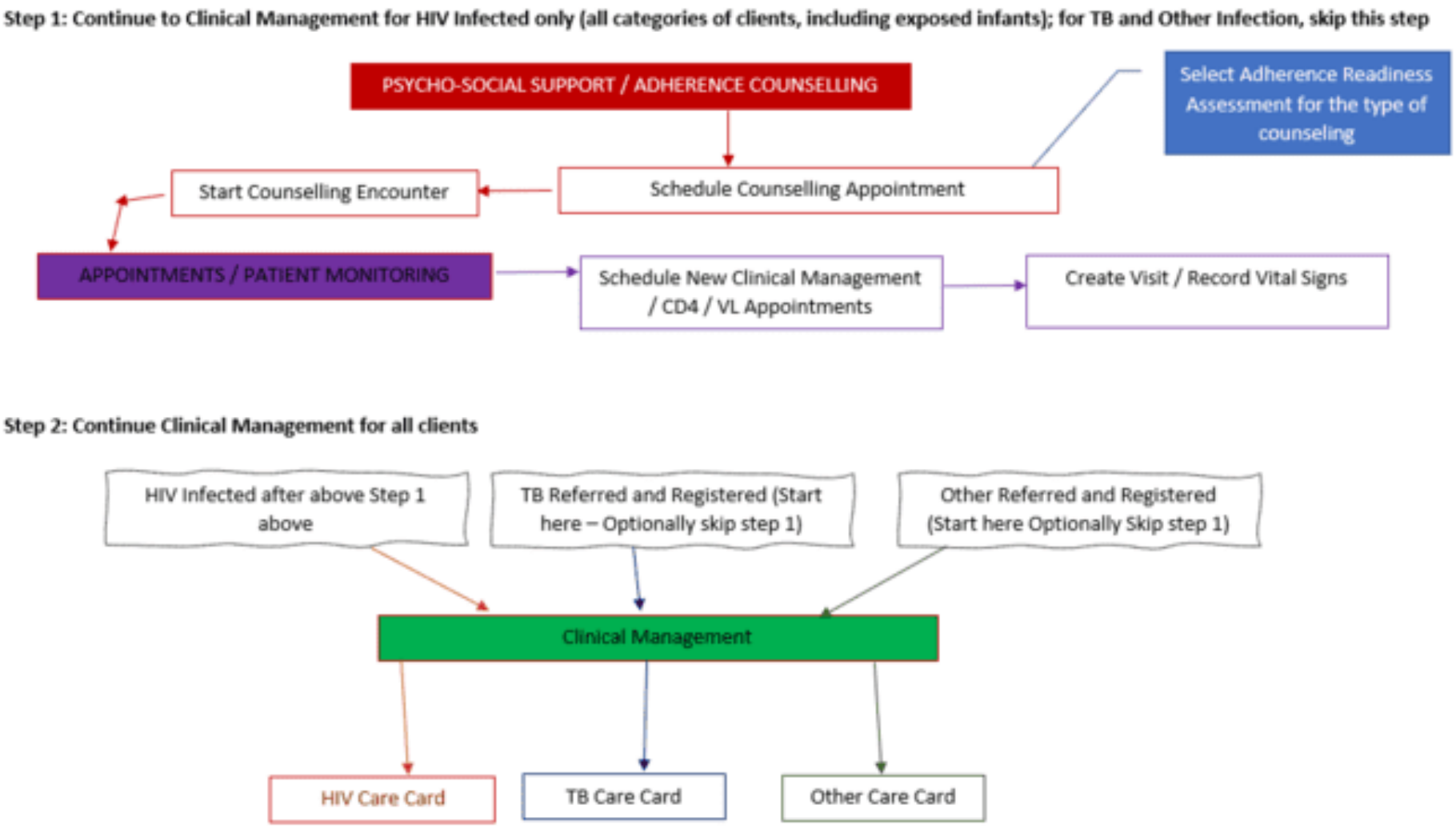


Figure 20: Steps to clinical management

5.2.1 The Screenings and Management Role Permissions

The permissions of the Screenings and Management role are:

general_population_screenings: A user granted this permission can – Create a client's account, collect the client's personal, behavioral, and screening information, review a client's screening history, review/update a client's personal information, retrieve a list of all registered ANC clients at the assigned site, get a list of all the clients' files accessed by the logged-in user and registration status of the referred clients, record self-test kit distribution, retrieve site-level reports on screenings recorded, and review client's treatment plan for clients in care or referred back to the health center for follow-up.

referals: A user granted this permission can refer clients for care registration, management, and prevention and control services.

updates: A user assigned this permission can update the client's screening result, switch the client's category, and register deaths.

care_registration: A user assigned this permission can view all incoming referrals, register referred clients into care, register exposed infants into care, retrieve a list of registered clients, and record initial evaluation data of the registered clients.

psycho-social_adherence_counselling: Users assigned this permission can schedule counseling appointments, record counseling session information, and retrieve past recorded session information.

routine: A user assigned this permission can view pending client appointments, schedule new appointments, change

appointment dates, create a visit/record vital signs, get adherence readiness information, monitor clients' appointments and routine tests, and reset routine test dates.

central_medical_unit: A user assigned this permission can create a medication list, recall medication, and record the medication distribution to pharmacies.

pharmacy: A user assigned this permission can create stock, record medication dispense, view transaction history, and retrieve the client's treatment plan.

clinical_management: A user assigned this permission can record all clinical management notes and retrieve past clinical management notes.

prevention_control: can retrieve a list of contacts to be traced, record tracking of contacts, start a risk reduction plan for clients, retrieve past recorded risk and risk reduction session information, register PMTCT clients, and review PMTCT registrations.

5.2.2 The Screenings and Management Role Functionalities

5.2.2.1 General Population Counselling and Testing

5.2.2.1.1 Creating a New client's account

A user assigned the general_population_screenings permission can access the **page menu's GENERAL POPULATION COUNSELLING & TESTING sub-**menu. Expand this link and click on the "***create new client's account***" to get a form to collect the following information about the client:

First name: Enter the client's first name (if allowed) or the first letter of the first name.

Middle name: Enter the client's middle name (if allowed) or the first letter of the middle name.

Last name: Enter the client's last name (if allowed) or the first letter of the last name.

Date of Birth: Enter the client's day, month, and birth year.

Sex: Enter the client's biological sex or the sex assigned at birth.

Mother's maiden name: enter the client's mother's maiden name or the first letter of the maiden name

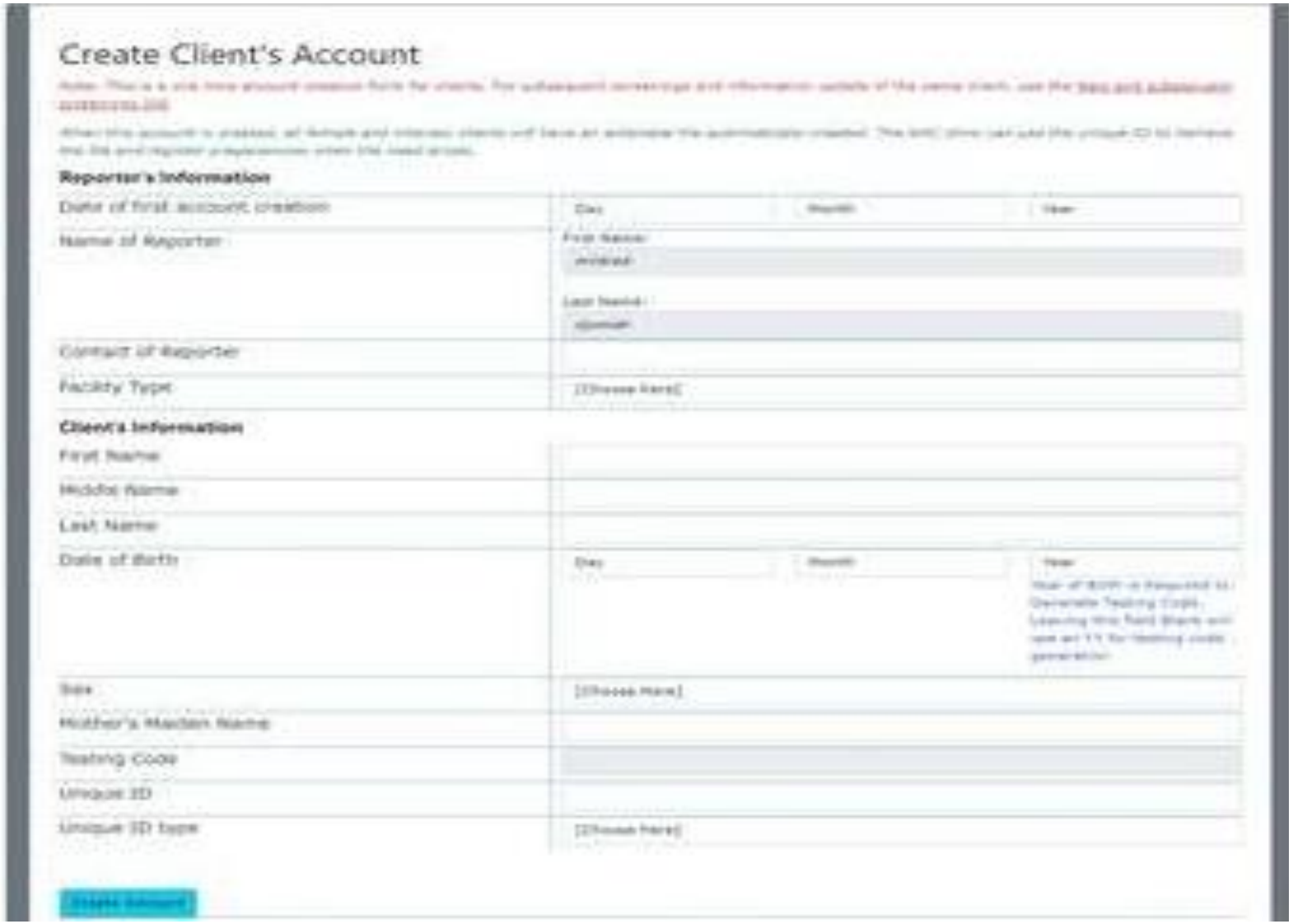


Figure 21: Clients account creation form

The testing code is generated automatically based on the credentials entered and should not be the client's unique identifier. The system enforces the clients' uniqueness; it is best to use an I.D. number unique to the client as a unique identifier. After filling in all the required fields, click the create account button to create the client's account. Watch out for a success message before proceeding to retrieve the file generated for the client.

NOTE: When an account is created for a client, the system generates data collection forms for the client. All clients whose sex assigned at birth is female or Intersex has pregnancy and antenatal-related forms added to their file.

5.2.2.1.2 Request release of client's file

This link should be the starting point for returning clients or clients with an account on the system. To access the generated file for the client, click on the "request release of client's file" link and enter the information requested on the form to release the client's file. Watch out for a success message indicating a successful release of the client's file.

NOTE: all released files are retrieved by midnight of the release date and are available only to the user that released the file.

5.2.2.1.3 Collect client's information

Once the file is successfully released, the next step is to click on the "collect client's information" link. The page holds two containers.

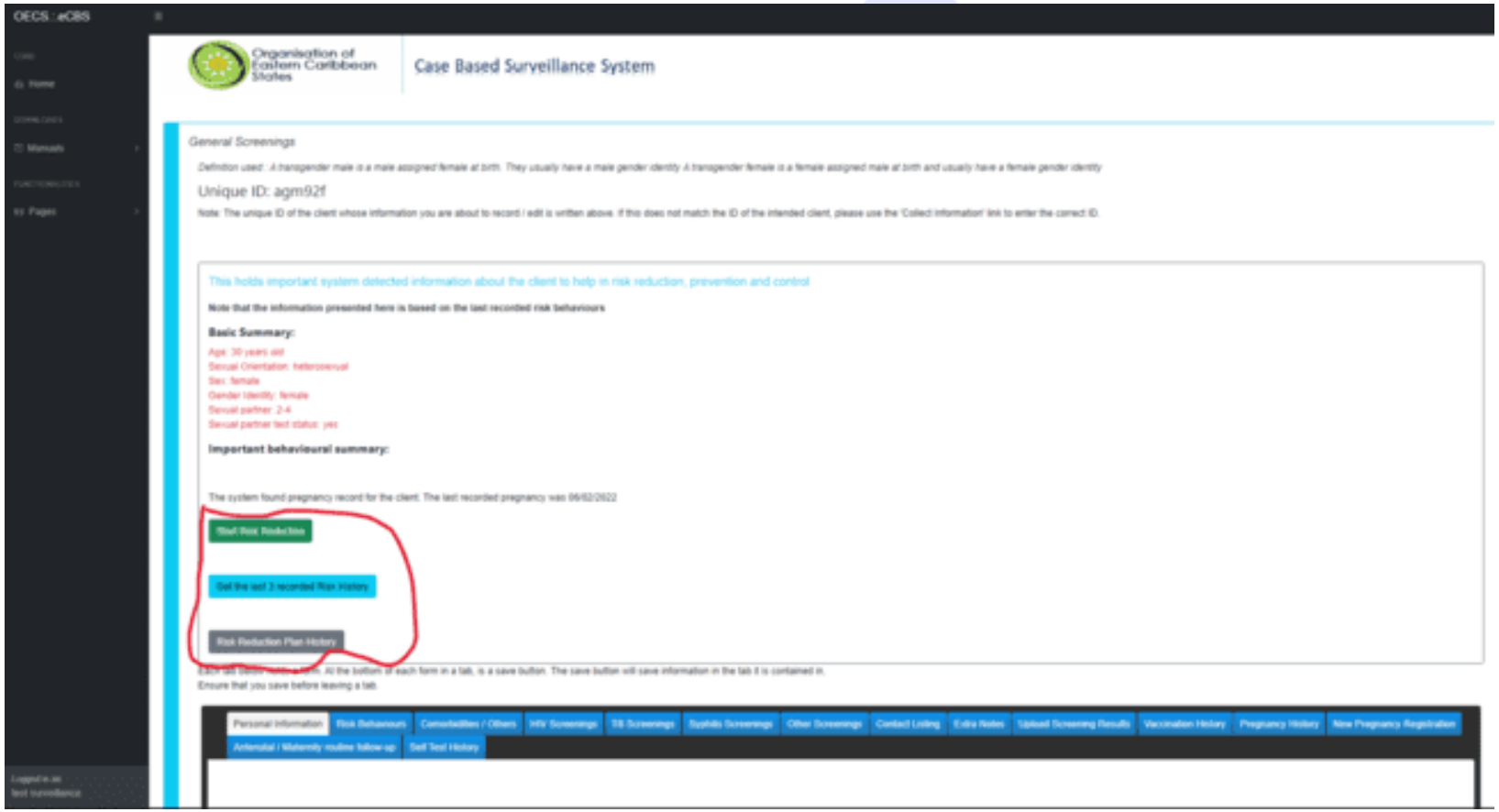


Figure 22: Image of the collect information page showing the client's important summary, the prevention and risk reduction buttons, and the information collection tabs

The first container holds all the important flags about the client. These flags are generated based on the personal, behavioral, and screening information entered about the client. This container also holds three buttons that link the user to the risk reduction plans and histories.

The second container holds tabs containing the forms for further reporting data collection. The forms within each tab hold a save button, and information entered must be saved before moving to a new tab.

The first tab (labeled personal information) holds a form that collects the following types of information: country of birth and residence, address, telephone number, health district, parish, occupation, marital status, level of education, gender identity, sexual orientation, ethnicity, number of sexual partners, types of sexual activity, travel info.

The second tab (labeled risk behaviors) holds a form that collects the client's behavioral information, some of which are intrusive. All the questions on this form are required as critical indicators for auto-report generation rely on this data.

The third tab (labeled comorbidities/others) holds a form that collects comorbid information about the client and other previous screening / STI diagnosis information.

The fourth tab (labeled HIV screenings) holds the HIV screenings record form. Enter the date of the record, select the type of test, the testing modalities used, and the name of the test kit used. For rapid parallel testing, enter both the test kit and results. For serial, users can enter one save and the next or wait for both results and enter both simultaneously. For other types of testing, leave the test kit field blank and fill in just one result field.

The fifth tab (labeled T.B. Screenings) holds the T.B. screening record form. Enter the date, the type of test, the induration (for TST), the result, and the result date.

The sixth tab (Syphilis Screenings) holds the Syphilis screenings record form. Select the record date, the type of test, the titer, the result, and the result date.

The seventh tab (Other screenings) holds the form to record other screenings. Select the record date, the type of screening, the result text/selection, and the test result date.

The eighth tab (contact listing) holds the form to record information of household contacts, sexual or injection drug partners, an STI / Hepatitis positive or high-risk client. The listed contact is saved with an automatically generated contact code for tracing in the prevention & control clinic. See 5.2.2.4.5

The ninth tab (extra notes) holds a form to leave additional notes about the client for follow-up.

The tenth tab (upload screenings results) holds a form to upload or type screening reports.

The eleventh tab (Vaccination History) holds a form to record the client's vaccination/vaccination history.

The twelfth tab (Self-test History) holds a form that allows the provider to record self-test results for the client or view self-reported self-test results. This is useful when the client receives self-test kits and needs help registering their results on the system. This tab also displays information about the number of self-test kits and condoms given to the client.

For all the tabs listed above, The first three tabs retain their values for easier updating. The fourth to twelfth tabs are all encounter forms. Once values entered into the encounter forms are saved, the form is cleared, and the values held are displayed on the page's right in a history table.

For clients whose biological sex is female or intersex, there are three additional tabs:

1. Pregnancy history tab: this tab holds a table of all client's active and previously registered pregnancies. Click on a pregnancy I.D. on the table to link to that file.

2. *Pregnancy Registration tab:* Holds a pregnancy registration form. The form contains several required fields; the pregnancy id field should have a unique value. As a suggestion, the pregnancy I.D. can be created thus: by adding the pregnancy number as a suffix to the unique I.D. For instance, if a client has a unique I.D. ggh89h and presents for pregnancy registration with the first pregnancy, the pregnancy I.D. would then be ggh89hgpreg1. For the second pregnancy, the pregnancy I.D. will be ggh89hgpreg2 and ggh89hgpreg3 for the third, and so on. The system enforces uniqueness on Pregnancy I.D.s.

Once all the required form fields are filled and submitted, the pregnancy visits and investigations forms are generated automatically. All the generated forms are available in the next tab; the Antenatal/maternity routine follow-up.

3. *Antenatal/maternity routine follow-up*: This tab holds the file of the last recorded pregnancy. At the top of the page are flags that hold information on the current gestation age of the pregnancy and the gestation age at the last recorded HIV /Syphilis screening. The main content area holds two containers. The container to the left contains the information about antenatal screenings. The container to the right of the page has 17 tabs that collect information about the pregnancy, partners, and birth. Above the flags is a container that holds automatically detected flags based on the data entered in the forms.

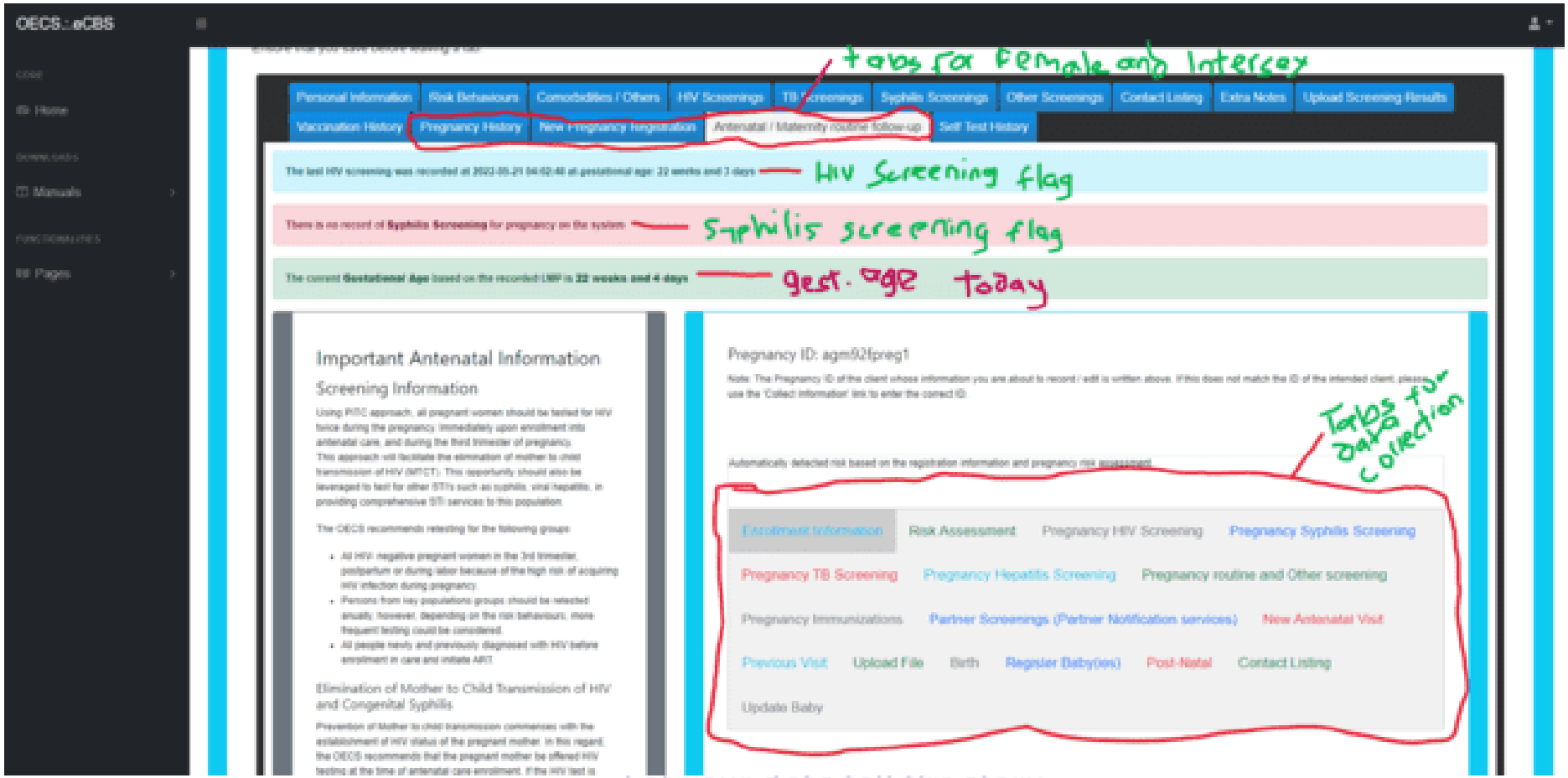


Figure 23: Screenshot of the antenatal and routine follow-up tab with annotated labels

Tab 1: Enrollment Information: The enrollment information form allows for editing and collecting pregnancy registration and baseline information. The data collected are the weight, height, BMI, date of last delivery, type of previous delivery, number of children below age 18,

Date of last normal menstrual period, expected delivery date, drug allergies, family planning history, previous obstetric history, and family medical history. All the fields in this form are editable.

Note: During the pregnancy registration, the date of last normal menstrual is required; the system automatically calculates the expected date of delivery and the gestation age using this date. The enrollment information form holds the date of the last normal menstrual period and the expected delivery date in editable format. When users edit the date of the last normal menstrual period, ignore the expected delivery date, and the system automatically updates this date after the form is saved.

Tab 2: Risk Assessment: This holds a form that collects the psychological, behavioral, medical, and obstetric risks to the pregnancy.

Tab 3: pregnancy HIV Screening: This holds a form to record HIV screening for this pregnancy. The gestation age at the time of screening is calculated and pre-filled based on the LMP. For entry of back-dated records, the gestation age should be updated in the format as shown in Fig. 24 below

Tab 4: pregnancy Syphilis Screening: This holds a form to record Syphilis screenings for the current pregnancy. The gestation age at the time of screening is calculated and pre-filled based on the LMP. For entry of back-dated records, the gestation age should be updated in the format as shown in Fig. 24 below

Tab 5: pregnancy T.B. screenings: This holds a form to record Tuberculosis screenings for the current pregnancy.

Tab 6: Pregnancy Hepatitis screenings: This holds a form to record Hepatitis screenings for the current pregnancy.

All HIV, Syphilis, and Hepatitis screenings must be recorded using the pregnancy HIV Screening form. Failure to do so will flag the pregnancy as missing the routine pregnancy HIV screening.

Tab 7: Pregnancy routine and other screenings: This holds a form recording all other screenings done during the pregnancy.

Tab 8: pregnancy Immunizations: This holds a form that records all vaccines administered during the pregnancy.

Tab 9: Partner Screening (Partner Notification Services): This holds a form for account creation or account linkage of a partner of the pregnant client. If the partner already has an account on the system, fill out the form using the Unique ID of the existing account and create the link. If the partner does not have an existing account, filling out the form creates the account and the connection. After a successful save, the system redirects to request the release of the partner's file for data collection. Follow the directions from 5.2.2.1.2.

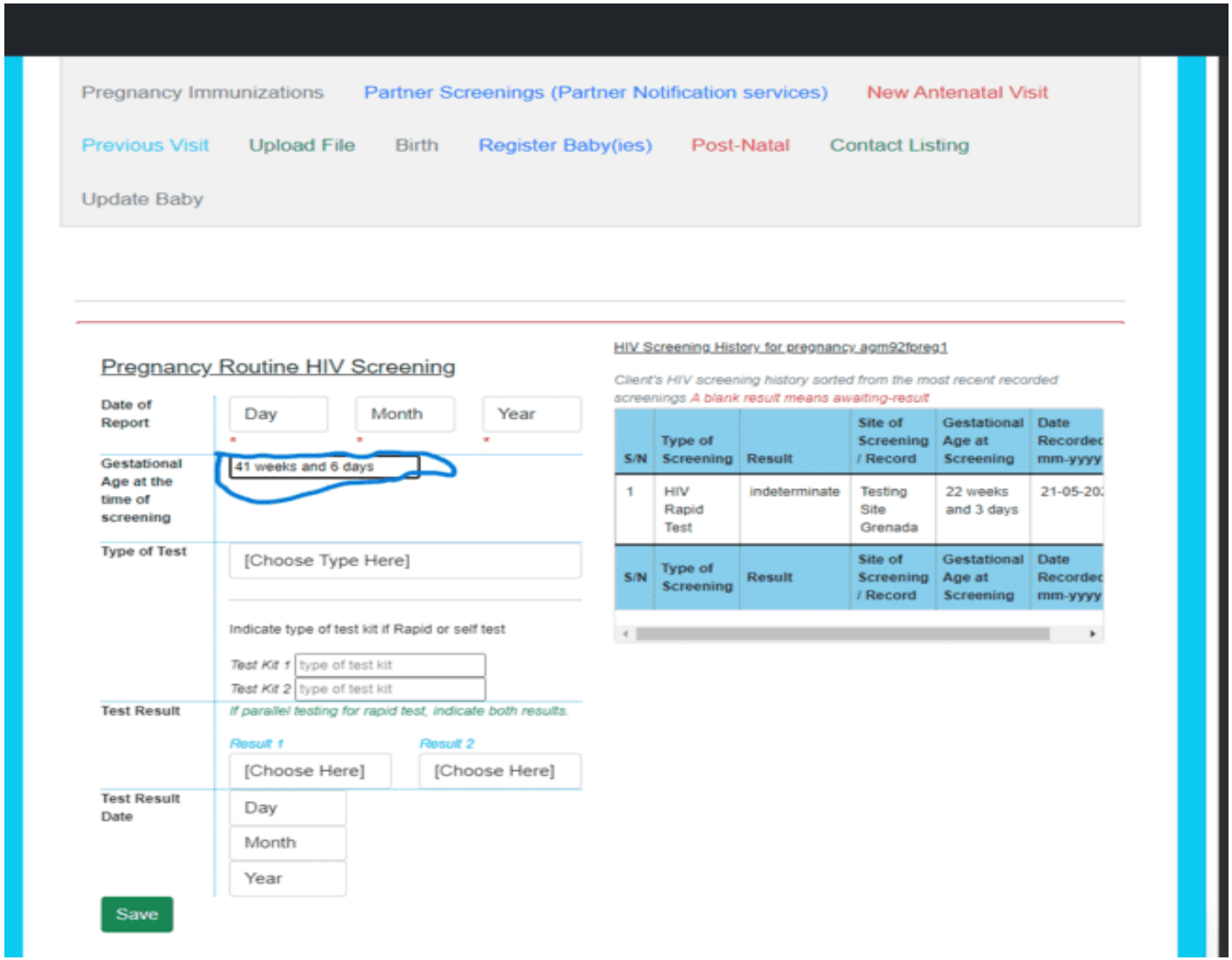


Figure 24: The antenatal HIV Screening record form showing the gestation age at the time of screening

Tab 10: New antenatal visit: The new antenatal visit form collects information about the fundus height, presentation, and position, the relation of P.P to the brim, fetal heart, date of first fetal movement, edema, Hb, urine (ALB and sugar), B.P, weight, headache, bowels, micturition, discharge, varicose veins, special observations, and advanced obstetric assessment. This tab is an encounter form filled during each visit. All the information saved is available for review in the next tab (the previous visit tab).

Tab 11: Previous visit: It holds several previously collected routine antenatal visit information containers.

Tab 12: Upload file: This allows uploading files or typing/pasting medical reports.

Tab 13: Birth: This holds an updatable form to record the baby's date, time, place, birth notes, and the discharge notes of the mother.

Tab 14: Register baby(ies): This holds a form to register the baby (ies) born. It collects information such as the baby code, sex, names, birth weight, length, head circumference, chest circumference, Apgar score at 1 min, and Apgar score at 5 mins. As a suggestion for the baby code, users can use the pregnancy I.D. and suffix it with the baby number (for multiple gestations). E.g., for a pregnancy I. D agm92fpreg1 with twins born, the baby code for twin 1: agm92fpreg1baby1, and twin 2: agm92fpreg1baby2.

Tab 15: Post-natal: This holds a form that collects the post-natal information of the mother. It collects the weight, B.P., ALB, sugar, Hb, breast and feeding, abdomen, pelvic exam, pap smear, family planning, and any symptoms and duration.

Tab 16: contact listing: This holds a form for listing high-risk partners Or partners at risk for tracing and prevention services.

Tab 17: update baby: This allows updating the baby information entered in the register baby tab. Use this form to record the baby's discharge weight and notes.

Take a look at figure 22. Notice the container at the top with three buttons. These buttons are a shortcut to the prevention services link.

The button labeled 'Risk reduction plan history' links to a table containing all the information from previous risk reduction sessions.

The button labeled start risk reduction: links to the risk reduction session form.

The 'get last three recorded risk history' button links to the risk reduction history page where the previous three recorded risk behaviors are retrieved.

5.2.2.1.4 Client's Screening History

Enter the unique I.D of the client in the form that presents if screening records exist for the client, a container that holds exportable tables grouped by the type of screenings is displayed.

5.2.2.1.5 Review / Update Client's Personal Information

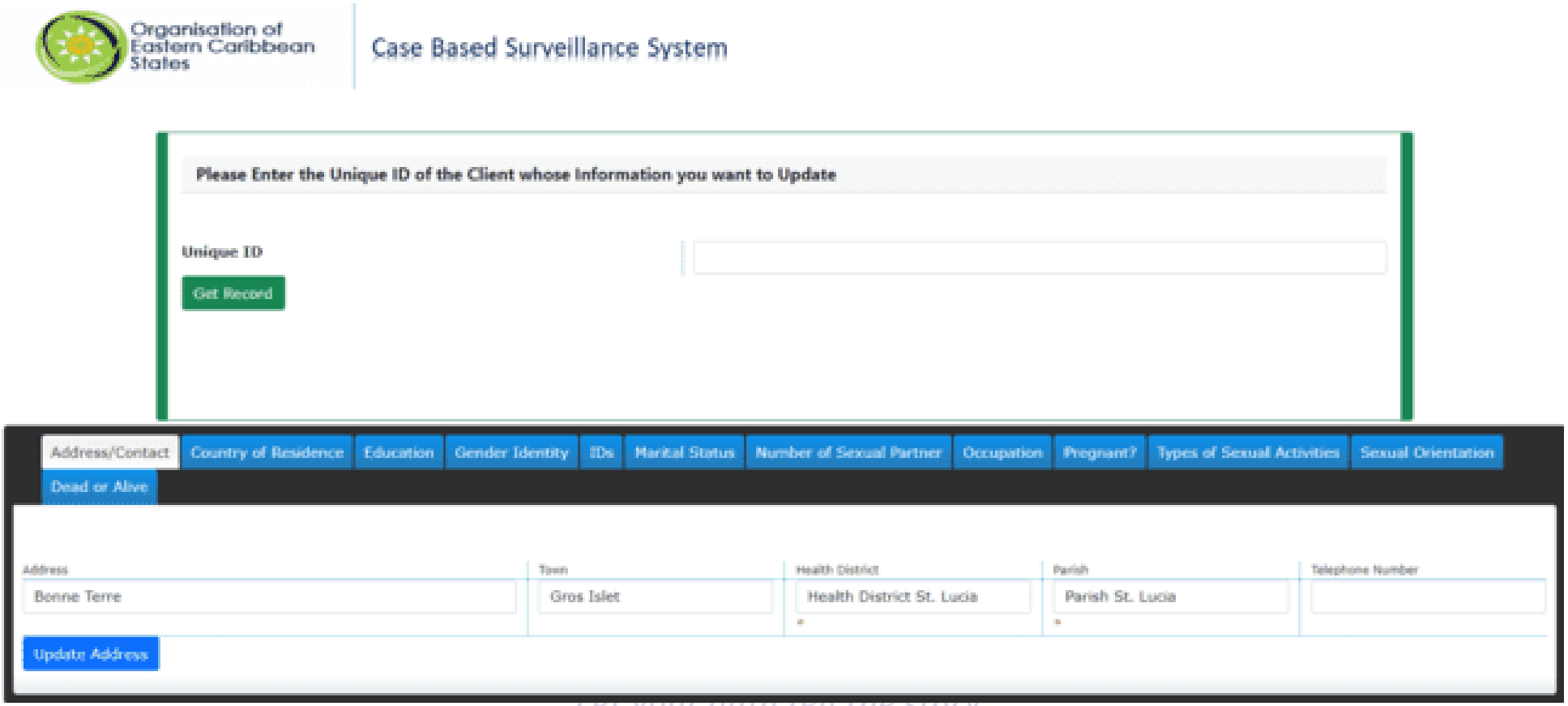


Figure 25: Update personal information tabs

Enter the unique ID of the client in the form and click on the Get Record button. If the Unique I.D. exists, the client's information forms retrieve in tabs.

Tab 1: Address/Contact – Update existing or enter new address / contact of the client.

Tab 2: Country of residence – Update existing or enter the new country of residence and the client's length of stay.

Tab 3: Education – Update or enter the highest level of education of the client.

Tab 4: Gender Identity – Update or select a gender identity for the client

Tab 5: IDs – Update or Enter other forms of Identity for the client

Tab 6: Marital Status – Update or select a marital status for the client

Tab 7: Number of sexual partners – Update or enter the number of sexual partners of the client and the sexual partner test status.

Tab 8: Occupation – Update or Select the occupation of the client.

Tab 9: pregnant? (females only) – select if the client is currently pregnant.

Tab 10: Types of Sexual activities – Update or select the types of sexual activities of the client.

Tab 11: Sexual Orientation – Update or select the sexual orientation of the client.

Tab 12: Dead or Alive – Select or update if the client is dead and the cause of death.

Note that there is an update button in every tab. It is important to save each tab before moving on to the next tab.

5.2.2.1.6 All registered pregnancies

This link holds an exportable table of all pregnancies registered at the assigned testing site of the logged-in user.

5.2.2.1.7 My records

This page holds tables of clients' files accessed by the logged-in user and the referrals done by the logged-in. The referrals table groups clients referred for care registration/prevention by those registered in care and those awaiting registration.

5.2.2.1.8 Record self-test distribution

This page holds a form for recording HIV self-test kit distribution. To the right is a table that holds all entries in updatable and searchable form. For entry error, click on the trash button beside the row of data to delete.

5.2.2.1.9 HIV screenings at this site

This page holds an exportable table of the HIV screenings recorded at the logged-In user's site. Above the table is a summary report of the screenings disaggregated by sex.

5.2.2.1.10 Syphilis Screenings at this site

This page holds an exportable table of the Syphilis screenings recorded at the logged-In user's site. Above the table is a summary report of the screenings disaggregated by sex.

5.2.2.1.11 T.B. Screenings at this site

This page holds an exportable table of the Tuberculosis screenings recorded at the logged-In user's site. Above the table is a summary report of the screenings disaggregated by sex.

5.2.2.1.12 Other Screenings at this site

This page holds an exportable table of all other routine screenings recorded at the logged-In user's site.

5.2.2.1.13 Client's treatment plan

Enter the unique I.D of the client to review the Doctor's treatment plan. The symptom review and treatments retrieve in their respective tabs for follow-up.

5.2.2.2 Referrals

A user assigned the referals permission has access to the **REFERRALS** sub-menu of the pages menu. Expand this link to reveal a list of links to referrals functionalities

5.2.2.2.1 Refer New HIV cases for care registration and management

This link holds a referral form for referral of confirmed HIV-positive clients for care registration. This referral must be made for all positive clients to enable care registration at the management clinic. This referral generates a care registration form for the client. See 5.2.2.3.5

5.2.2.2.2 Refer new T.B. case for treatment and management

This link holds a referral form for the referral of confirmed or suspected T.B. cases for further evaluation, registration, and management. This referral generates a care registration form for the client. See 5.2.2.3.6

5.2.2.2.3 Refer for other treatment & management (Prevention, STDs & Viral Hepatitis)

This link holds a referral form for referral of clients for treatment of other STDs, Viral Hepatitis, and prevention services. This referral generates a care registration form for the client. See 5.2.2.3.7

5.2.2.3 Care Registrations and Initial Evaluation

A user assigned the care_registration permission has access to the CARE REGISTRATIONS AND INITIAL EVALUATION sub-menu of the pages menu. Expand this link to reveal a list of links to its functionalities

5.2.2.3.1 View HIV Care referrals

This links to a page containing an exportable table of all clients referred for HIV care registration. The table contains information on the client's unique I.D., category, name of the referrer, date of referral, client's date of birth, biological sex, and a button to delete each row of information if there is an error in the referral information.

5.2.2.3.2 View T.B. care referral

This links to a page containing an exportable table of all clients referred for T.B. care registration. The table holds information about the client's unique I.D., category, name of the referrer, date of referral, client's date of birth, biological sex, and a button to delete each row of information if there is an error in the referral information.

5.2.2.3.3 View Other care referrals

This links to a page with an exportable table of all clients referred for prevention, Viral hepatitis, and other STDs care registration. The columns have the client's unique I.D., category, name of the referrer, date of referral, name of the client, client's date of birth, biological sex, and a button to delete each row of information if there is an error in the referral information.

5.2.2.3.4 HIV, Syphilis & Hepatitis Exposed Infant Registration

This links to a form for registration of infants exposed to HIV, Syphilis, Hepatitis, or multiple exposures. Enter the Infant's name, sex, date of birth, birth weight and length, feeding type, and mother's unique I.D., and select the exposure (HIV, Syphilis, Hepatitis, HIV & Syphilis, HIV & Hepatitis, Syphilis & Hepatitis, HIV& Syphilis & Hepatitis). A successful registration generates the exposed infant evaluation forms. See 5.2.2.3.10

5.2.2.3.5 HIV care registration (Adolescent, Adult, Pediatric)

This link holds a form for retrieving the registration form generated on referral for care and treatment. Enter the unique I.D of a referred client and click on the "Get registration form" button. If the unique I.D entered matches the unique I.D of a client referred for HIV care registration and management, the one-time registration form is released. The form has the unique I.D, category, name of the referrer, and date of referral. Verify that this is the correct credential of the client to be registered. Enter the registration date and click on the "Register" button. This registration generates the initial evaluation form. The forms generated depend on the category of the client. For Adults, Pregnant and Adolescent clients, see 5.2.2.3.8; for pediatric clients, see 5.2.2.3.9

5.2.2.3.6 T.B. care registration

This link holds a form for retrieving the registration form generated on referral for care and treatment. Enter the unique I.D of a referred client and click on the "Get registration form" button. If the unique I.D entered matches, the unique I.D of a client referred for Tuberculosis care registration and management, and the one-time registration form is released. The form has the unique I.D, category, name of the referrer, and date of referral. Verify that this is the correct credential of the client to be

registered. Enter the registration date and click on the "Register" button. This registration generates a tuberculosis registration, evaluation, and management care card for the registered client. See 5.2.2.8.3

5.2.2.3.7 Other Care Registration

This link holds a form for retrieving the registration form generated on referral for care and treatment. Enter the unique I.D of a referred client and click on the "Get registration form" button. If the unique I.D entered matches, the unique I.D of a client referred for prevention, hepatitis, or other STDs care registration and management, the one-time registration form is released. The form has the unique I.D, category, name of the referrer, and date of referral. Verify that this is the correct credential of the client to be registered. Enter the registration date and click on the "Register" button. This registration generates a tuberculosis registration, evaluation, and management care card for the registered client. See 5.2.2.8.3

5.2.2.3.8 Adult, Pregnant & Adolescent Initial and Clinical Evaluation

All clients whose category is Adult, Pregnant, or Adolescent has an initial evaluation form generated on registration. This link holds a form for the retrieval of the generated forms. Enter the unique I.D of a registered Adult, Pregnant or Adolescent client and click on the "Get form" button. Suppose the Unique I.D is the I.D of a registered client in the listed category. In that case, a container with five tabbed pages displays. See Fig. 26

All forms in the tabs are updateable. Enter as much information available and update at a later time when the other information is available.

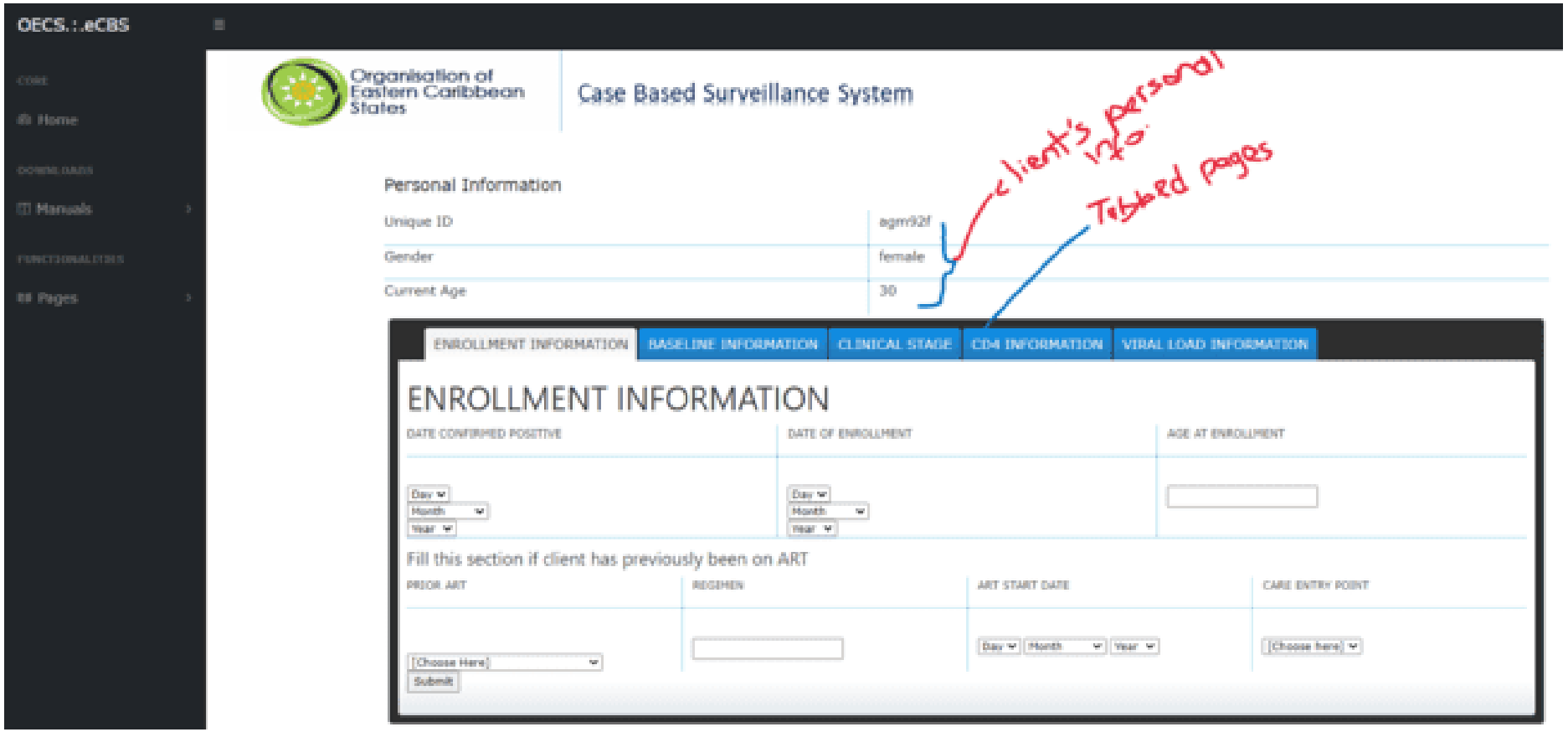


Figure 26: Adult, Pregnant & Adolescent HIV Initial clinical evaluation form

Tab 1: Enrollment information – Enter the date the client was confirmed positive, the date of enrollment into care, and the age at enrollment; if previously on ART, select the previous ART (Transfer-in with records, earlier Arv but not transfer-in, PMTCT only, PEP only), enter the treatment regimen, the date started ART and the care entry point.

Tab 2: Baseline Information – Enter the date started ART, the initial weight, the initial clinical stage, the name of the treatment supporter or medication pick-up if ill, the relationship to the treatment supporter, the home-based care provider, and the drug allergies.

Tab 3: Clinical Stage – This is not the main clinical staging form; it only describes the WHO-proposed immunological classification for established HIV infection. It asks for the date of the first WHO clinical stage 1 or 2 diagnosis, the date of the first WHO clinical stage 3 diagnosis, and the date of the first WHO clinical stage 4 diagnosis. Users can skip this form and fill it out later after the client's clinical management visit or later down the line if the client's situation changes.

Tab 4: CD4 Information – This holds a form that collects the baseline and critical CD4 values. It collects the date of the first CD4 request, the date of the first CD4 sample collection/test date and the result, the date of the first CD4 count < 350 and the value, the date of first CD4 count < 200 and the value. Enter as much information as is available and update at a later time when more information is available, or the client gets new results that match one or more of the requested data. Entry of the date of the first CD4 test triggers the CD4 flags on the client's file and marks the next date of CD4 as three months from the date of the first test. If done differently in the clinic, ignore the system timings, or see 5.2.2.7.8 to reset the client's next test date.

Tab 5: Viral load information – This holds a form that collects the date of the first Viral load test request, the date of the test, and the value. Entry of the date of the first viral load test triggers the Viral load flags on the client's file and marks the next date of the Viral load test as six months from the first test date. If done differently in the clinic, ignore the system timings, or see 5.2.2.7.8 to reset the client's next test date.

5.2.2.3.9 Pediatric Initial & Clinical Evaluation

All clients whose category is pediatric (exposed Infant not included) have a pediatric initial evaluation form generated on registration. This link holds a form for the retrieval of the generated forms. Enter the I.D of a registered pediatric client and click on the "Get form" button. Suppose the Unique I.D is the I.D of a registered client in the listed category. In that case, a container with five tabbed pages displays. See Fig. 27

Tab 1: Pediatric Enrollment Information – this tab holds an enrollment form in updateable form. Enter all the available information and update as more information becomes available. The information collected is:

- Maternal treatment during pregnancy,
- the intrapartum PMTCT treatment,
- the neonatal PMTCT ARV exposure,
- The age of the child at enrollment,
- the type, name, and address of the primary caregiver and secondary caregiver,
- The telephone number of the caregiver,
- The mode of transmission (MTCT or other modes),
- The mode of delivery of the child, the gestation age at delivery, and the duration of membrane rupture,
- The type of test(PCR or antibody) for the final HIV diagnosis and the date of the final HIV diagnosis,
- The date of enrollment into care,
- The date started ARV,
- The date of status disclosure to the child,
- The mother's status (Dead or Alive),
- The father's HIV status,
- The father's address/contact

Tab 2: Clinical Stage – This is not the main clinical staging form; it only describes the WHO-proposed immunological

classification for established HIV infection. It asks for the date of the first WHO clinical stage 1 or 2 diagnosis, the date of the first WHO clinical stage 3 diagnosis, and the date of the first WHO clinical stage 4 diagnosis. Users can skip this form and fill it out later after the client's clinical management visit or later down the line if the client's situation changes.

Tab 3: Immunization – This tab holds a form to view or collect all previous and new vaccines administered to the child.

Tab 4: Viral Load – This holds a form that collects the date of the first Viral load test request, the date of the test, and the value. Entry of the date of the first viral load test triggers the Viral load flags on the client's file and marks the next date of the Viral load test as six months from the first test date. If done differently in the user's clinic, ignore the system timings, or see 5.2.2.7.8 to reset the client's next test date.

Tab 5: CD4 - This holds a form that collects the baseline and critical CD4 values. It collects the date of the first CD4 request, the date of the first CD4 sample collection/test date and the result, the date of the first CD4 count < 350 and the value, the date of first CD4 count < 200 and the value. Enter as much information as is available and update at a later time when more information is available, or the client gets new results that match one or more of the requested data. Entry of the date of the first CD4 test triggers the CD4 flags on the client's file and marks the next date of CD4 as three months from the date of the first test. If done differently in the clinic, ignore the system timings, or see 5.2.2.7.8 to reset the client's next test date.

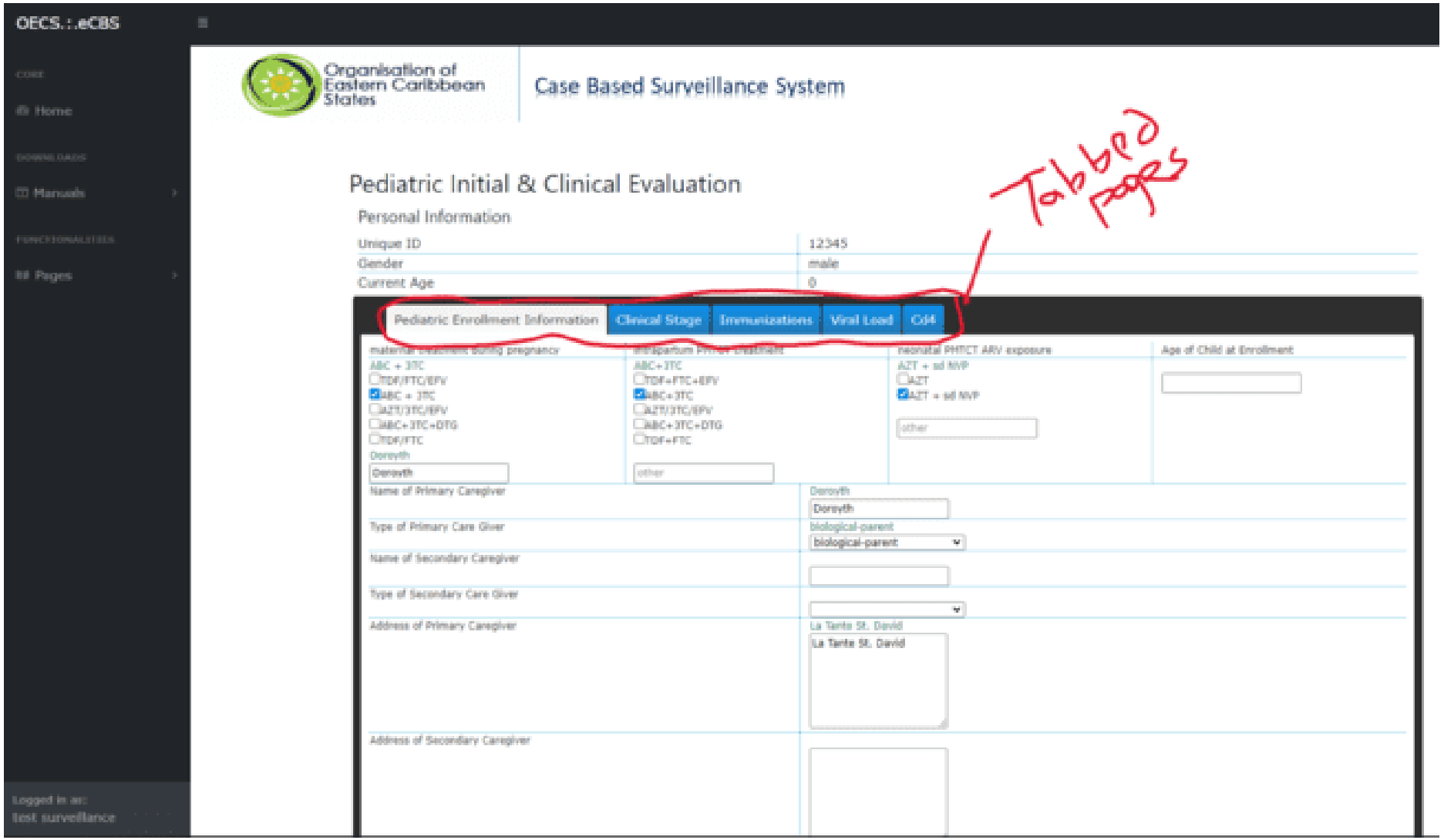


Figure 27: Pediatric HIV initial clinical evaluation card

All forms in the tabs are updateable. Enter as much information available and update at a later time when the other information is available.

5.2.2.3.10 HIV Exposed Infant Evaluation

All clients whose category is exposed have an exposed infant initial evaluation form generated on registration. This link holds a form for the retrieval of the generated forms. Enter the I.D of a registered exposed client and click on the "Get form" button. Suppose the Unique I.D is the I.D of a registered client in the listed category. In that case, a container with five tabbed pages displays. See Fig. 28

Tab 1: Exposed Infant Enrollment Information – this tab holds an enrollment form in updateable form. Enter all the available information and update as more information becomes available. The information collected is:

- Maternal treatment during pregnancy,
- the intrapartum PMTCT treatment,
- the neonatal PMTCT ARV exposure,
- The age of the child at enrollment,
- the type, name, and address of the primary caregiver and secondary caregiver,
- The telephone number of the caregiver,
- The mode of transmission (MTCT or other modes),
- The mode of delivery of the child, the gestation age at delivery, and the duration of membrane rupture,
- The type of test(PCR or antibody) for the final HIV diagnosis and the date of the final HIV diagnosis,
- The date of enrollment into care,
- The date started ARV,
- The date of status disclosure to the child,
- The mother's status (Dead or Alive),

- The father's HIV status,
- The father's address/contact

Tab 2: Exposed Infant screenings – This holds a form recording up to 4 HIV screening information. It collects the age at the screening, the screening date, the type (PCR/Antibody), and the test result.

Tab 3: Immunization – This tab holds a form to view/record all previous/new vaccines administered to the child.

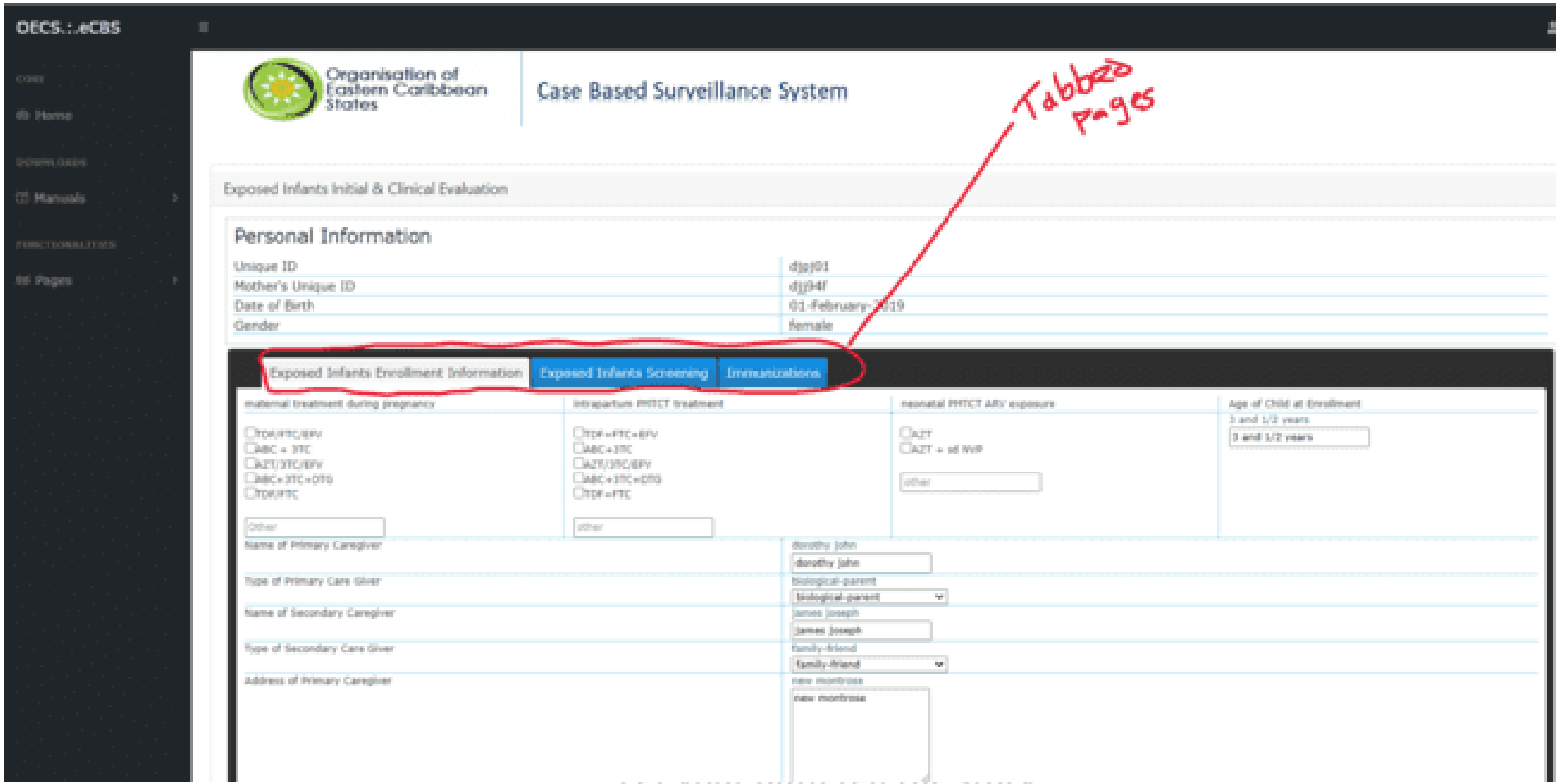


Figure 28: HIV Exposed infant evaluation card

5.2.2.3.11 Registered Clients (HIV)

This link contains two exportable tables listing all registered HIV care and treatment clients. Table 1 lists adult, adolescent, pediatric and pregnant clients with unique I.D., registration date, registered by, category, and date of referral as the column labels, while Table 2 lists exposed infants with column labels unique I.D., date of birth, sex, date registered, registered by and exposure.

5.2.2.3.12 Registered Clients (Tuberculosis)

This link holds two exportable tables that list all registered Tuberculosis care and treatment clients. Table 1 lists adult, pregnant, and adolescent clients with unique I.D., registration date, category, and registered by as the column labels. Table 2 lists pediatric clients with column labels unique I.D., registration date, category, and registered by.

5.2.2.3.13 Registered Clients (Others)

This link holds three exportable tables that list all registered other care and treatment clients. Table 1 lists adult, pregnant, and adolescent clients with unique I.D., registration date, category, and registered by as the column labels. Table 2 lists pediatric clients with column labels unique I.D., registration date, category, and registered by. Table 3 lists the exposed infants registered for other care and treatment with column labels, unique I.D., date registered, and exposure.

5.2.2.4 Prevention & Control / PMTCT

A user granted the prevention_control permission can access the page menu's **PREVENTION & CONTROL / PMTCT** sub-menu. Expand this link to reveal a list of links to its functionalities

5.2.2.4.1 Track client's risk history

Enter the client's unique I.D on the form that presents and click on the get button. Suppose records exist for the unique I.D. entered. In that case, the last three recorded risk behaviors display in separate containers with the most recent first. For another means of getting to this page, see figure 22.

5.2.2.4.2 Risk Reduction

Enter the client's unique I.D on the form that presents and click on the get client button. If the unique I.D entered is valid, a risk reduction session form generates for the client. For another means of getting to this page, see figure 22.

5.2.2.4.3 Risk reduction history

Enter the client's unique I.D on the form that presents and click on the get client button. Suppose the unique I.D entered is valid, and records exist for the client. In that case, the page populates with an exportable table of the previously recorded information. For another means of getting to this page, see figure 22.

5.2.2.4.4 Listed contact

This page holds two exportable tables of all the contacts listed from the antenatal clinics and recorded from the other clinics. The table columns are contact code, date listed, unique I.D., contact's name, address, telephone number, gender of the contact, the status, and report.

5.2.2.4.5 Report tracing

This page holds two forms. Form 1: Enter the contact code of a contact listed by a pregnant client, and Form 2: enter the contact code for contacts listed from other clinics. Entry of a valid contact code on the correct form generates a report form for the contact. The form collects the date of the report/tracing, a text field to leave notes about the tracing or tracing attempts, and a result button to mark as traced when the tracing is complete.

5.2.2.4.6 PrEP / PEP Referrals

This link holds a referral form for referral of clients for treatment of other STDs, Viral Hepatitis, and prevention services. This referral generates a care registration form for the client. See 5.2.2.3.7

5.2.2.4.7 Untraced contact list

This page holds two exportable tables of listed contacts/partners that require action. The first table contains untraced contacts/partners of pregnant clients, and the second table has untraced contacts/partners from the general population.

5.2.2.4.8 Pregnant client registration /PMTCT data form

At the top of the page is a flag; beneath the flag is a form for retrieving the previous PMTCT registration form for an update. A green flag indicates no positive pregnant client and requires no action. A blue flag indicates pregnant clients whose HIV/Syphilis lab results are reactive/positive. Beneath the flag is a get list button. Click on the button to get a table of all flagged clients. The columns of the table are unique I.D, pregnancy I.D, date created, and a get form button. Click on the get form button on the row of the unique I.D whose PMTCT registration form to generate. Figure 30 shows the form. Fill in the information required on the form and save. To update the saved PMTCT form, use the search form beneath the flag, shown in figure 29.

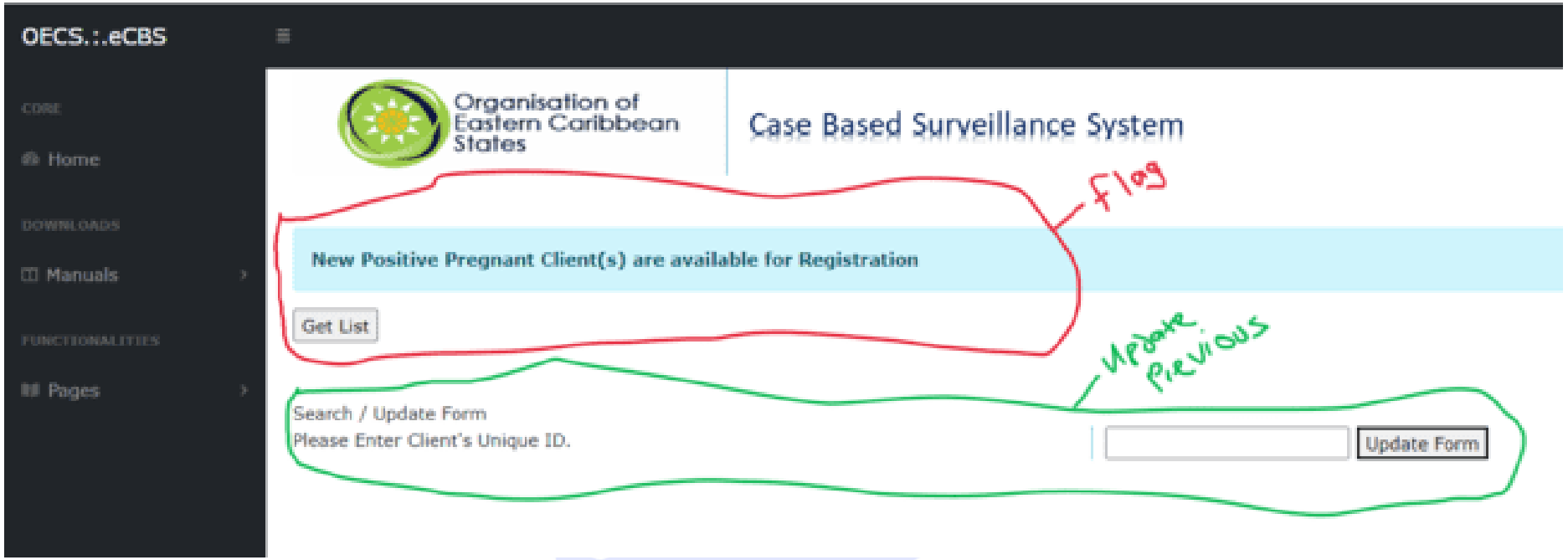


Figure 29: Image of the PMTCT Home page

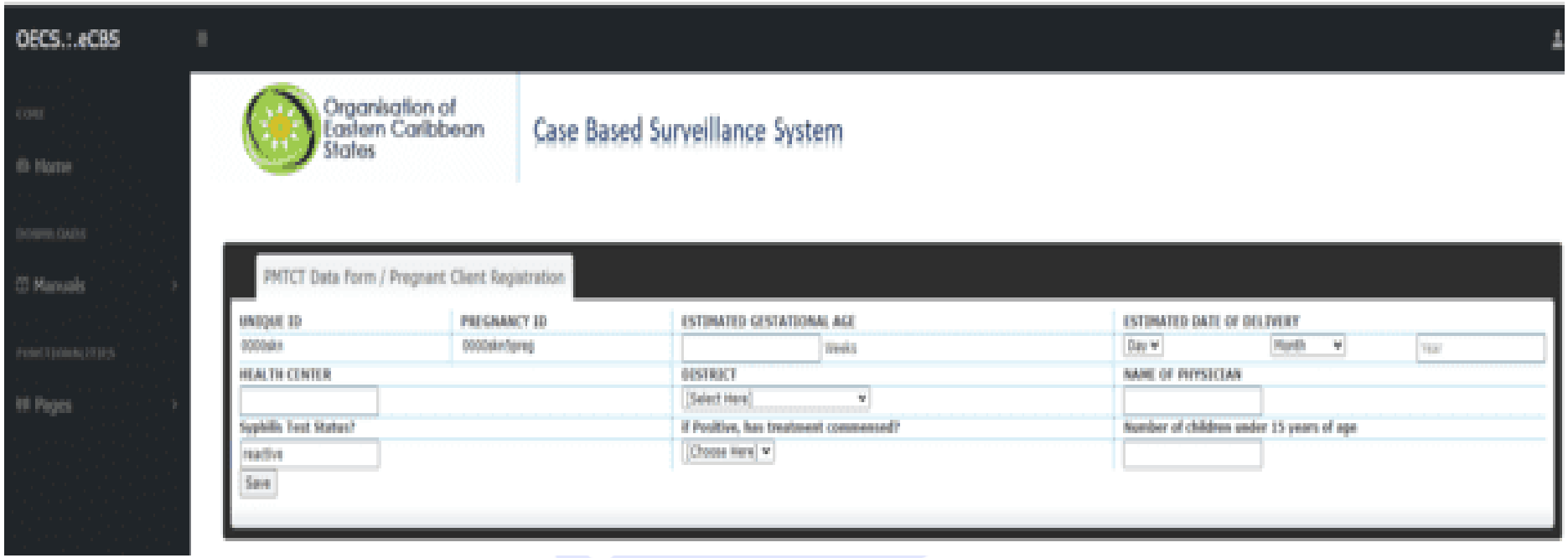


Figure 30: PMTCT data / registration Form

5.2.2.4.9 PMTCT Registration History

Enter the client's unique I.D on the form to get information on all PMTCT registrations recorded for the client for previous pregnancies.

5.2.2.5 Screenings, category/mortality updates

A user granted the updates can access the **page's menu SCREENINGS, CATEGORY / MORTALITY UPDATES sub-**menu. Expand this link to reveal a list of links to its functionalities

5.2.2.5.1 Order/update screenings

Enter the unique I.D of the client to get screening forms for data entry. If the unique I.D entered is correct, a container with seven tabbed pages displays.

Tab 1: HIV Screening – holds the HIV screenings record form. Enter the date of the record, select the type of test, the testing modalities used, and the name of the test kit used. For rapid parallel testing, enter both the test kit and results. For serial, users can enter one save and the next or wait for both results and enter both simultaneously. For other types of testing, leave the test kit field blank and fill in just one result field.

Tab 2: T.B. Screenings – holds the T.B. screening record form. Enter the date, the type of test, the induration (for TST), the result, and the result date.

Tab 3: Syphilis Screenings – holds the Syphilis screenings record form. Select the record date, the type of test, the titer, the result, and the result date.

Tab 4: Other Screenings – holds the form to record other screenings. Select the record date, the type of screening, the result text/selection, and the test result date.

Tab 5: Extra Notes – holds a form to leave additional notes about the client for follow-up.

Tab 6: Upload Screening results – holds a form to upload or type screening reports.

Tab 7: Drug resistance Testing – This holds a form to enter the drug-resistance test result. Enter the information on the form and for the test result, use the Add row button to add new rows to enter multiple results. Figure 31 shows the drug-resistance test record form.

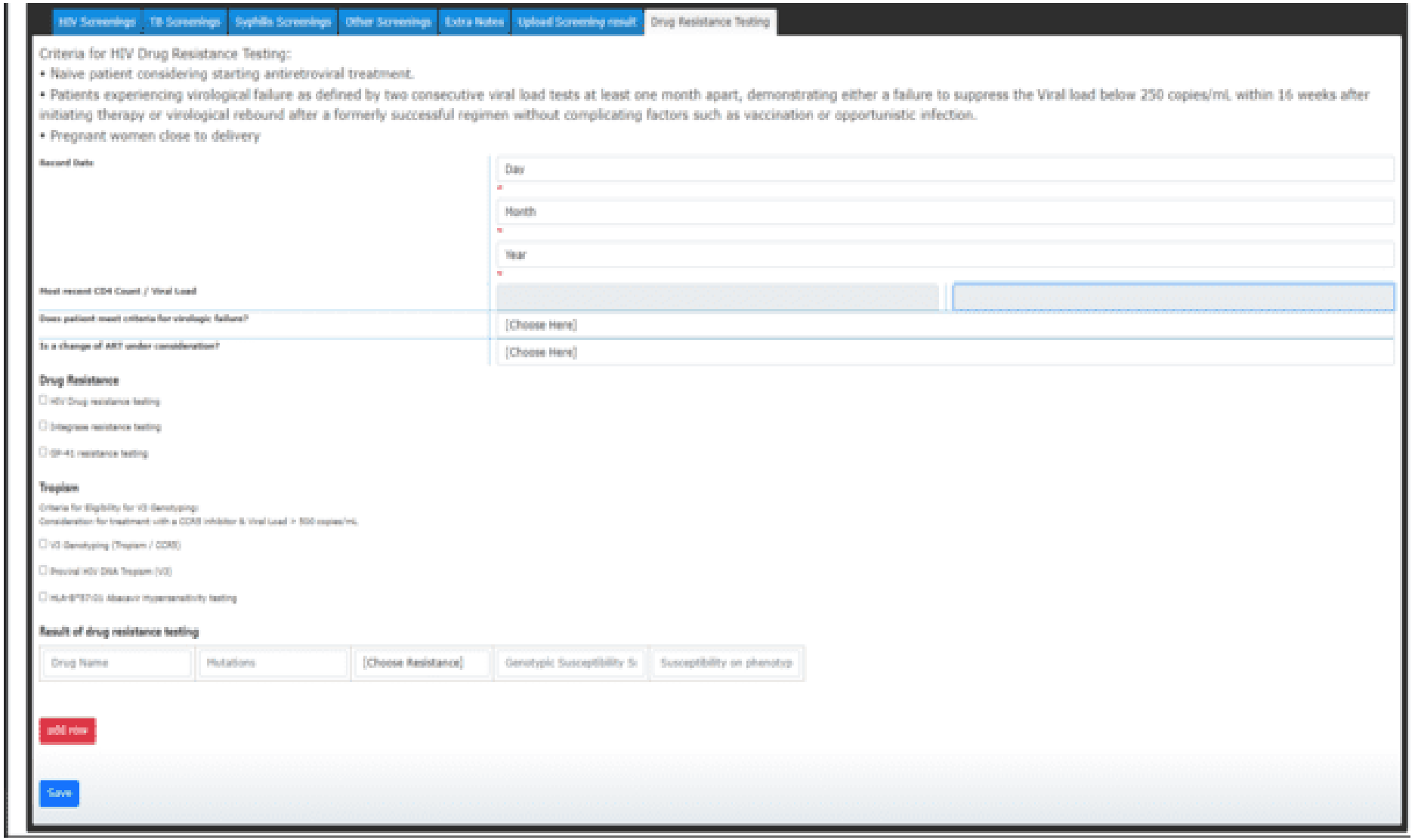


Figure 31: Drug-resistance test form

5.2.2.5.2 Update client's category

To update the client's category, enter the unique I.D of the client. If the I.D. matches and I.D of a client in care, the system generates a form for the change. Select a new category from the options on the form and click on the update button. Note that a new initial and clinical evaluation form is generated once the client's category changes. If the change is from adult to pediatric, see 5.2.2.3.9 for instructions on filling out the new initial evaluation form. If the change is from pediatric to adult, see 5.2.2.3.8 for instructions on filling out the new initial evaluation form. Changes between adolescents and adults have no change in the initial evaluation form.

5.2.2.5.3 Register deaths

Enter the client's unique I.D on the form that presents. A death registration form displays for the client. Change the status from Alive to dead, select the cause of death from the option (HIV death, HIV-related death, unknown), enter the date of death, and click on the update button.

5.2.2.6 Psycho-social support / Adherence counseling

A user granted the psycho-social_adherence_counselling permission can access the **PSYCHO-SOCIAL SUPPORT / ADHERENCE COUNSELING** sub-menu of the page menu. Expand this link to reveal a list of links to its functionalities

5.2.2.6.1 Schedule counseling appointments

There are three types of counseling sessions.

1. Adherence readiness assessment
2. Adherence strategy workplan
3. Adherence follow-up assessment

Enter the client's unique I.D on the form that presents and select the button that holds a label for the type of counseling appointment.

Note: a client can have only one pending appointment at a time. All users granted the psycho-social_adherence_counselling permission must also have the routine permission to enable appointment scheduling.

5.2.2.6.2 Pending counseling appointments

This page holds an exportable table of scheduled counseling appointments, the scheduled dates, and the session type. On each row is a delete symbol. Click the symbol to delete an appointment in error or with the wrong session type and reschedule the appointment.

5.2.2.6.3 Start counseling appointments

Enter the unique I.D. of the client to retrieve the forms generated for the session. The type of form generated depends on the kind of session scheduled. At the top of each session, forms are the CD4 and Viral load flags containing information about the test due date.

For the Adherence readiness assessment session: the pretreatment adherence counseling form collects information that assesses the client's knowledge of HIV, HIV status, misconceptions, medications side effects, stigma, support group, mental state, and readiness to take pills daily for the rest of life.

For the Adherence Strategy workplan: The form collects information on the strategy employed to get a client ready for adherence. It records the medication used for practice trial/simulation.

For Adherence follow-up assessment: The form looks at the medications Prescribed to the clients and asks questions about the doses missed up to three days before the appointment. It records the circumstance under which the client missed the drug and the issues to be addressed to improve adherence.

5.2.2.6.4 Past counseling encounter

Enter the unique I.D. of the client to retrieve the last counseling encounter. The previous counseling encounter returns in three tabs if the unique I.D. exists.

Tab 1: holds the last pretreatment adherence counseling if there was a previous session

Tab 2: holds the adherence follow-up assessment if there was a previous session

Tab 3: holds the adherence strategy workplan if there was a previous session.

5.2.2.7 Appointments / Patient monitoring

A user granted the routine permission can access the APPOINTMENT / PATIENT MONITORING sub-menu of the page menu. Expand this link to reveal a list of links to its functionalities

5.2.2.7.1 View pending appointments

This link holds a table of all scheduled clinical management and lab test appointments. The columns of the table are the client's unique I.D., the purpose of the appointment, the date created and created by, and the date of the appointment. The trash sign beside each appointment row would delete the appointment if it were created wrongly or in error.

5.2.2.7.2 Schedule new clinical management / CD4 / VL appointments

Enter the unique I.D., reason for the appointment, and date on the form to schedule the appointment.

5.2.2.7.3 Schedule counseling appointment

Same as 5.2.2.6.1

There are three types of counseling sessions.

1. Adherence readiness assessment

2. Adherence strategy workplan

3. Adherence follow-up assessment

Enter the client's unique I.D on the form that presents and select the button that holds a label for the type of counseling appointment.

Note: a client can have only one pending appointment at a time.

5.2.2.7.4 Change appointment date

Enter the unique I.D. of a client with a pending clinical management appointment. Only the date of the appointment is editable. If there are other errors, delete the appointment and recreate it.

5.2.2.7.5 Create visit/record vital signs

For a client with a clinical management appointment, the create visit/record vital sign link collects the vital signs and statistics of the client for release of the care card for clinical management. This process is a strict rule for HIV care and treatment for

registered clients and optional for other types of clients. Clients registered for T.B., prevention, and other STDs only need to be registered into care for the care card to be released.

5.2.2.7.6 Get adherence readiness information

This page lists all clients who have had a treatment adherence readiness assessment. It displays the list in two tables. Table 1: Those assessed via psychological assessment and Table 2: Those assessed via a strategy workplan.

5.2.2.7.7 Monitor clients

This link displays three tables in three tabs.

Tab 1: Cd4 and Viral load monitoring: This lists all the clients and their cd4/viral load test status and due dates.

Tab 2: Medication Adherence Assessment Report: This lists all clients on ART who have had an adherence follow-up assessment.

Tab 3: Missed Appointments: This lists clients who have missed an appointment and have not been to the clinic since the appointment.

5.2.2.7.8 Routine tests/reset dates

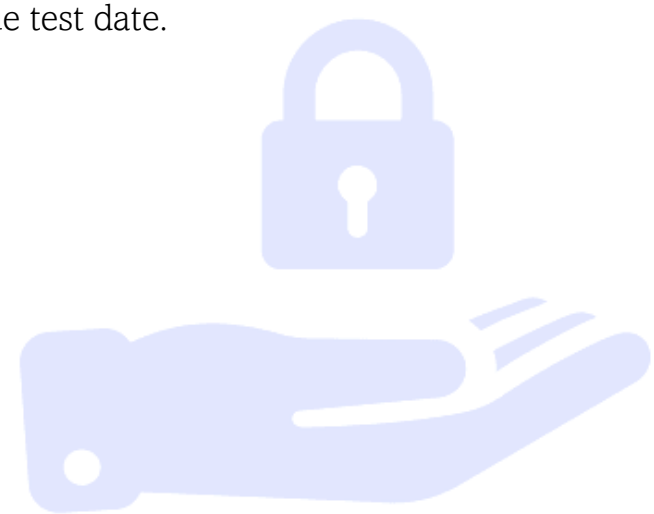
This links to a page that holds a form and a table. A form is at the top of the page; enter the client's unique I.D. and select the examination whose date to reset.

Beneath the form is a table that lists all the clients and their test status in color codes.

Red means no baseline test recorded or test date due passed.

Green means test status is OK, and the date of the next test is in the future

Blue means that the current date is the due test date.



5.2.2.8 Clinical Management

A user granted the clinical_management permission has access to the CLINICAL MANAGEMENT sub-menu of the pages menu. Expand this link to reveal a list of links to its functionalities

5.2.2.8.1 Waiting clients

This page holds an exportable table that contains information on all triaged clients waiting for clinical management. The table columns hold the client's unique I.D., the visit's purpose, and the triage nurse's or staff's name. All clients for HIV clinical management must be on this list to access the care card to record the clinical management encounter.

5.2.2.8.2 HIV care card

Enter the unique I.D. of a triaged client or of a client whose I.D. appears on the waiting client list. The care card is released for data collection if the I.D. entered is found amongst triaged clients. There are two types of care cards.

1. The Adult / Adolescent / Pregnant client care card: the system present the forms based on the category of the client. If the client category is not the desired category for the appropriate form generation, refer to 5.2.2.5.2 to update the client's category. At the top of the page are flags and trends of important values. The flags hold information about the Cd4 and viral load tests, the trends in the cd4 and viral load values recorded over time, the BMI trends, the adherence assessment report for clients on ART, and the results of drug resistance tests, if any. A link to record, order, update, or view screenings is beneath the flags and above the day's encounter forms. Click on the link and enter the client's unique I.D. follow 5.2.2.5.1

The last recorded vital signs and statistics are displayed along with the basic demographic information of the client above the form tabs.

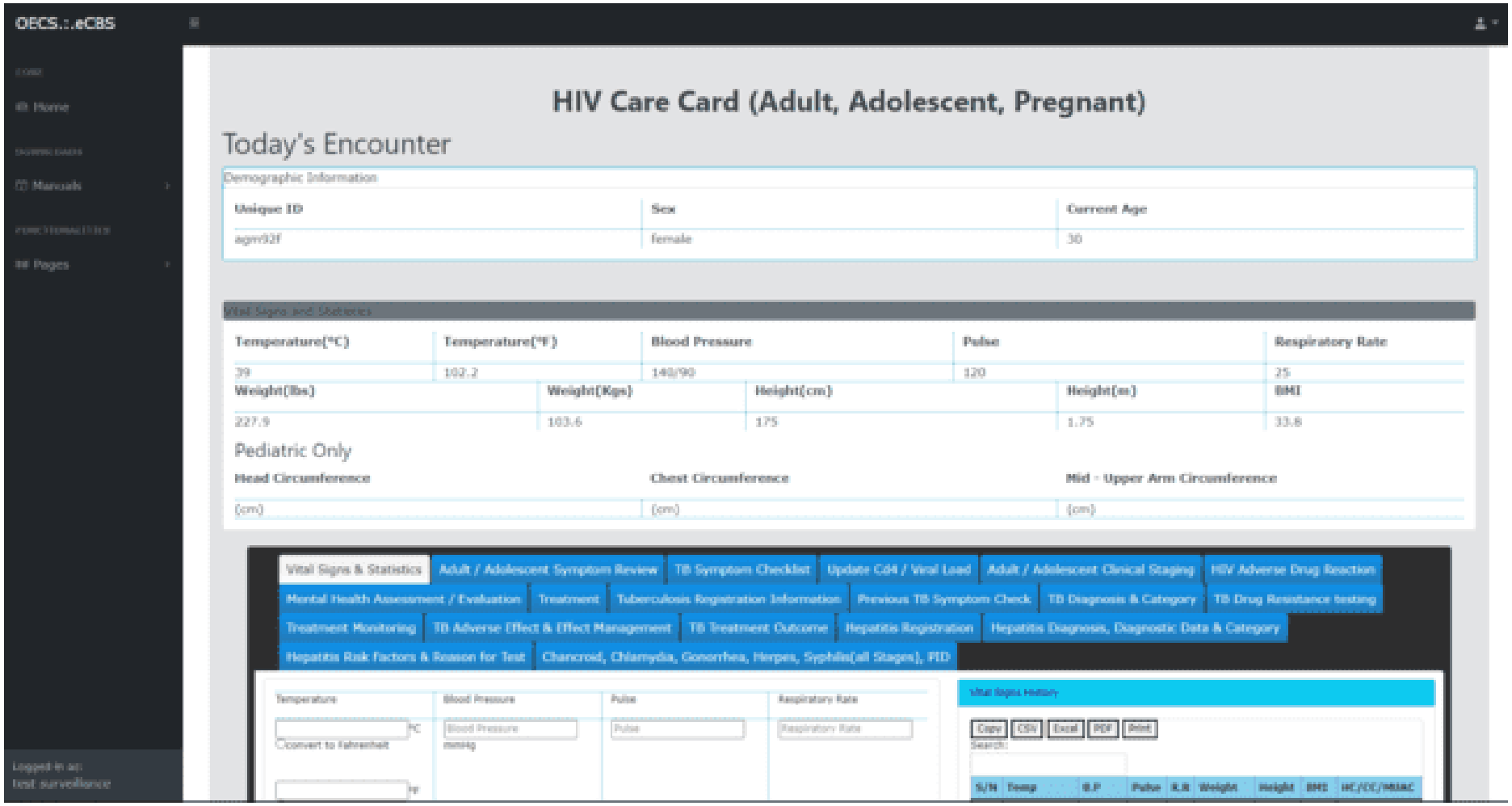


Figure 32: Adult, Adolescent, and Pregnant HIV care card

Tab 1: Vital signs & statistics –This tab holds a form for recording vital signs and statistics and an exportable table holding all previously recorded values.

Tab 2: Adult/Adolescent symptom review – This tab holds an encounter form for recording symptoms and observations for the clinical management encounter. The fields collected are: presenting complaints, additional comments/information, detailed findings, new OI/other problems, family planning info, patient's disposition(withdrawal), assessment, plan, ARV therapy, and treatment Regimen. The form clears for the next entry after a successful save. Note that the values saved cannot be edited. In the event of missing information, fill out a new form. The previous forms saved are available in the previous encounter link. See 5.2.2.8.5

Tab 3: TB Symptom checklist – This encounter form holds questions that classify the client as a TB suspect or not suspect and records information about follow-up screenings, treatment, and prophylaxis. After saving the entries, the form clears for a new entry. The previous TB symptom checklist tab holds the previously saved entries. Once saved, an edit is not possible. For missing information or change in information, fill out the form again.

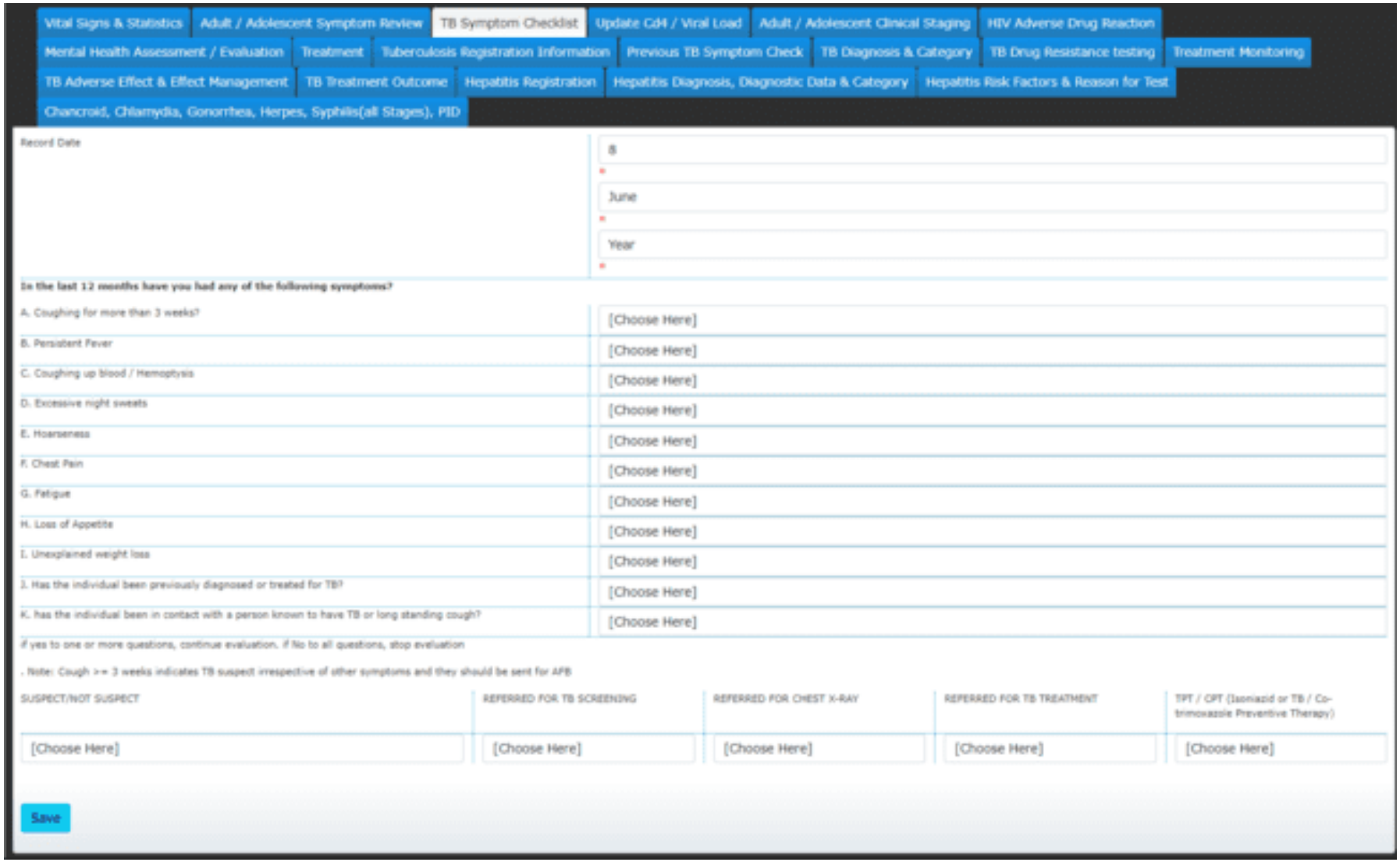


Figure 33: TB Symptom checklist form

Tab 4: Update CD4/Viral load – This tab holds a form to record the most recent CD4/Viral load values if not already recorded.

Tab 5: Adult/Adolescent Clinical Staging – This holds a form that lists various symptoms categorized in stages. Select all of the client's symptoms to stage the client.

Tab 6: HIV Adverse Drug Reaction – This holds a form to select the adverse drug reactions experienced by clients on ART.

Tab 7: Mental Health Assessment/Evaluation – This form collects assessment answers that track client symptoms and presentation changes. It also captures their DSM-5 diagnosis category over time. Each of the assessment questions is rated on a 5-point scale. See figure 34 for the scale, domain of assessments, and threshold for further inquiry. Beneath the Instruction is the encounter form (figure 35) to record answers to the assessment questions. Once submitted, the form clears for a new entry.

HIV / AIDS Mental Health Diagnosis and Assessment Measure Form

This form tracks changes in the individual's symptom presentation and captures their DSM-5 diagnosis category over time. Each item on the measure is rated on a 5-point scale (0 = none or not at all, 1 = slight or rare: less than a day or two, 2 = mild or several days, 3 = moderate or more than half the days, 4 = severe or nearly every day)

The score on each item within a domain should be reviewed. Because additional inquiry is based on the highest score on any item within a domain, the clinician is asked to indicate the score in the "Highest domain score" column. A rating of mild (i.e 2) or greater on any item within a domain (except for substance use, suicidal ideation, sexual behavior and psychosis) shall serve as a guide for further additional inquiry

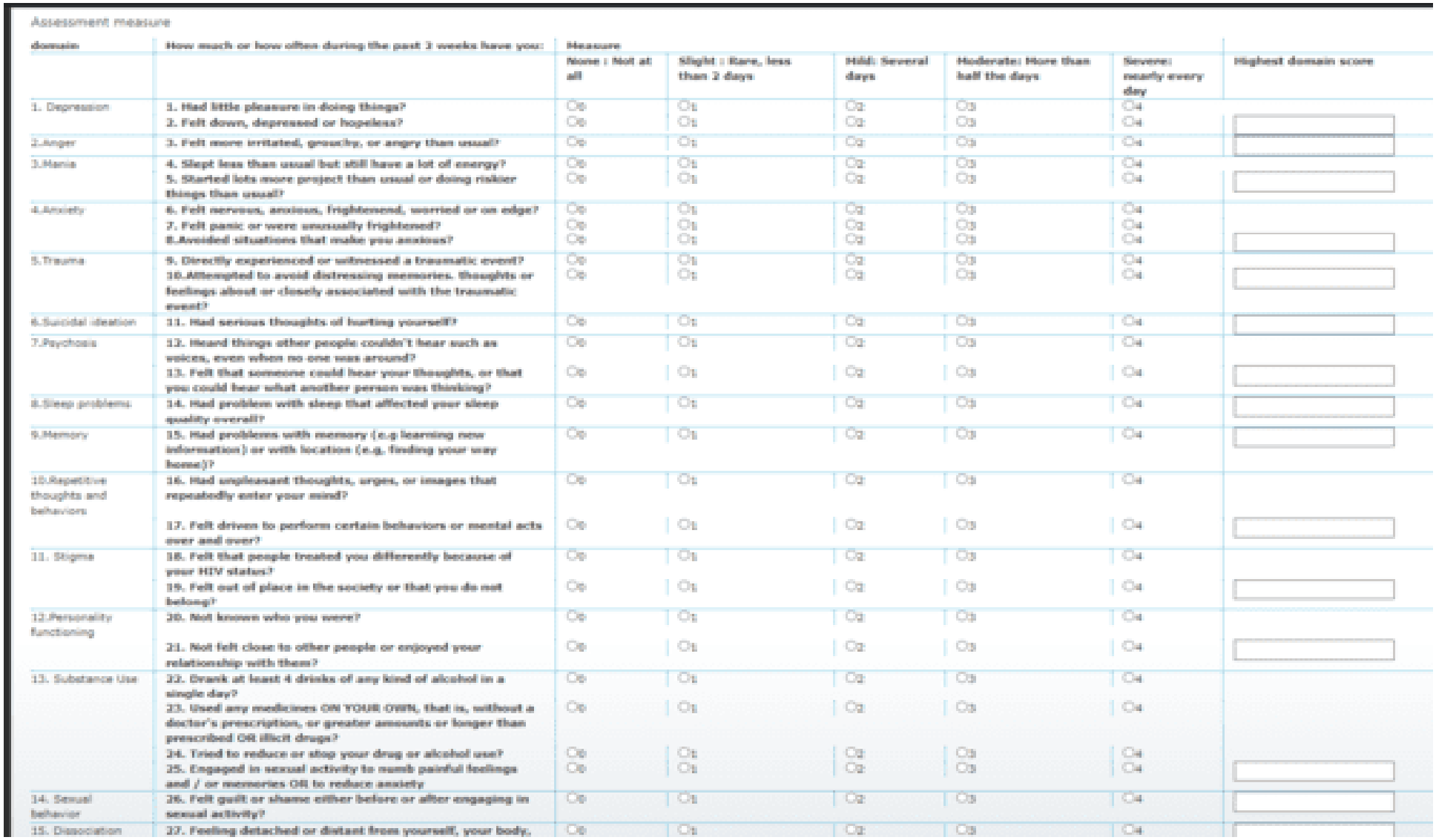
For substance use, suicidal ideation, sexual behavior and psychosis, a rating of slight (i.e , 1) or greater on any item within the domain indicates a need for further follow-up to determine if a more detailed assessment and / or immediate action is needed.

The tool should be completed at regular intervals as clinically indicated but at a minimum at baseline and every 90 days thereafter. Consistently high scores on a particular domain may indicate significant and problematic symptoms for the individual that might warrant further assessment, treatment and follow-up. Clinical judgement should guide decision making.

This measure consists of 27 questions that assess 15 domains and includes collection of the mental health diagnosis, medication status and HIV risk behavior practices.

Domain	Domain name	Threshold to guide further inquiry
1.	Depression	Mild or greater
2.	Anger	Mild or greater
3.	Mania	Mild or greater
4.	Anxiety	Mild or greater
5.	Trauma	Mild or greater
6.	Suicidal ideation	Slight or greater
7	Psychosis	Slight or greater
8	Sleep problems	Mild or greater
9	Memory	Mild or greater
10.	Repetitive thoughts and behaviors	Mild or greater
11.	Stigma	Mild or greater
12.	Personality functioning	Mild or greater
13.	Substance use	Slight or greater
14.	Sexual behavior	Mild or greater
15.	Dissociation	Mild or greater

Figure 34: Mental Health Evaluation Instruction



Assessment measure

domain	How much or how often during the past 2 weeks have you:	Measure None : Not at all	Slight : Rare, less than 2 days	Mild: Several days	Moderate: More than half the days	Severe: nearly every day	Highest domain score
1. Depression	1. Had little pleasure in doing things?	○0	○1	○2	○3	○4	
	2. Felt down, depressed or hopeless?	○0	○1	○2	○3	○4	
2.Anger	3. Felt more irritated, grouchy, or angry than usual?	○0	○1	○2	○3	○4	
3.Mania	4. Slept less than usual but still have a lot of energy?	○0	○1	○2	○3	○4	
	5. Started lots more project than usual or doing riskier things than usual?	○0	○1	○2	○3	○4	
4.Anxiety	6. Felt nervous, anxious, frightened, worried or on edge?	○0	○1	○2	○3	○4	
	7. Felt panic or were unusually frightened?	○0	○1	○2	○3	○4	
	8.Avoided situations that make you anxious?	○0	○1	○2	○3	○4	
5.Trauma	9. Directly experienced or witnessed a traumatic event?	○0	○1	○2	○3	○4	
	10.Attempted to avoid distressing memories, thoughts or feelings about or closely associated with the traumatic event?	○0	○1	○2	○3	○4	
6.Suicidal ideation	11. Had serious thoughts of hurting yourself?	○0	○1	○2	○3	○4	
7.Psychosis	12. Heard things other people couldn't hear such as voices, even when no one was around?	○0	○1	○2	○3	○4	
	13. Felt that someone could hear your thoughts, or that you could hear what another person was thinking?	○0	○1	○2	○3	○4	
8.Sleep problems	14. Had problem with sleep that affected your sleep quality overall?	○0	○1	○2	○3	○4	
9.Memory	15. Had problems with memory (e.g learning new information) or with location (e.g, finding your way home)?	○0	○1	○2	○3	○4	
10.Repetitive thoughts and behaviors	16. Had unpleasant thoughts, urges, or images that repeatedly enter your mind?	○0	○1	○2	○3	○4	
	17. Felt driven to perform certain behaviors or mental acts over and over?	○0	○1	○2	○3	○4	
11. Stigma	18. Felt that people treated you differently because of your HIV status?	○0	○1	○2	○3	○4	
	19. Felt out of place in the society or that you do not belong?	○0	○1	○2	○3	○4	
12.Personality functioning	20. Not known who you were?	○0	○1	○2	○3	○4	
	21. Not felt close to other people or enjoyed your relationship with them?	○0	○1	○2	○3	○4	
13. Substance Use	22. Drank at least 4 drinks of any kind of alcohol in a single day?	○0	○1	○2	○3	○4	
	23. Used any medicines ON YOUR OWN, that is, without a doctor's prescription, or greater amounts or longer than prescribed OR illicit drugs?	○0	○1	○2	○3	○4	
	24. Tried to reduce or stop your drug or alcohol use?	○0	○1	○2	○3	○4	
	25. Engaged in sexual activity to numb painful feelings and / or memories OR to reduce anxiety	○0	○1	○2	○3	○4	
14. Sexual behavior	26. Felt guilt or shame either before or after engaging in sexual activity?	○0	○1	○2	○3	○4	
15. Dissociation	27. Feeling detached or distant from yourself, your body,	○0	○1	○2	○3	○4	

Figure 35: Mental Health Assessment Questions

Tab 8: Treatment – Take a look at figure 36. The treatment form has three sections. The top holds a table of drug pick-up history from the pharmacy if recorded. Beneath the history is a form on the left for recording the prescription given to the client. Use the Add Row button to add new rows as only one drug can be entered on a row. The right side holds the history of recorded prescriptions over time regardless of dispense or pick-up.

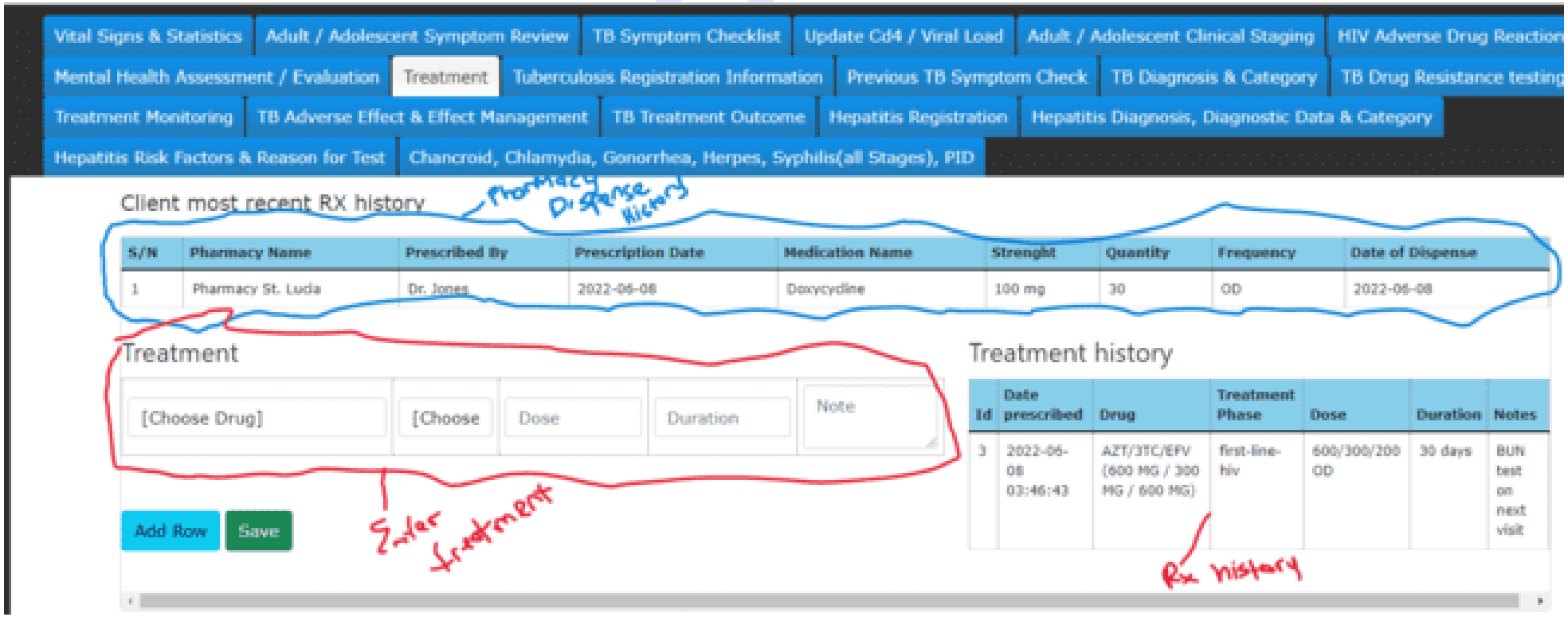


Figure 36: The treatment record page

Tab 9: Tuberculosis registration information – Clients registered for HIV care and treatment automatically get all tuberculosis registration forms and management added to their care card. If a client in HIV care was suspected or diagnosed with TB, fill out the form in the Tuberculosis Registration Information tab. This form is a one-time updateable form.

Tab 10: Previous TB symptom checklist – This holds a table containing information from the TB symptomatic check form.

Tab 11: TB Diagnosis & Category – This tab holds a form that collects TB diagnosis, diagnostic criteria, and category information. It is a one-time updateable form that allows for changes in the future with new information or re-registration.

Tab 12: TB Drug Resistance testing – The drug resistance testing form collects information about the drug resistance test and its results. Use the add row button to create new rows to enter more than one resistance result. The table to the form's right holds all the recorded drug resistance test histories.

Tab 13: Treatment monitoring – this holds a form that records information on the lab evaluation requested as part of treatment/treatment monitoring. The table to the right of the form is a table that holds all previously recorded treatment monitoring information.

Tab 14: TB adverse effect & effect management – This tab holds two forms. The first form is the adverse effect evaluation form. It contains options of possible adverse effects. Select the

Tab 15: TB treatment outcome – At the end of TB treatment for a client, use the form in this tab to record the treatment outcome.

Tuberculosis registration information, TB Diagnosis & Category, TB Drug Resistance testing, Treatment monitoring, TB adverse effect & effect management, and

TB treatment outcome tabs hold Tuberculosis care and management forms. Do not fill out those forms if the client is not diagnosed with Tuberculosis.

Tab 16: Hepatitis Registration – Clients registered for HIV Care and Treatment automatically get all Hepatitis and Other STDs forms added to their care card. For clients diagnosed with Hepatitis, fill out the Hepatitis registration form.

Tab 17: Hepatitis Diagnosis, Diagnostic data & Category – This tab holds a form for selecting the symptoms, clinical diagnosis, diagnosis category, evaluation, and diagnosis of cirrhosis and hepatocellular carcinoma.

Tab 18: Hepatitis Risk Factors & Reason for test – This tab holds a form for selecting the client's risk factors and why they got tested.

Tab 19: Chancroid, Chlamydia, Gonorrhea, Herpes, Syphilis (all stages), PID – This tab holds a form for registering other STDs. Fill out the registration form for clients with syphilis, chlamydia, gonorrhea, or other STDs.

Note that the treatment form should record treatments for all conditions. An HIV registered Adult / Adolescent client does not need the TB and Other referral and registration except if the TB clinic and the other STD clinic are different from the HIV clinic. In that case, they should be referred for each type of referral and registered into that care to get a dedicated care card for TB and Others.

2. The Pediatric care card: the system present the forms based on the category of the client. If the client category is not the desired category for the appropriate form generation, refer to 5.2.2.5.2 to update the client's category. Like the Adult care

card, all TB care cards forms auto-generate in the pediatric and exposed infant HIV Care card. Except if the pediatric or exposed client is HIV negative with TB infection, or the management clinic differs for TB and HIV, it is not necessary to do a TB referral.

Tab 1: Vital Signs and Statistics – This tab holds a form for recording vital signs and statistics and an exportable table holding all previously recorded values.

Tab 2: Pediatric Symptom Review-This tab holds a form that collects the client's symptoms and duration, the developmental assessment, physical examination by organ systems, findings, and plan.

Tab 3: TB symptom checklist - This encounter form holds questions that classify the client as a TB suspect or not suspect and records information about follow-up screenings, treatment, and prophylaxis. After saving the entries, the form clears for a new entry. The previous TB symptom checklist tab holds the previously saved entries. Once saved, an edit is not possible. For missing information or change in information, fill out the form again.

Tab 4: Pediatric ART Care card – This tab holds a form that records the client's nutrition and developmental status at each visit. It also collects information on opportunistic infections, ARV regimen, the reason for change or stop of ARV if applicable, and hemoglobin and ALT values.

Tab 5: Cd4 /Viral load – This tab holds a form to record the most recent CD4/Viral load values if not already recorded.

Tab 6: Pediatric Clinical Staging – This holds a form that lists various symptoms categorized in stages. Select all of the client's symptoms to stage the client.

Tab 7: HIV Adverse Drug Reaction – This holds a form to select the adverse drug reactions experienced by clients on ART.

Tab 8: Treatment – Take a look at figure 36. The treatment form has three sections. The top holds a table of drug pick-up history from the pharmacy if recorded. Beneath the history is a form on the left for recording the prescription given to the client. Use the Add Row button to add new rows as only one drug can be entered on a row. The right side holds the history of recorded prescriptions over time regardless of dispense or pick-up.

Tab 9: Initial Evaluation Information – This tab holds the initial evaluation form filled for the client on care registration. Update the values on the form with new information, if any.

Tab 10: Immunizations - This tab holds a form for recording immunizations given to the child. The table to the right of the form holds all previously recorded immunizations.

Tab 11: Tuberculosis Registration Information – Clients registered for HIV care and treatment automatically get all tuberculosis registration forms and management added to their care card. If a client in HIV care was suspected or diagnosed with TB, fill out the form in the Tuberculosis Registration Information tab. This form is a one-time updateable form.

Tab 12: Previous TB symptom checklist – This holds a table containing information from the TB symptomatic check form.

Tab 13: TB Diagnosis & Category – This tab holds a form that collects TB diagnosis, diagnostic criteria, and

category information. It is a one-time updateable form that allows for changes in the future with new information or re-registration.

Tab 14: TB Drug Resistance testing – The drug resistance testing form collects information about the drug resistance test and its results. Use the add row button to create new rows to enter more than one resistance result. The table to the form's right holds all the recorded drug resistance test histories.

Tab 15: Treatment monitoring – this holds a form that records information on the lab evaluation requested as part of treatment/treatment monitoring. The table to the right of the form is a table that holds all previously recorded treatment monitoring information.

Tab 16: TB adverse effect & effect management – This tab holds two forms. The first form is the adverse effect evaluation form. It contains options of possible adverse effects. Select the

Tab 17: TB treatment outcome – At the end of TB treatment for a client, use the form in this tab to record the treatment outcome.

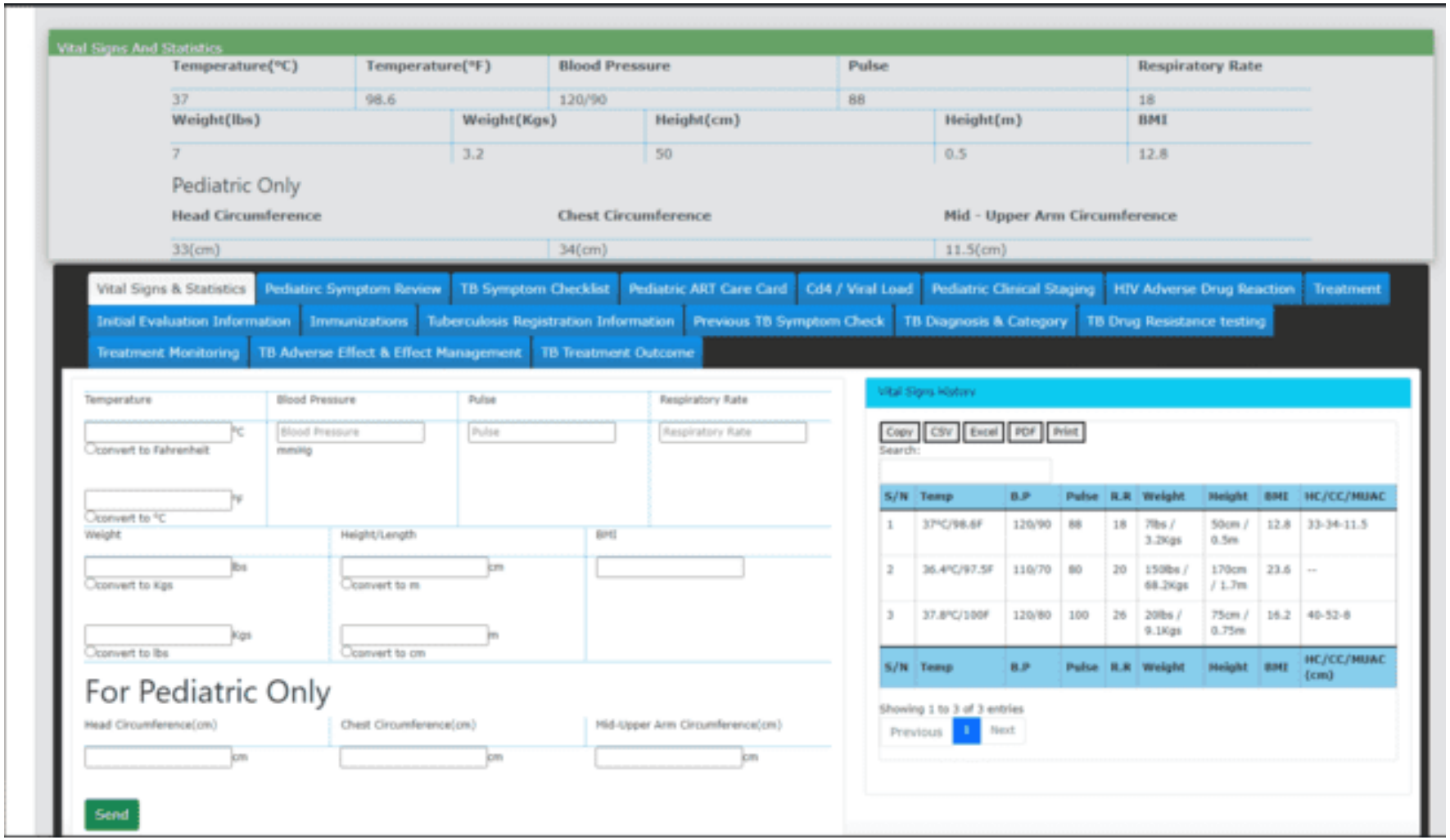


Figure 37: Pediatric HIV care card

The HIV exposed infant care card: The care card for the exposed infant is similar to that of the pediatric except for the addition of the exposed infant screenings Tab. The exposed infant screening tab holds the form for recording up to four HIV screenings. It collects the age at the screening, the screening date, the type (PCR/Antibody), and the test result. This form is the same used in the Initial evaluation. If filled during the initial evaluation, the previous record remains on the form in updatable format.

5.2.2.8.3 T.B. care card

Enter the unique I.D. of a client registered for Tuberculosis care management. There is one general care card for tuberculosis management. At the top of the page are flags of the Cd4 and Viral load values. Beneath the flag is a link to order or update screenings. Click on the link and follow the directions at 5.2.2.5.1. The care card holds several forms in tabs

Tab 1: Vital Signs and Statistics – This tab holds a form for recording vital signs and statistics and an exportable table holding all previously recorded values.

Tab 2: Registration Information – Clients registered for HIV care and treatment automatically get all tuberculosis registration forms and management added to their care card. If a client in HIV care was suspected or diagnosed with TB, fill out the form in the Tuberculosis Registration Information tab. This form is a one-time updateable form.

Tab 3: symptomatic checklist - This encounter form holds questions that classify the client as a TB suspect or not suspect and records information about follow-up screenings, treatment, and prophylaxis. After saving the entries, the form clears for a new entry. The

previous TB symptom checklist tab holds the previously saved entries. Once saved, an edit is not possible. For missing information or change in information, fill out the form again.

Tab 4: Previous symptom check– This holds a table containing information from the TB symptomatic check form.

Tab 5: Diagnosis & Category – This tab holds a form that collects TB diagnosis, diagnostic criteria, and category information. It is a one-time updateable form that allows for changes in the future with new information or re-registration.

Tab 6: Drug Resistance testing – The drug resistance testing form collects information about the drug resistance test and its results. Use the add row button to create new rows to enter more than one resistance result. The table to the form's right holds all the recorded drug resistance test histories.

Tab 7: Treatment – Take a look at figure 36. The treatment form has three sections. The top holds a table of drug pick-up history from the pharmacy if recorded. Beneath the history is a form on the left for recording the prescription given to the client. Use the Add Row button to add new rows as only one drug can be entered on a row. The right side holds the history of recorded prescriptions over time regardless of dispense or pick-up.

Tab 8: Treatment monitoring – this holds a form that records information on the lab evaluation requested as part of treatment/treatment monitoring. The table to the right of the form is a table that holds all previously recorded treatment monitoring information.

Tab 9: TB adverse effect & effect management – This tab holds two forms. The first form is the adverse effect evaluation form, containing options for possible adverse effects. Select the applicable option and save. The second form contains options for the management of the selected adverse effect. Select the management applied and save.

Tab 10: TB treatment outcome – At the end of TB treatment for a client, use the form in this tab to record the treatment outcome.

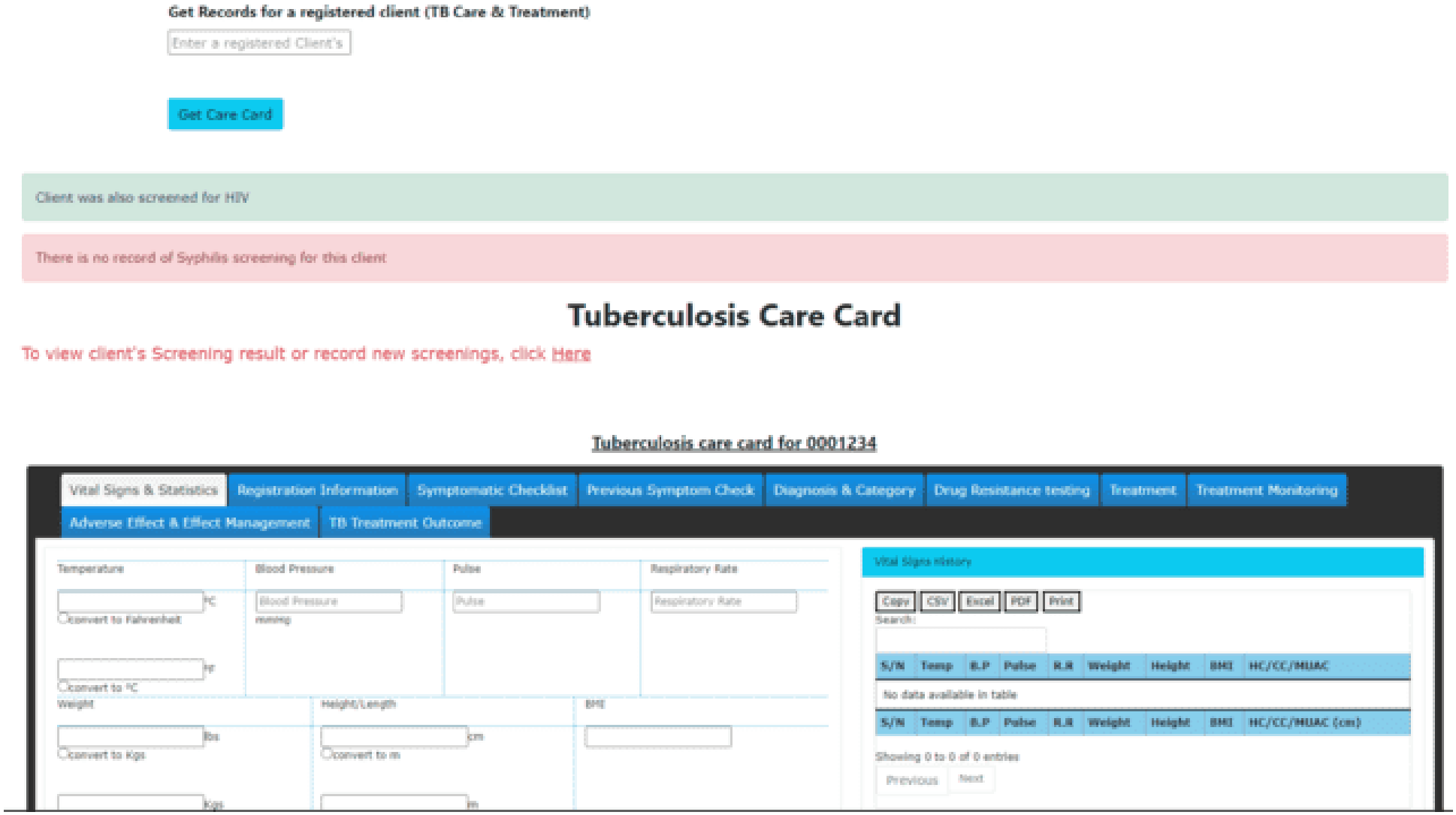


Figure 38: The tuberculosis management care card

5.2.2.8.4 Other care card

Enter the unique I.D. of a registered client. There are two types of care cards.

1. **The Adult / Adolescent / Pediatric client care card**: At the top of the page are flags of the Cd4 and Viral load values. Beneath the flag is a link to order or update screenings. Click on the link and follow the directions at 5.2.2.5.1. The care card holds several forms in tabs

   Tab 1: Hepatitis Registration – For clients diagnosed with Hepatitis, fill out the Hepatitis registration form.

   Tab 2: Hepatitis Diagnosis, Diagnostic Data, and Category – This tab holds a form for selecting the symptoms, clinical diagnosis, diagnosis category, evaluation, and diagnosis of cirrhosis and hepatocellular carcinoma.

   Tab 3: Hepatitis risk factors & reason for test – This tab holds a form for selecting the client's risk factors and why they got tested.

   Tab 4: Chancroid, chlamydia, Gonorrhea, Herpes, Syphilis (all stages), PID – This tab holds a form for registering other STDs. Fill out the registration form for clients with syphilis, chlamydia, gonorrhea, or other STDs.

   Tab 5: Treatment – Take a look at figure 36. The treatment form has three sections. The top holds a table of drug pick-up history from the pharmacy if recorded. Beneath the history is a form on the left for recording the prescription given to the client. Use the Add Row button to add new rows as only one drug can be entered on a row. The right side holds the history of recorded prescriptions over time regardless of dispense or pick-up.

Tab 6: Treatment monitoring – this holds a form that records information on the lab evaluation requested as part of treatment/treatment monitoring. The table to the right of the form is a table that holds all previously recorded treatment monitoring information.

Tab 7: Vital Signs and Statistics - This tab holds a form for recording vital signs and statistics and an exportable table holding all previously recorded values.

2. The Exposed Infant Care Card: At the top of the page are flags of the Cd4 and Viral load values. Beneath the flag is a link to order or update screenings. Click on the link and follow the directions at 5.2.2.5.1. The care card holds several forms in tabs

Tab 1: Vital Signs and Statistics – This tab holds a form for recording vital signs and statistics and an exportable table holding all previously recorded values.

Tab 2: Perinatal Hepatitis Case report – This tab holds a form that collects information about the mother's pregnancy. Prenatal ANC visits and antiviral treatments during pregnancy. This form should be filled out for all clients with Hepatitis infection during pregnancy regardless of the treatment outcome.

Tab 3: Perinatal Hepatitis Clinical and Diagnostic Data – This tab holds a form that collects information on the mother's hepatitis diagnostic screenings and the child's hepatitis diagnostic screenings, the infant's reason for test, symptoms, and onset of symptoms, liver enzymes at diagnosis, infant's hepatitis B vaccination history, Infant's Hepatitis outcome.

Tab 4: Congenital Syphilis Case Report – This tab holds a form that collects information about the mother's pregnancy, prenatal ANC visits, syphilis screenings, and treatment during pregnancy. This form is for all clients with a treponemal infection regardless of the treatment outcome.

Tab 5: Congenital Syphilis Clinical & Diagnostic Data – This tab holds a form that collects information about the infant, symptoms, treatment, and outcome.

Tab 6: Treatment – Take a look at figure 36. The treatment form has three sections. The top holds a table of drug pick-up history from the pharmacy if recorded. Beneath the history is a form on the left for recording the prescription given to the client. Use the Add Row button to add new rows as only one drug can be entered on a row. The right side holds the history of recorded prescriptions over time regardless of dispense or pick-up.

Tab 7: Treatment monitoring – this holds a form that records information on the lab evaluation requested as part of treatment/treatment monitoring. The table to the right of the form is a table that holds all previously recorded treatment monitoring information.

Tab 8: Symptom Review – This tab holds a form that collects the client's symptoms and duration, the developmental assessment, physical examination by organ systems, findings, and plan.

Tab 9: Immunizations - This tab holds a form for recording immunizations given to the child. The table to the right of the form holds all previously recorded immunizations.

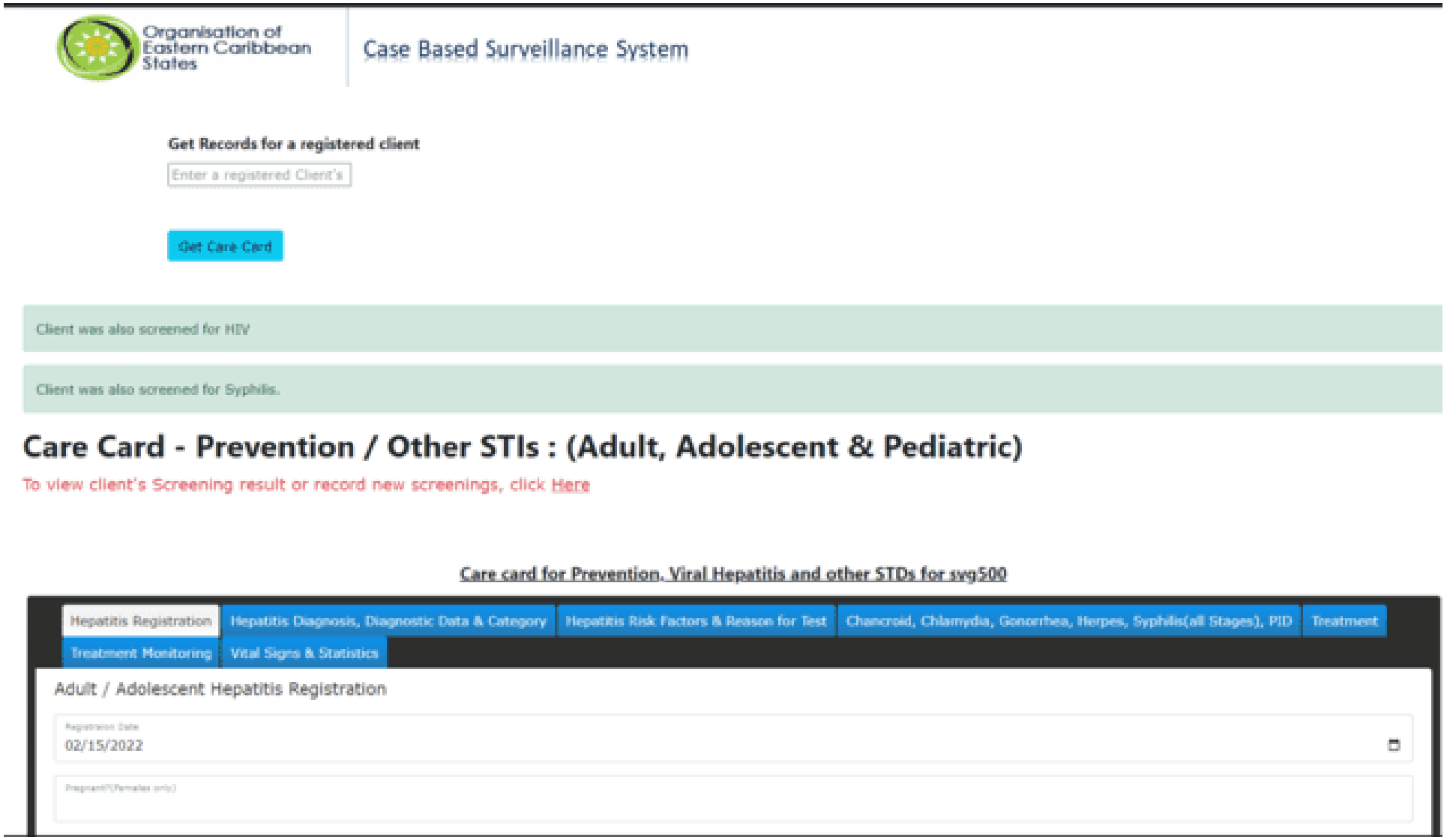


Figure 39:Adult, adolescent, and pediatric Prevention and Other STIs Care Card

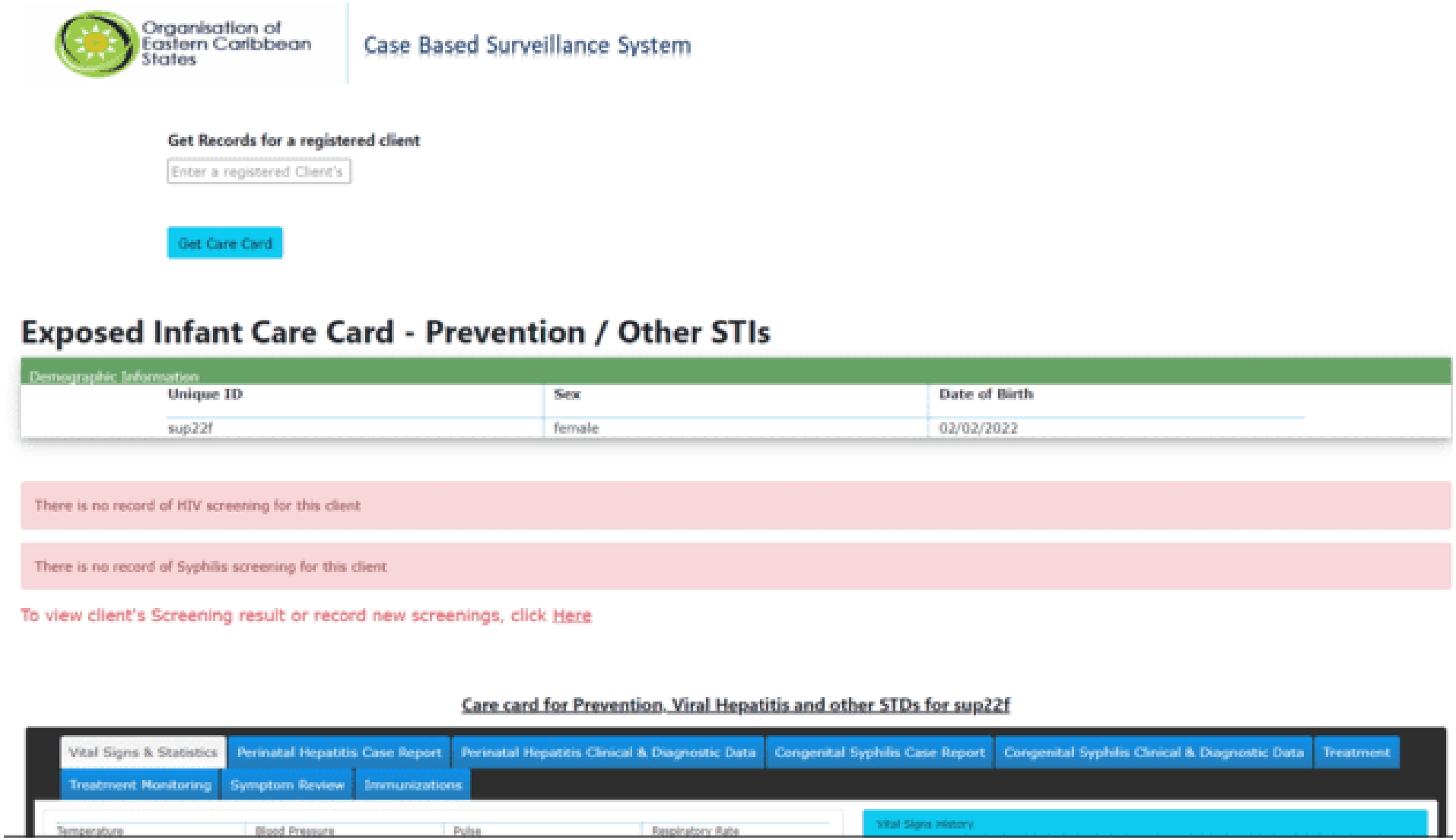


Figure 40: Exposed Infant Syphilis, Hepatitis and prevention care card

5.2.2.8.5 Previous encounter

Enter the client's unique I.D. of the client who has had a clinical management encounter in the form. The file displayed depends on the category of the client.

1. **Adult / Adolescent**: The previously recorded review of symptoms, CD4/viral load values, clinical staging, and mental health assessment response populates in their respective tabs in containers tagged by the timestamp of record entry with the most recent first.
2. **Pediatric /Exposed:** The previously recorded review of symptoms, ART care card, CD4/viral load values, and clinical staging populate in their respective tabs in containers tagged by the timestamp of record entry with the most recent first.

   Note that an empty tab means that forms with no previous encounter.

5.2.2.9 Central Medical Store & Supplies

A user granted the central_medical_unit permission has access to the CENTRAL MEDICAL STORES & SUPPLIES sub-menu of the pages menu. Expand this link to reveal a list of links to its functionalities

5.2.2.9.1 List of registered pharmacies dispensing ARVs

This page holds an exportable list of all the pharmacies registered during the system configuration. Medication distribution is only possible for pharmacies that appear on this list. Ask the administrator to add the pharmacy to the list if omitted.

5.2.2.9.2 Create medication stock

This page holds a form for the creation of medications in stock at the Central Medical Stores. The medication stock entry comes first before carrying out additional functions of the central medical store is possible. Fill the form with the name of the medication, the form, strength, manufacturer, expiry date, batch number, quantity, packaging, and amount per pack. Save and wait for a success message. The form clears for the next entry. Repeat the process to enter each medication.

5.2.2.9.3 Stocklist

This age holds an exportable table of the stock created in the previous step.

5.2.2.9.4 Edit/recall stock

If a stock entry has an error or was recalled, use this form to edit/delete/recall the stock. Correct the fields with the error and click on the green Edit button for edits. In the case of delete or recall, select the reason for recall and click on the red recall button.

5.2.2.9.5 View recalled

This page holds an exportable table of all deleted or recalled stock entries.

5.2.2.9.6 Record distribution

This page holds a form to record the distribution of drugs to pharmacies. Look for the row with the drug name, fill in the pharmacy, quantity supplied, and received by fields, and then click on the distribute button. This process subtracts the quantity supplied from the quantity in stock. Repeat the same process to record all distributions of all medications to all pharmacies.

5.2.2.9.7 View distribution

This page holds a searchable table of all recorded distributions and a delete button to reverse the distributions if recorded in error.

5.2.2.10 Pharmacy

A user granted the pharmacy permission has access to the **PHARMACY** sub-menu of the page's menu. Expand this link to reveal a list of links to its functionalities

5.2.2.10.1 Create stock

This page holds a form for the creation of medications received and in stock at the Pharmacy. The medication stock entry comes first before carrying out additional functions of the pharmacy is possible. Fill the form with the name of the medication, the form, strength, manufacturer, expiry date, batch number, quantity, packaging, and amount per pack. Save and wait for a success message. The form clears for the next entry. Repeat the process to enter each medication.

5.2.2.10.2 View stock

This page holds flags about the medications in stock at both the pharmacy and the central medical stores. The flags hold information about the medication running low in stock, the medications that are out o stock, and the medications that have expired or are about to expire at the pharmacy and the central medical stores. Beneath the flags is a form. If a stock entry has an error or was recalled, use this form to edit/delete/recall the stock. Correct the fields with the error and click on the green Edit button for edits. In the case of delete or recall, select the reason for recall and click on the red recall button.

5.2.2.10.3 View recalled

This page holds an exportable table of all deleted or recalled stock entries.

5.2.2.10.4 Dispense

This page holds a form to record the dispense of a prescription. Repeat filling the form for each drug on the prescription. Take note of the prescription number for label printing.

5.2.2.10.5 Print label

To print the label/directions for a filled prescription, Enter the client's unique ID and the prescription number.

5.2.2.10.6 View all transaction history

This page holds an exportable and searchable table of all recorded drug dispense.

5.2.2.10.7 View client's treatment plan

Enter the client's unique I.D. for the symptom review and treatment plan.

5.2.2.10.8 View client's Rx History: For HIV-positive clients in care

Enter the unique I.D of the client to get an exportable/searchable table of all drug dispense history for the client.

5.3 THE MONITORING AND REPORTING ROLE

The monitoring and reporting role of the system holds all auto-reporting functionalities. Four permission groups control the functionalities of this role.

5.3.1 The Monitoring and Reporting Role Permissions

1. *screenings_report*: controls access to all auto-generated screenings and positivity reports for all screenings recorded on the system.

2. *cases_report*: controls access to all care referrals, care registration, reports, and summaries.

3. *anc_report*: controls access to EMTCT and other antenatal reports

4. *pharmacy_report*: controls access to pharmacy reports.

5.3.2 The Monitoring and Reporting Role Functionalities

5.3.2.1 Screenings, Prevention, and Control Report :

All users assigned the screenings_report permission can access the "Screenings, Prevention and Control Report" sub-menu on the expansion of the page's menu. This sub-menu holds the following auto-generated reports:

1. **Registered clients report** This links to a page that gives the auto-calculated total of the client's account created on the system disaggregated by the sex, gender identity, and month of account creation. All calculations are done regardless of the clients' screenings and results.

2. **HIV screenings and positivity report:** This links to a page that gives the auto-calculated total of the client's HIV screenings disaggregated by sex, age group, testing modality, test results, ethnicity, the month of screening, and 10-year trend in screenings and positivity.

3. **Syphilis screenings and positivity report:** This links to a page that gives the auto-calculated total of the client's Syphilis screenings disaggregated by sex, age group, test results, ethnicity, and the month of screening, and 10-year trend in screenings and positivity.

4. **Tuberculosis screenings and positivity report:** This links to a page that gives the auto-calculated total of the client's Tuberculosis screenings disaggregated by sex, age group, test results, ethnicity, the month of screening, and 10-year trend in screenings and positivity.

5. **Behavioral Report / Prevention / OECS Commission M & E Summary Report:** This links to a page that auto-calculates the total of the client's HIV screenings disaggregated by risk behaviors, sexuality, and positivity. It also holds the prevention service summary report and the OECS M&E summary with the following reports generated:

5.3.2.2 Commitment to the 90-90-90 Target:

All users assigned the cases_report permission can access the "Commitment to the 90-90-90 Target" sub-menu on expanding the page's menu. This sub-menu holds the following auto-generated reports:

1. People living with HIV: This links to a page that give an auto-calculated total of :

a. The total number of HIV screenings

b. The total number of Exposed infant Screenings

c. Total ANC HIV positives

d. Total Exposed infants positive

e. Total other clients positive

f. The ratio of positivity (General, ANC, Exposed)

g. Care referrals of pregnant, exposed, pediatric, adult, adolescent

h. Clients on first-line ART regimen (less than age 1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-59, 80 and over),

i. Clients on second-line ART regimen (less than age 1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-59, 80 and over)

j. Clients dead on ART (less than age 1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-59, 80 and over)

k. Clients lost to follow-up on first-line,

l. Clients lost to follow-up on second-line,

m. The total number of clients lost to follow-up,

n.number of children less than age 15 on first-line ART regimen,

o. the number of children less than 15 on second-line ART regimen,

p. number of adults 15+ on first-line ART regimen,

q. the number of adults 15+ on second-line ART regimen,

r. The total number of clients on ART,

s. The total number of clients on ART who died,

t. Pediatric switch of ART from first_line to second-line,

u. Adult switch from first-line to second-line.

5.3.2.3 Antenatal Reporting

Expanding the page's menu allows all users assigned the anc_report permission to access the "Antenatal Reporting" sub-menu. This sub-menu holds the following links to reports

1. EMTCT Report: This holds auto-generated reports on

a. Perinatal Syphilis case report: This is an exportable table with information on:

Mother's non-treponemal test details

Mother's treponemal test details

Mother's treatment and treatment outcome

Date of birth of the child

Child's screenings and titer values

Child's treatment details

Comments

b. Perinatal Hepatitis case Report

Child's date of birth

Date and Trimester of mother's first prenatal visit

Treatment mother received and date

Mother's Hepatitis Diagnosis date and Trimester

Mother's HBsAg result and date

Child's HBsAg result and date

Child's symptoms

Child's diagnosis and date

Child's Hep B vaccination

c. HIV Exposed Infant Report

Child's date of birth

Sex

Date of final HIV diagnosis

Mode of transmission

Date of Viral load test and value

Treatment

2. Incidence of perinatal HIV/Syphilis/Hepatitis (per 1000 live births)

Mother-to-child transmission rate

HIV incidence amongst exposed infants

Syphilis incidence amongst exposed

Hepatitis incidence amongst exposed infants

5.3.2.4 Pharmacy Report

Expanding the page's menu allows all users assigned the pharmacy_report permission to access the "Pharmacy Report" sub-menu. This sub-menu holds the following links to reports

1. OECS summary sheet – pharmacy: This gives the number of each ARV in stock and stock-out and the number of clients dispensed by each drug by sex.

5.3.3 Auto-generated reporting indicators and definitions used.

1. the Total number of new client accounts created in the selected reporting year,

2. Sex ratio of new clients,

3. Account created by month and sex,

4. Sex versus gender identity of created accounts,

5. Exportable tables of a-d,

6. the total number of people screened for HIV, including pregnant women,

7. The total number of people screened for HIV, excluding pregnant women,

8. The total number of males screened for HIV,

9. The total number of females screened for HIV, including pregnant women,

10. The total number of females screened for HIV, excluding pregnant women,

11. The total number of Intersex screened,

12. The total number of people that tested positive for HIV, excluding pregnant clients,

13. The total number of people that tested positive for HIV, including pregnant women,

14. The total number of males that tested positive for HIV,

15. The total number of females that tested positive for HIV, excluding pregnant clients,

16. The total number of Intersex clients that tested positive for HIV,

17. Total number of HIV confirmed positive pregnant clients,

18. The total number of pregnant clients with one or more reactive results to HIV

19. HIV screenings per 100,000 population,

20. HIV positives per 100,000 population,

The total number of HIV screenings

21. The total number of Exposed infant Screenings

22. Total ANC HIV positives

23. Total number of exposed infants HIV positive

24. Total number of other clients HIV positive

25. The ratio of positivity (General, ANC, Exposed)

26. Care referrals of pregnant, exposed, pediatric, adult, adolescent

27. Clients on first-line ART regimen (less than age 1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-59, 80 and over),

28. Clients on second-line ART regimen (less than age 1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-59, 80 and over)

29. Clients dead on ART (less than age 1, 1-4, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60-64, 65-69, 70-74, 75-59, 80 and over)

30. Clients lost to follow-up on first-line,

31. Clients lost to follow-up on second-line,

32. The total number of clients lost to follow-up,

33. number of children less than age 15 on first-line ART regimen,

34. the number of children less than 15 on second-line ART regimen,

35. number of adults 15+ on first-line ART regimen,

36. the number of adults 15+ on second-line ART regimen,

37. The total number of clients on ART,

38. The total number of clients on ART who died,

39. Pediatric switch of ART from first-line to second-line,

40. Adult switch from first-line to second-line.

6 The Training & Education Resource Portal

The education and training resource portal is the virtual training platform.

To log in, select the profile icon at the top-right of the home page(figure 7), bringing you to the training login page (figure 9).

There are four roles of the training portal

6.1 The Developer Role

The developer role holds functionalities to create and manage training portal users' accounts, create a training workshop, and view facilitators' and participants' schedules. This role controls two main functionalities.

Figure 41: The developer home page shows two main functionalities. Expand the pages menu and click on the > symbol to the right of each sub-menu to reveal the links to the functionalities

6.1.1 Users & Accounts

Expand the pages menu to reveal the Users & Account sub-menu. This menu holds links to create and manage users' accounts.

6.1.1.1 Create and manage users

The create and manage users' link displays two forms in the content area to create new users' accounts and manage existing accounts.

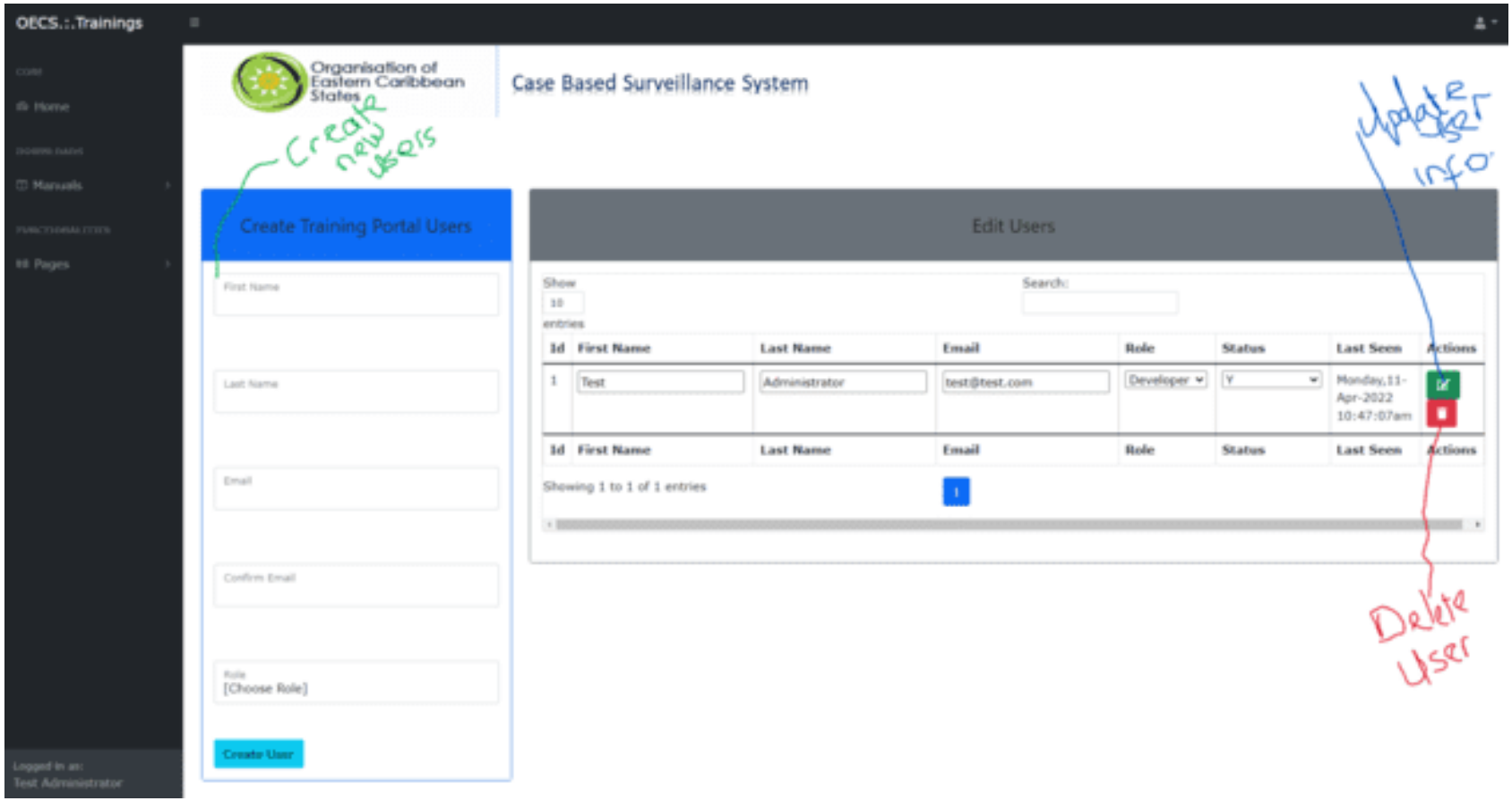


Figure 42: Create and manage users' account page

A success message displayed at the top of the page indicates a successful account creation. Take note of the new account details added to the list of editable users. The status remains N until the new user sets their password and activates their account. All activated accounts have a status of Y.

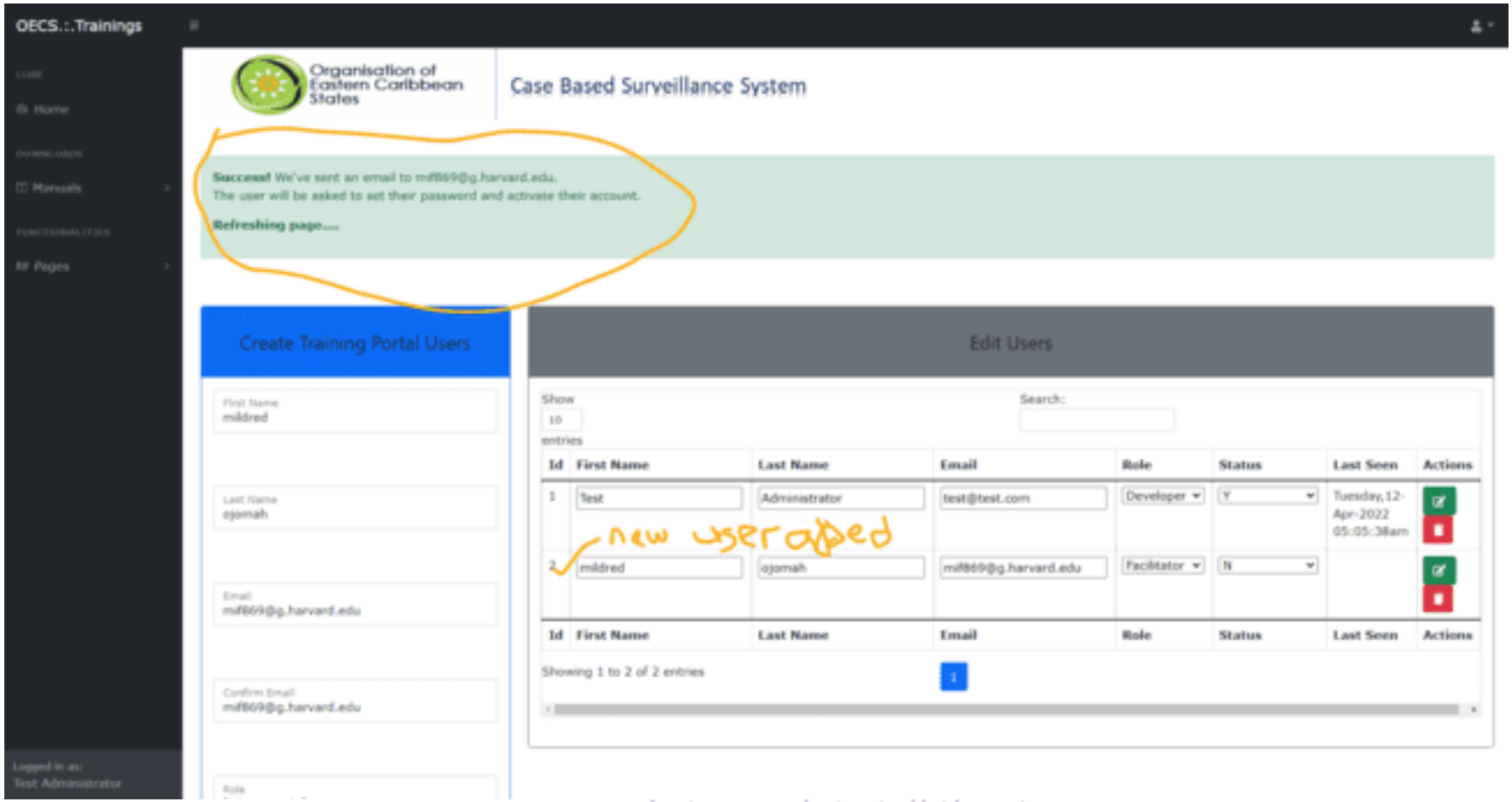


Figure 43: Image of the user account creation page showing the success message after creating an account.

6.1.1.2 View users

This link displays an exportable and searchable table that holds all portal users' account information

Figure 44: The 'view users' link displays a searchable and exportable list of all the portal users

6.1.2 Create Training

The "create training" sub-menu of the page's menu allows the Developer to create a training workshop, view the schedules of facilitators, and view the schedule of training participants. Only after a developer creates a training can a facilitator configures the training.

6.1.2.1 Create a new training.

The Developer creates the training before the Facilitator can configure the training. The "create a new training" link allows the Developer to create and update created training. To create the training, give the training a title, a start, and an end date. The title and dates are updateable and allow for future changes as needed.

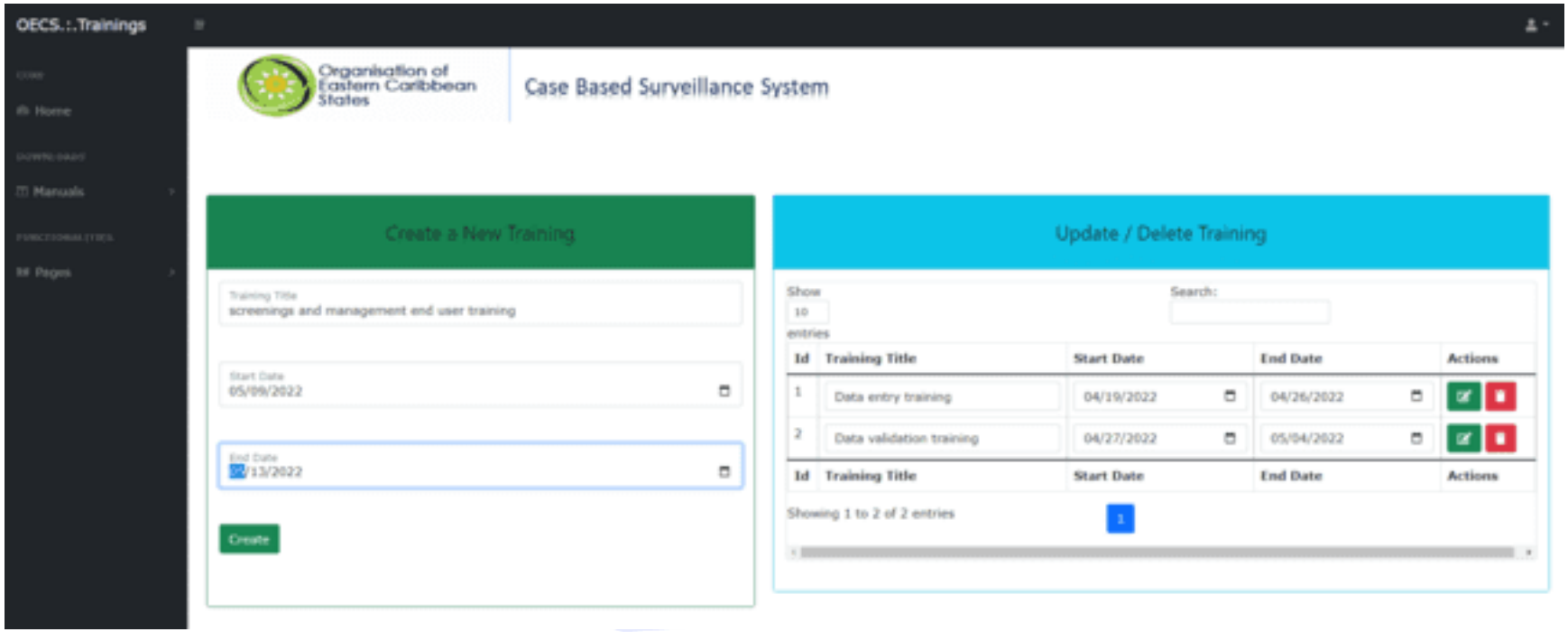


Figure 45: Creating a new virtual training workshop

6.1.2.2 View facilitator

After successfully creating training, the Facilitator configures the training with the sessions and other details. The view facilitator link allows the Developer to view the training schedule of the Facilitator.

6.1.2.3 View participant schedule

This link allows the Developer to view the participants associated with each training session created by the Facilitator. The page holds a drop-down menu of all the training titles, and the system displays a searchable and exportable list of all the training attendees.

6.2 THE FACILITATOR ROLE

The facilitator role holds functionalities to configure a created training and add participants to the training. The Facilitator also creates news and announcements, uploads files, and creates assessments, proctors, and grade assessments. This Role groups these functionalities into the *Notes, News, Uploads, Sessions, and Assessments & Certification groups*.

6.2.1 Notes, News, Uploads, Sessions

This sub-menu holds links to create a training session, create session rooms, add attendees to training, view attendees' schedules, create training notes, upload files/videos, and create training announcements and news.

6.2.1.1 Create training session

Select the 'create training session' link and fill the form on the left of the content area. Give the training session a unique name, select the training that the session is associated with, and select a start time for the session and an end time.

Training sessions are like modules or topics of a training workshop. [For example, for a training workshop with the title "screenings and management," and the training entails teaching the participants how to create the screenings account, how to

collect the required data… then you can create sessions "session 1: creating accounts", "session 1: data collection". For grouped participants with different training times, create several sessions with the times changed, e.g., session 1: creating accounts, session 2: creating accounts. Do this until all groups have a session].

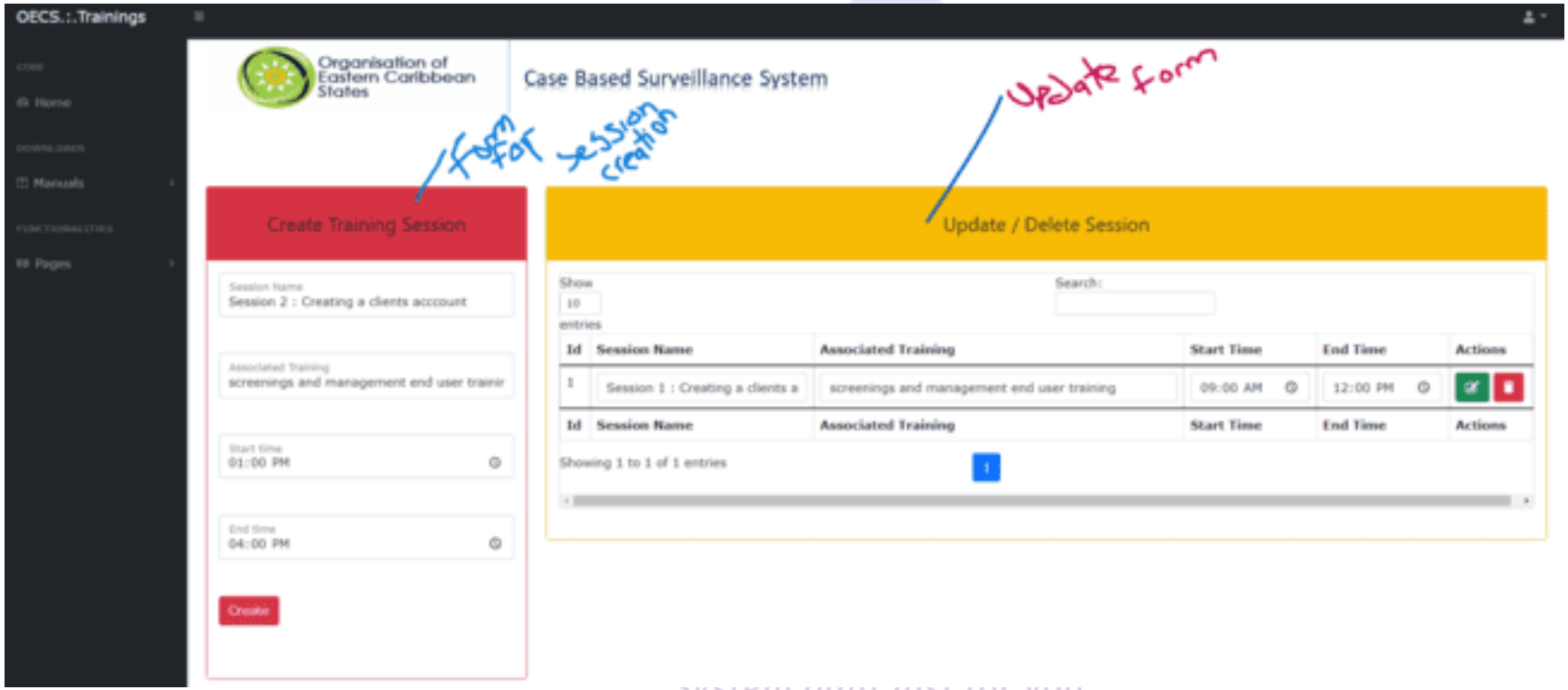


Figure 46: Creating sessions for a training workshop

6.2.1.2 Create session rooms

After creating a session, it is time to create a session room. A session room is the live web conference associated with a session. Creating and setting the room is the strictest configuration of virtual training. It gives live access to the participants and guests of the training and creates the Facilitator's schedule and like to start a live session. After creating a room appears on the 'update/delete' form. Each entry can be updated or deleted as needed. For edit, change the entry and click on the green edit symbol. This should be done a row at a time.

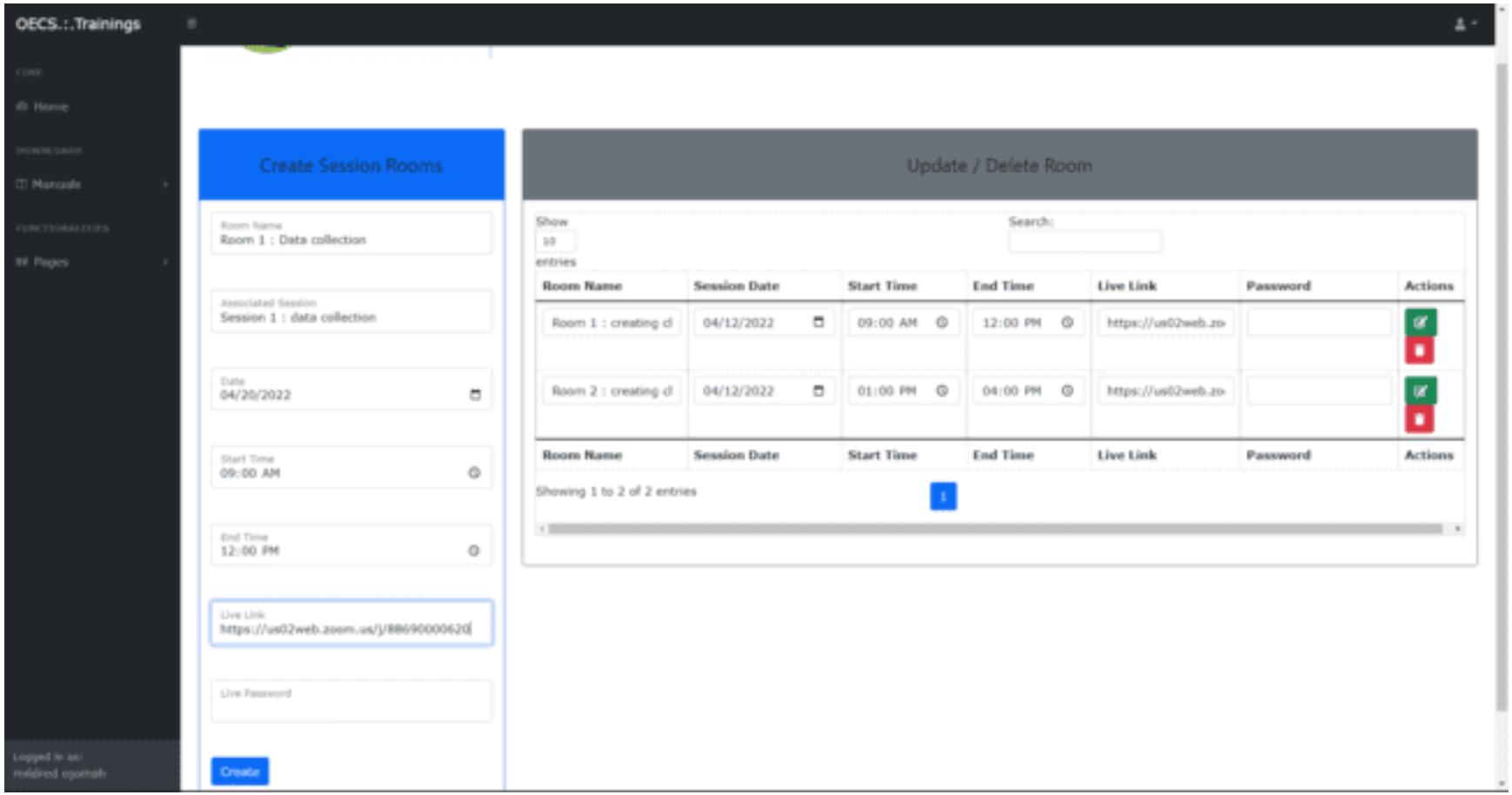


Figure 47: Creating a session room

Room creation completes the configuration of a training workshop. The Facilitator's home page holds a table of the Facilitator's training schedule.

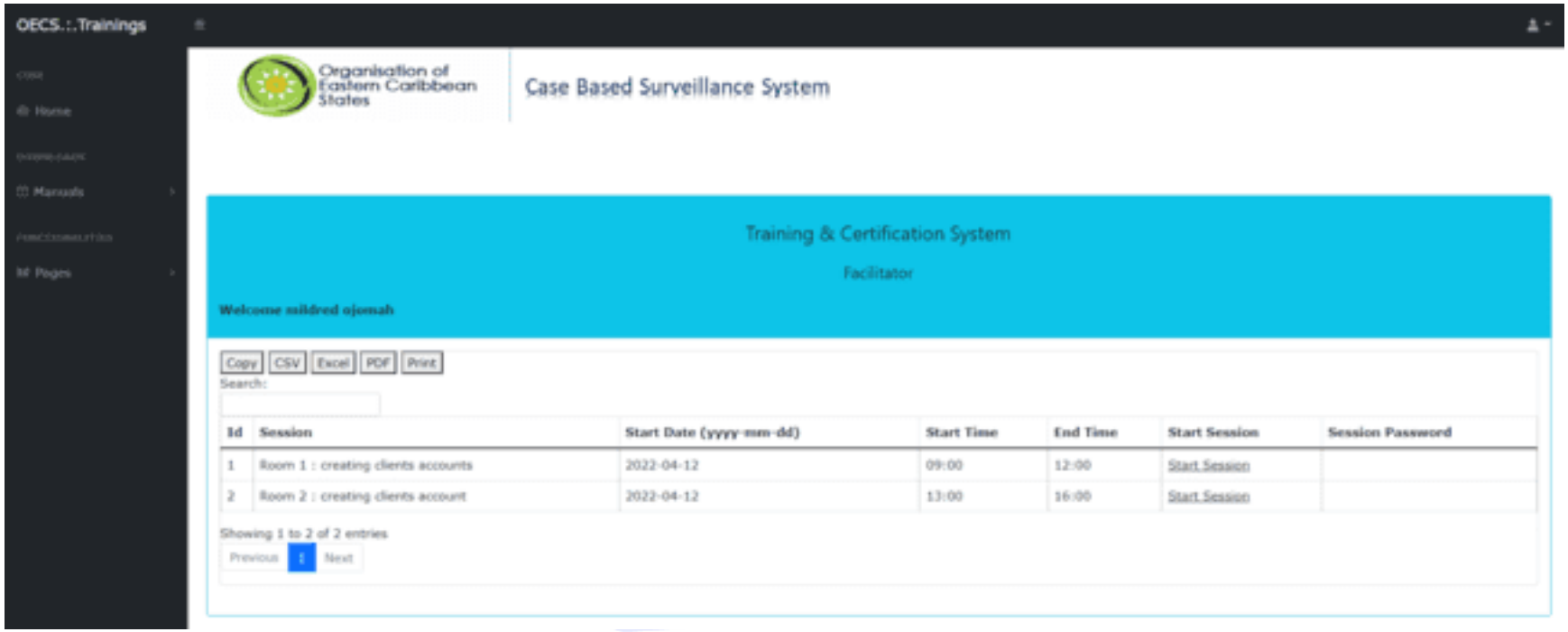


Figure 48: The facilitator's home page showing the table of the facilitator's training schedules

6.2.1.3 Add attendees to training

After configuring a training workshop, the next step is to add the training attendees to their training rooms.

The "add attendees to training" link displays a page with two forms. The form to the left allows the Facilitator to add attendees to the training. Select the room name from the drop-down menu and check the box next to the participants' names to be added. The form to the right of the page allows the Facilitator to delete a participant added in error.

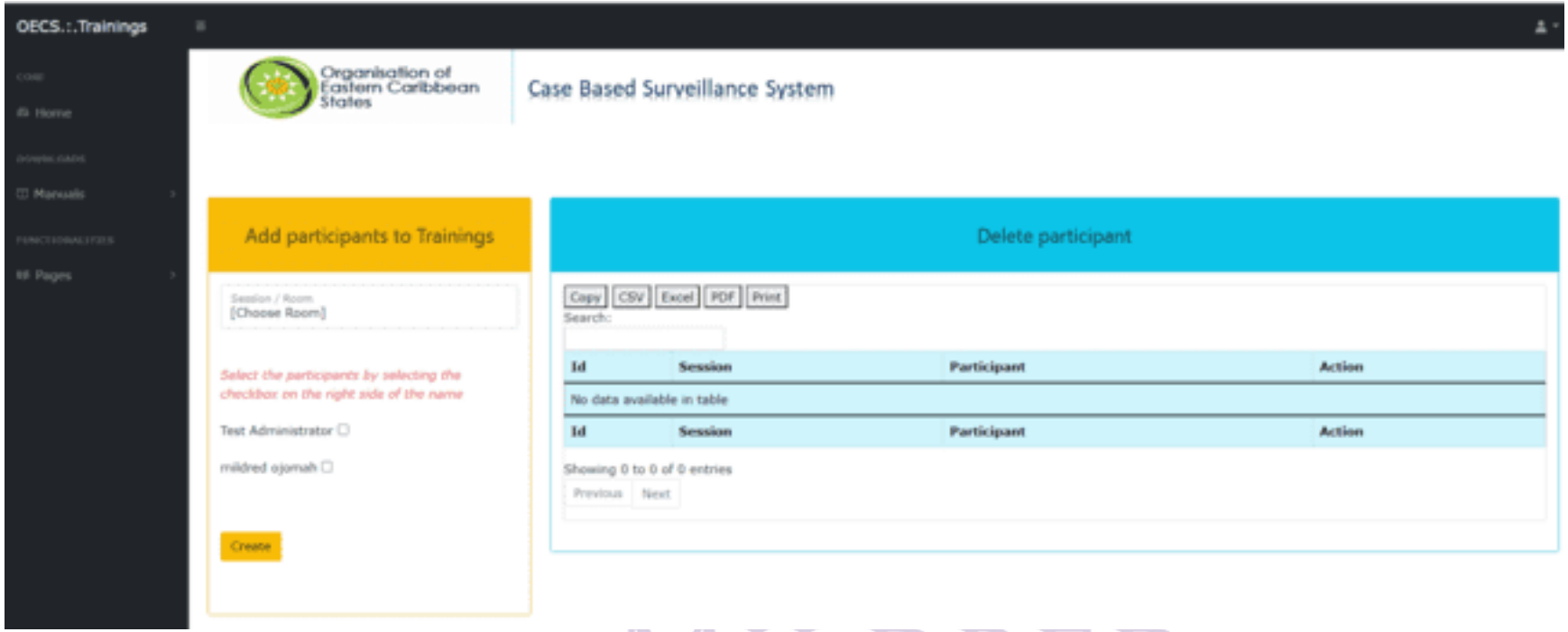


Figure 49: Image showing the page to add attendees to a training

6.2.1.4 View attendees schedule

After adding all attendees to the training, to view the attendees in each training and their schedule, use the "view attendees schedule" link. Select the training from the drop-down menu. An exportable table of the training participants is populated if any.

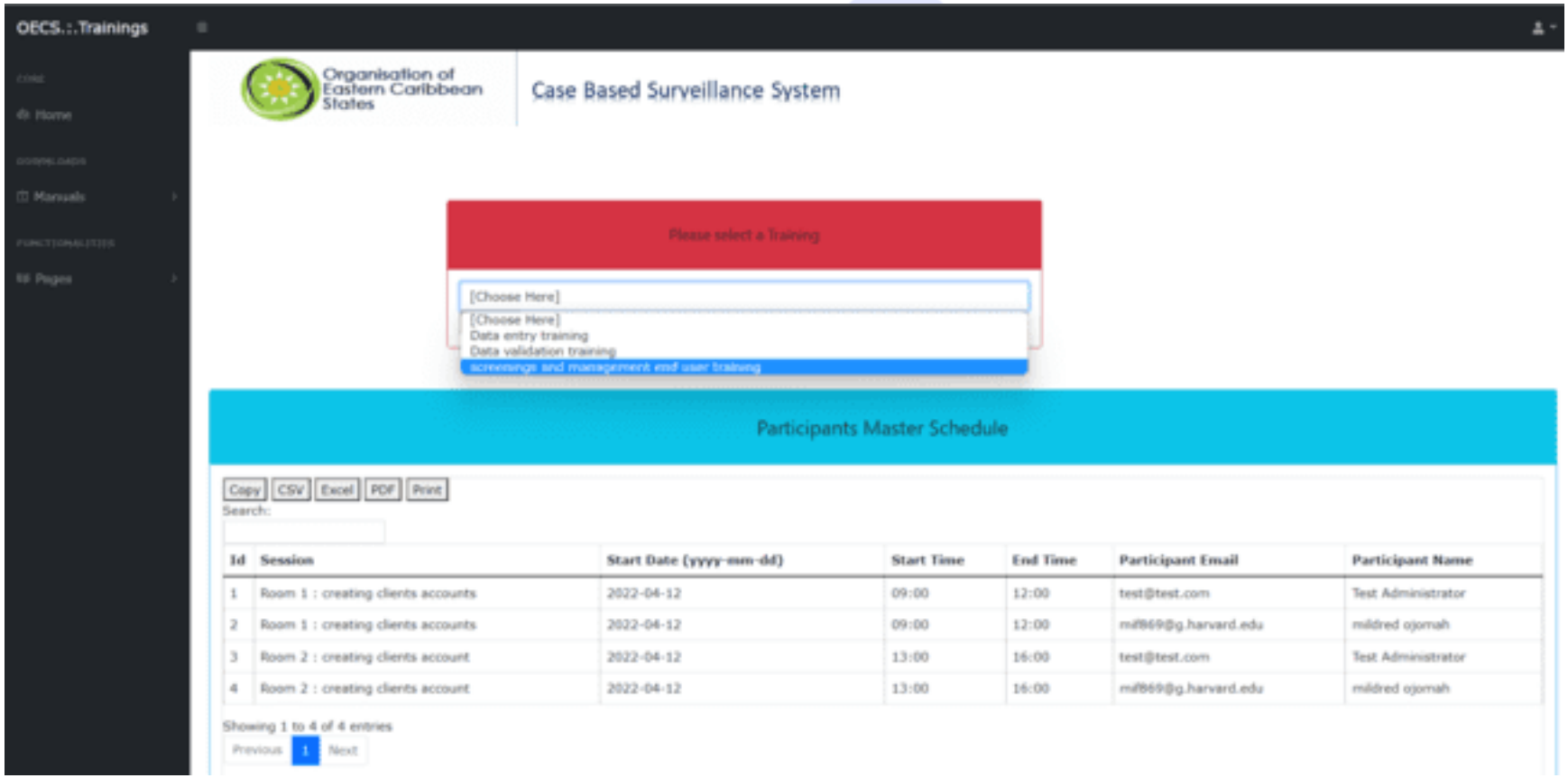


Figure 50: View attendees' schedule page

6.2.1.5 Create training notes

Use this link to create notes for a training session. Training notes are associated with a training session, and the notes created are displayed on the pages of the participants of that training session.

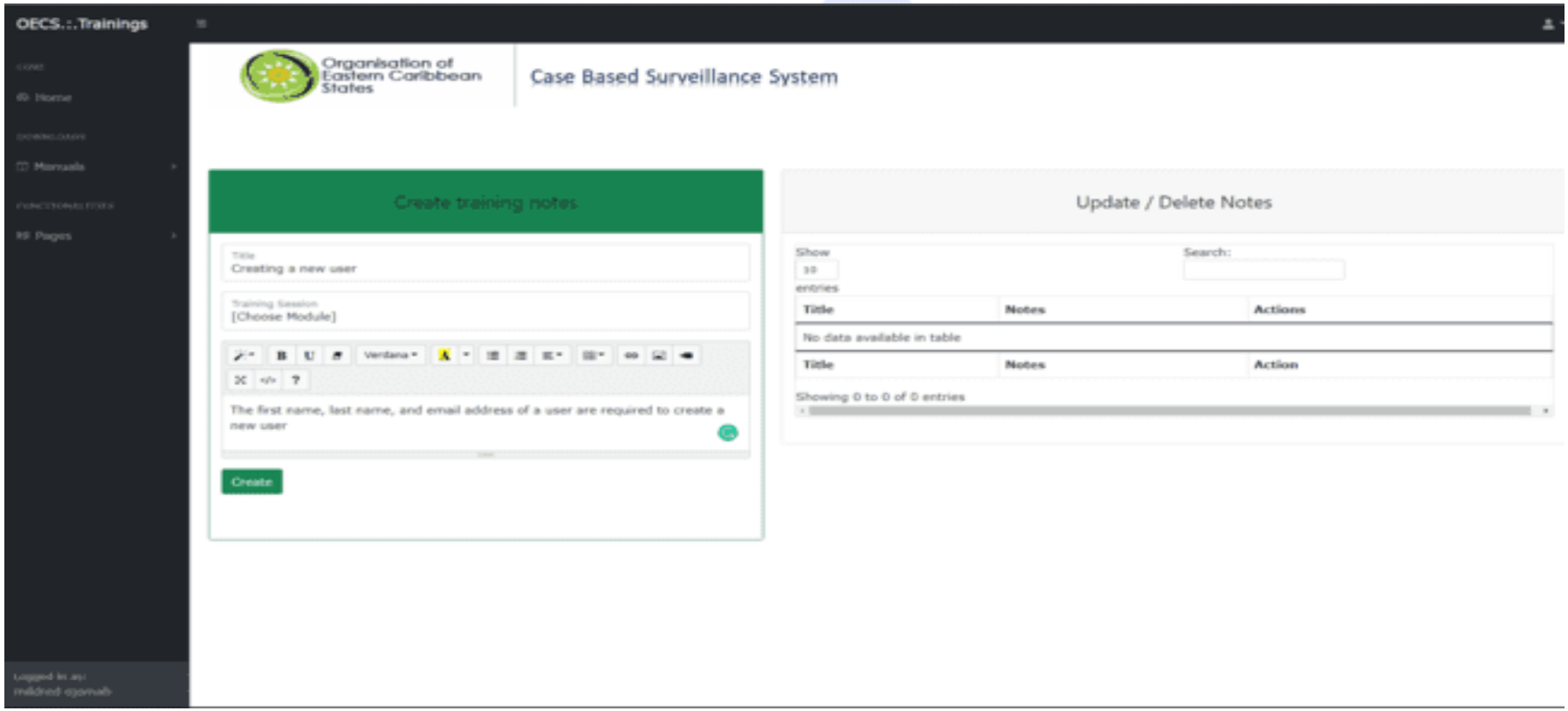


Figure 51: Creating a training note

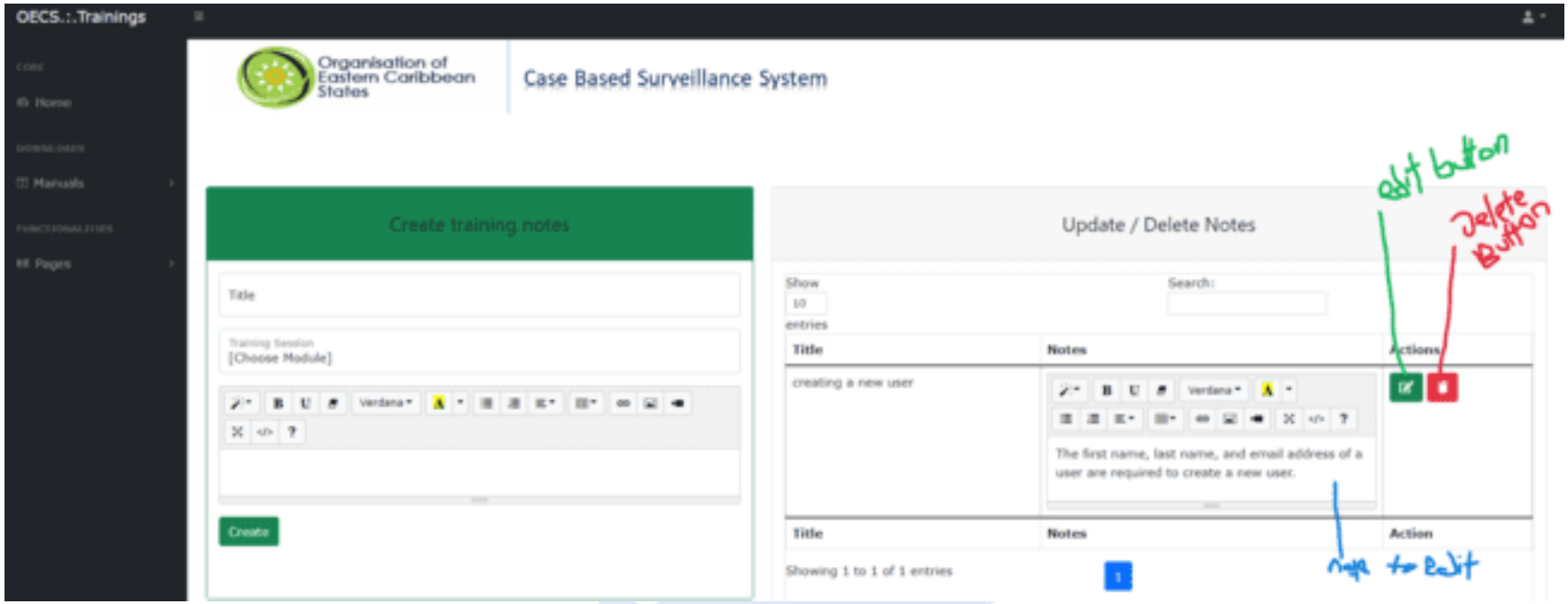


Figure 52: Updating a created training note

6.2.1.6 Upload files/videos

To upload files/short videos, use this link. Enter a descriptive title for the file, select the associated training session, and choose the file from the device. A file no longer used or uploaded in error can be deleted on the form to the right.

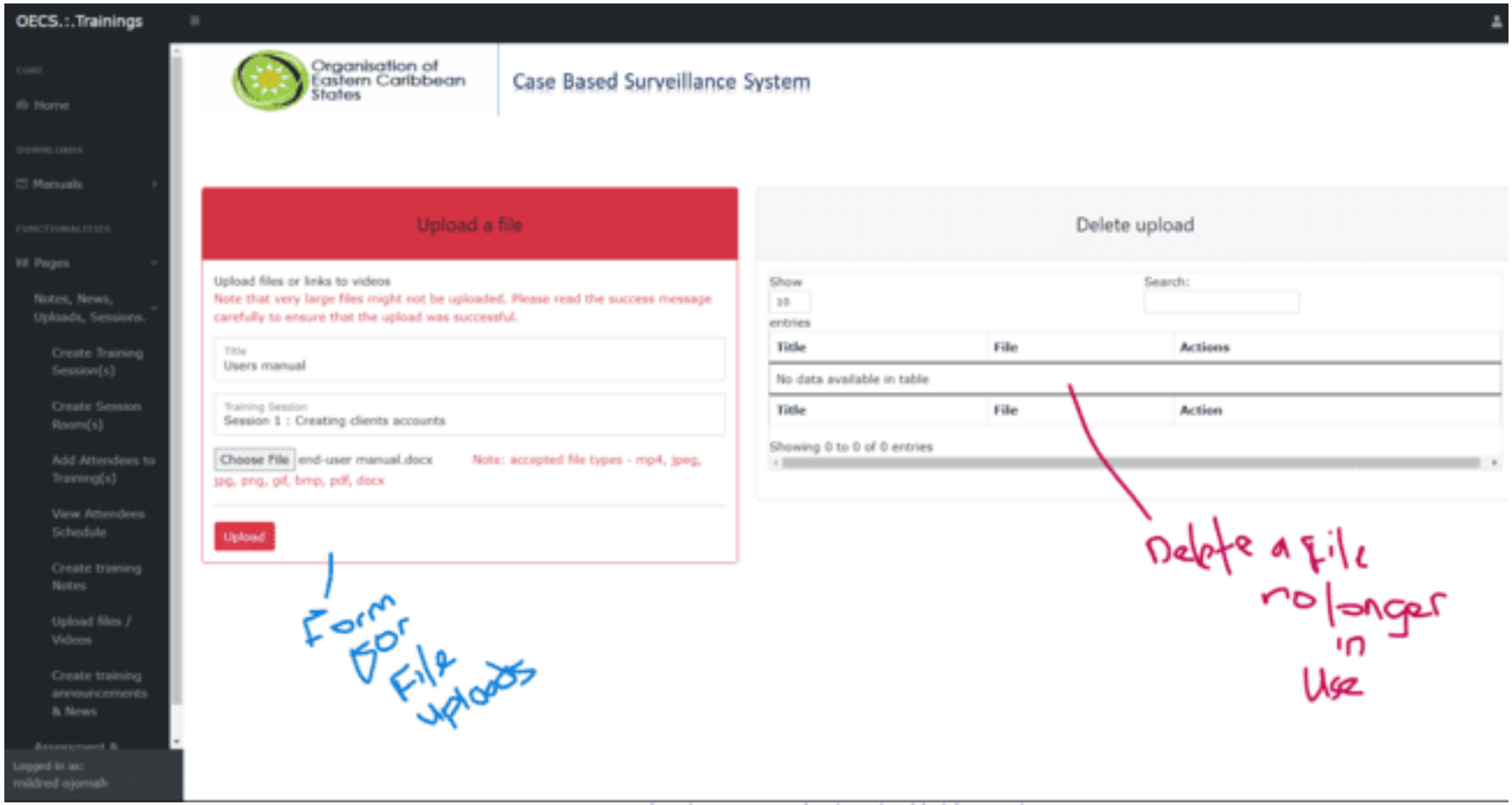


Figure 53: Uploading a file

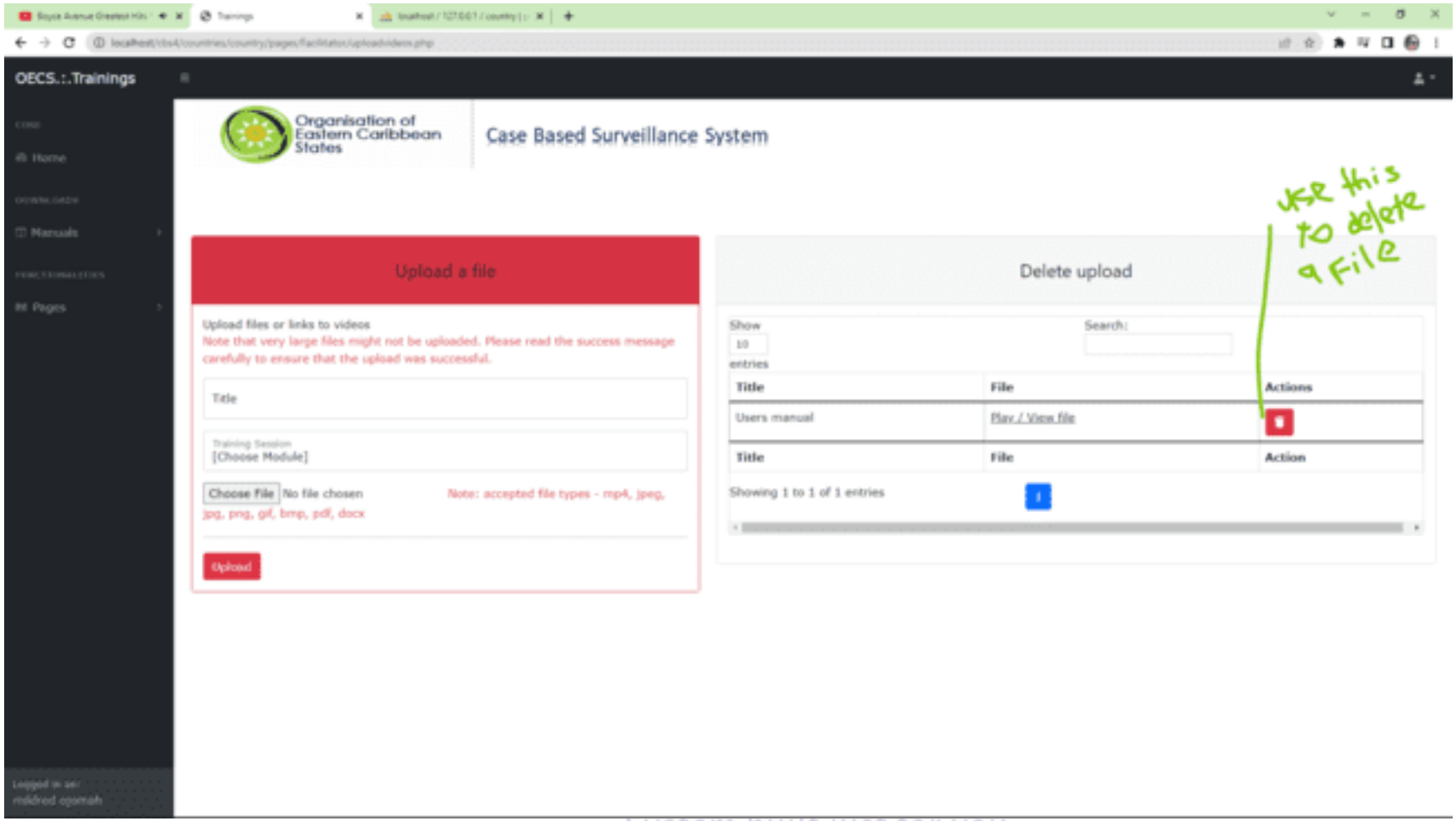


Figure 54: deleting an uploaded file

6.2.1.7 Create training announcements and news

Training announcements/news are associated with a session. Create an announcement by entering a descriptive title, selecting a session to associate with, and typing in the announcement/news.

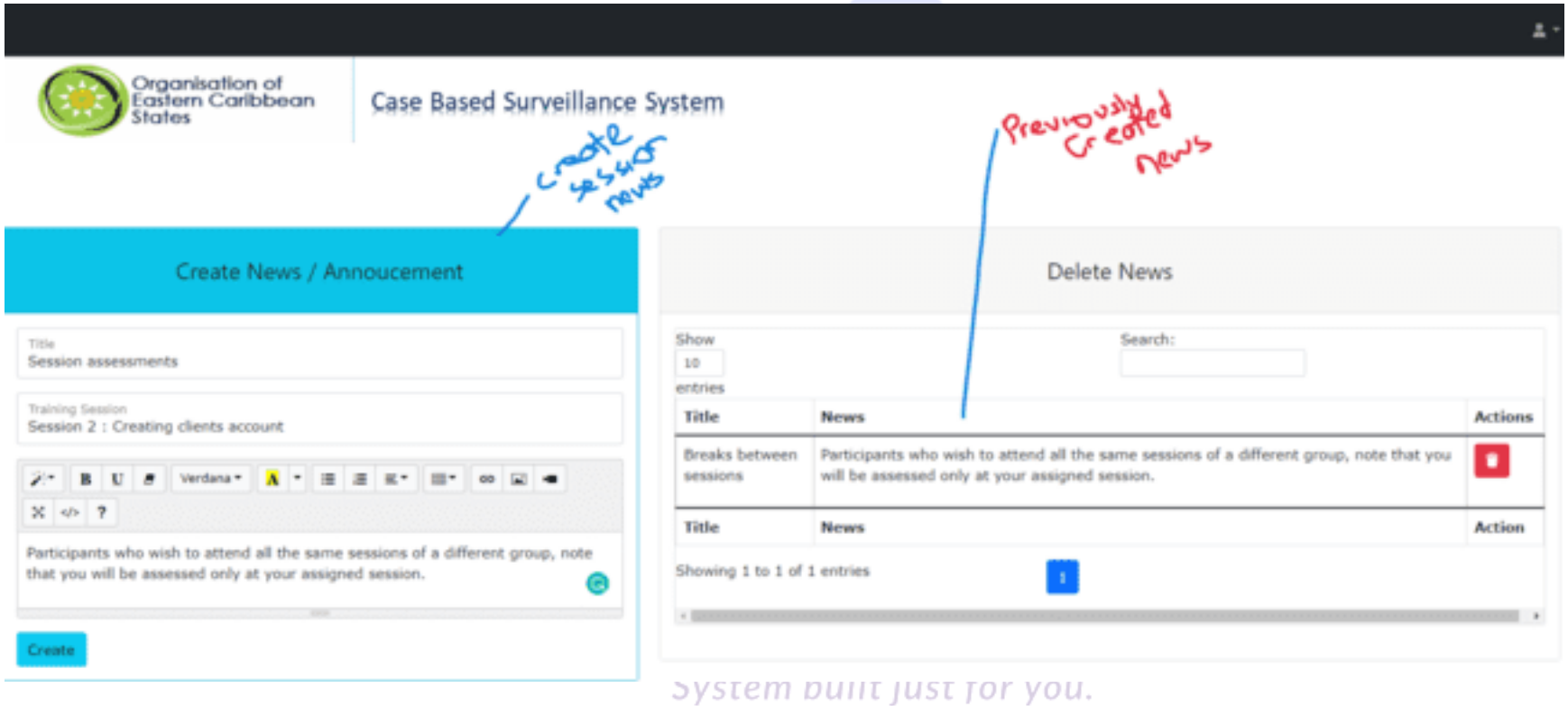


Figure 55: Creating a session announcement/news

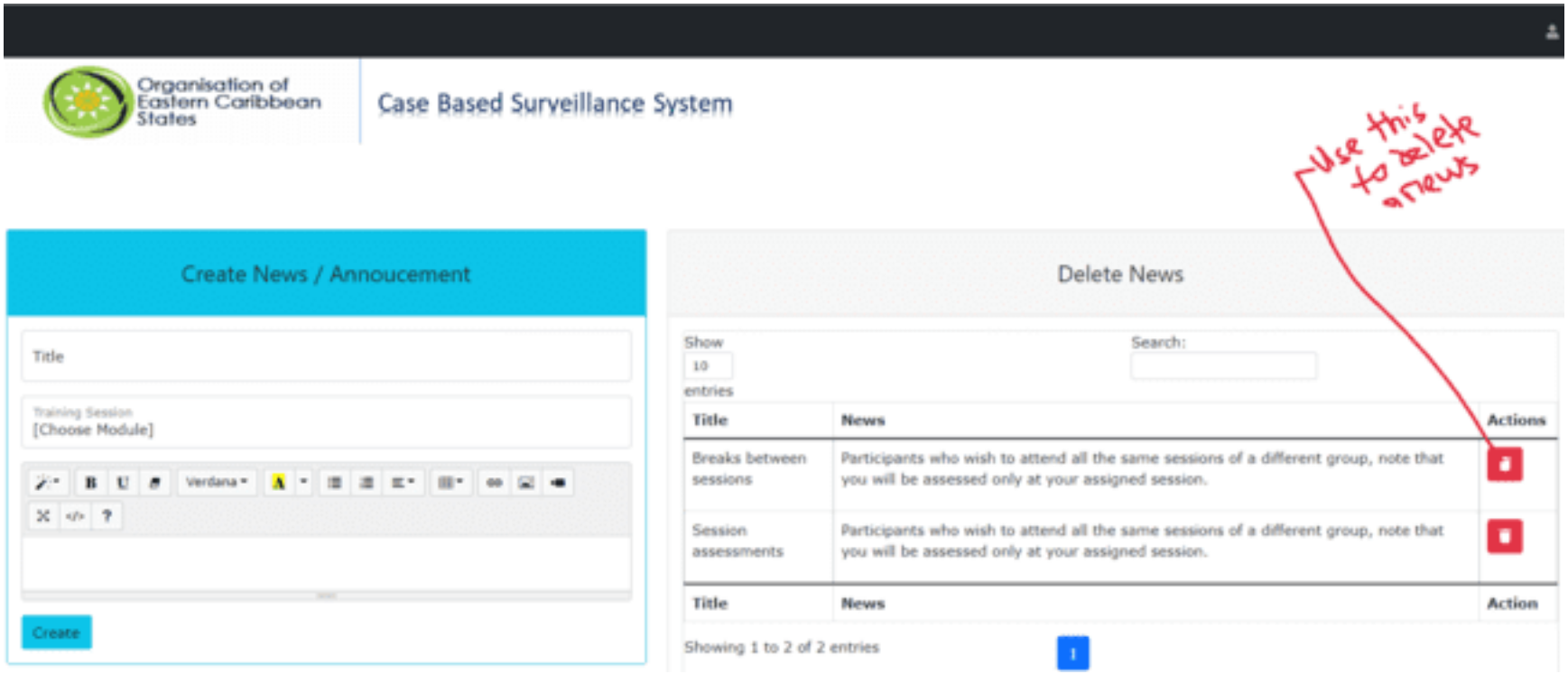


Figure 56: deleting previously created training news/announcements

6.2.2 Assessments and Certifications

This holds a list of functionalities for creating, proctoring, grading, and releasing assessments for training participants.

6.2.2.1 Create/manage training assessment

Use this link to create a training assessment, edit previously created assessments and add questions to a created assessment.

The main content area holds three forms. Take a look at the image below

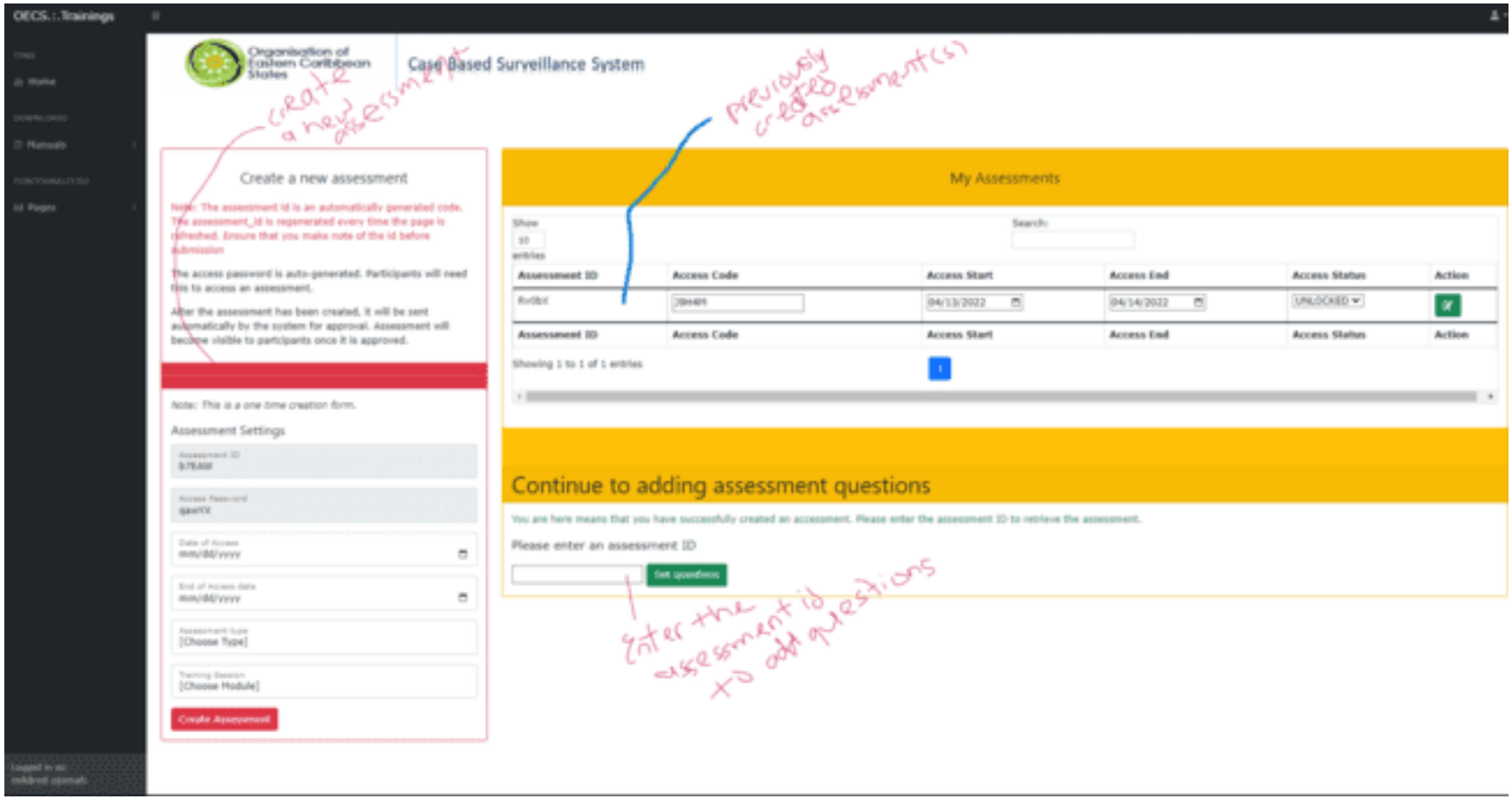


Figure 57: create and edit an assessment and set questions

After creating an assessment, the "My assessment" container allows the user to edit the assessment settings. The access code, start and end dates, and access status are updateable. To add questions to the created assessment, use the form below the "my

assessments" container, enter the assessment id and click the "set questions" button. This will display a page, as shown in the figure below.

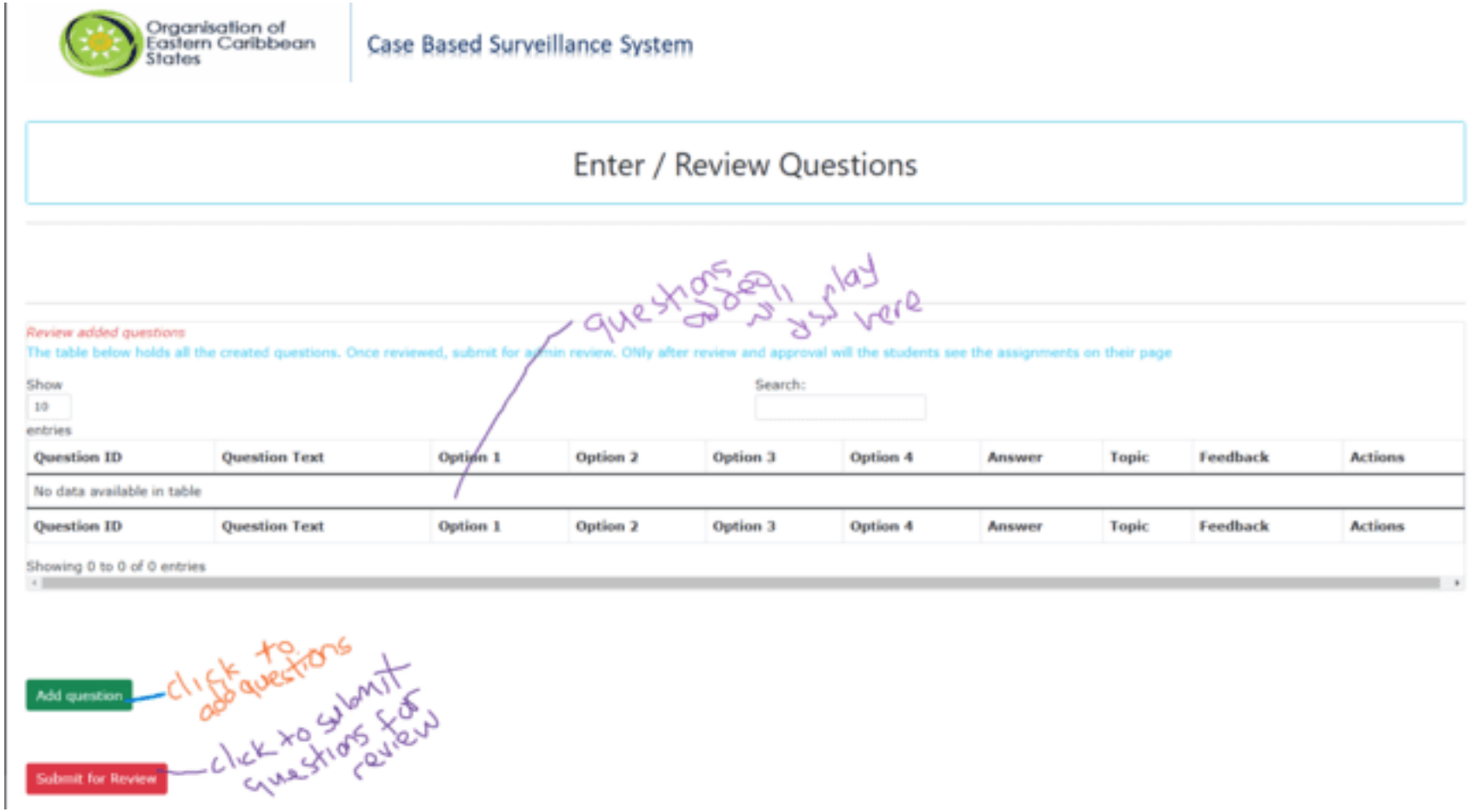


Figure 58: The question review and addition page

To add questions, use the Add question button. A form to select the question type is displayed. Select the question type and click on the create question button.

See the figure below.

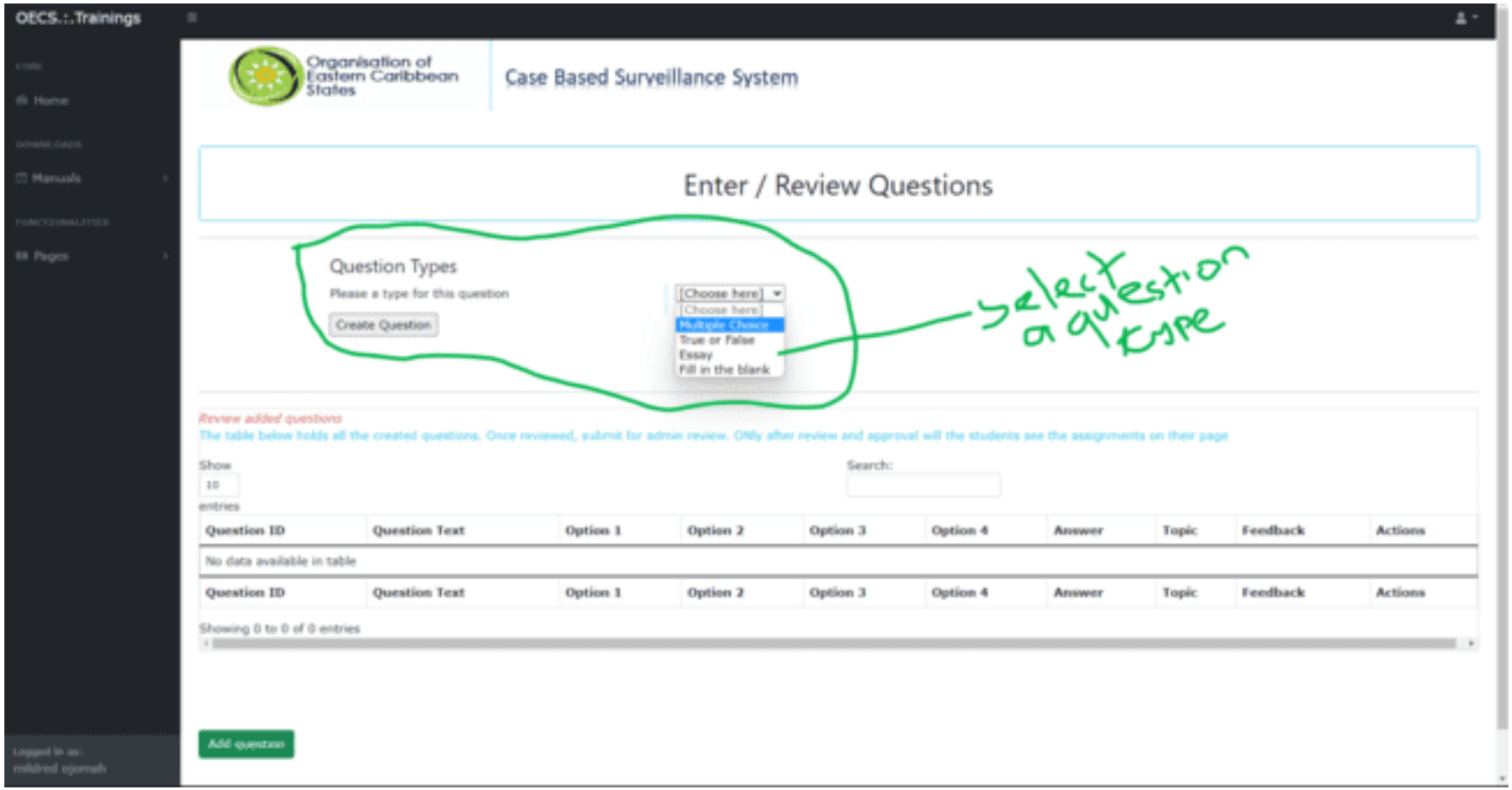


Figure 59: selecting a question type

Select the multiple-choice option and click the *'create question*' button. On the new page that presents, see the image below. Enter the question text, select the training session where the question was covered and provide answer options. Select the correct answer and provide feedback for the question and answer. Enter the question text for true or false questions, select the correct

answer, the training session where the topic was covered, and the answer feedback. For essay-type questions, enter the question text, the answer guide, the training session where the topic was covered, and the answer explanation/feedback. For a fill-in-the-blank type question, enter the question text, enter the answer keyword, select the question topic's training session, and provide feedback for the selected answer.

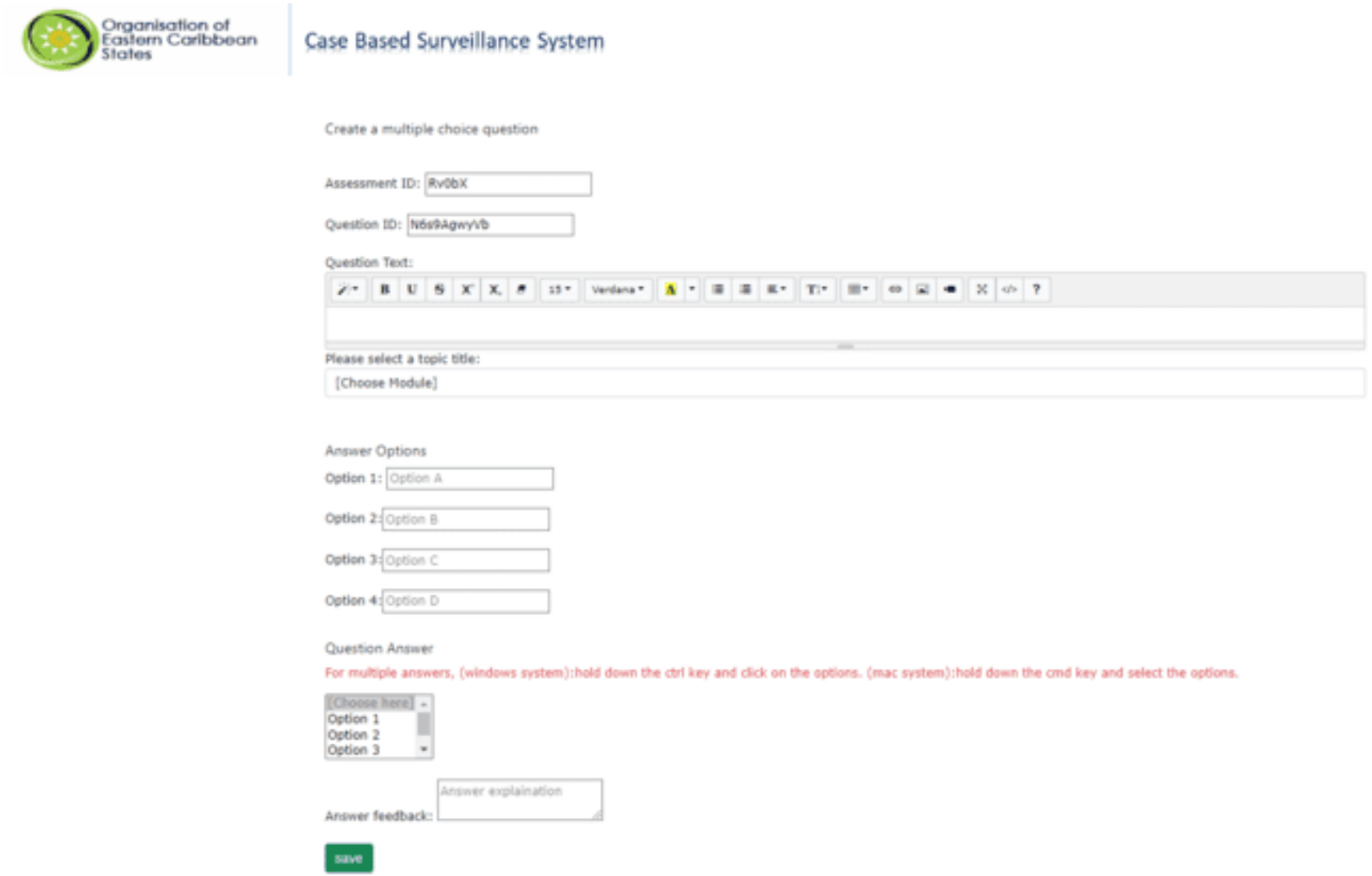


Figure 60: multiple choice question form

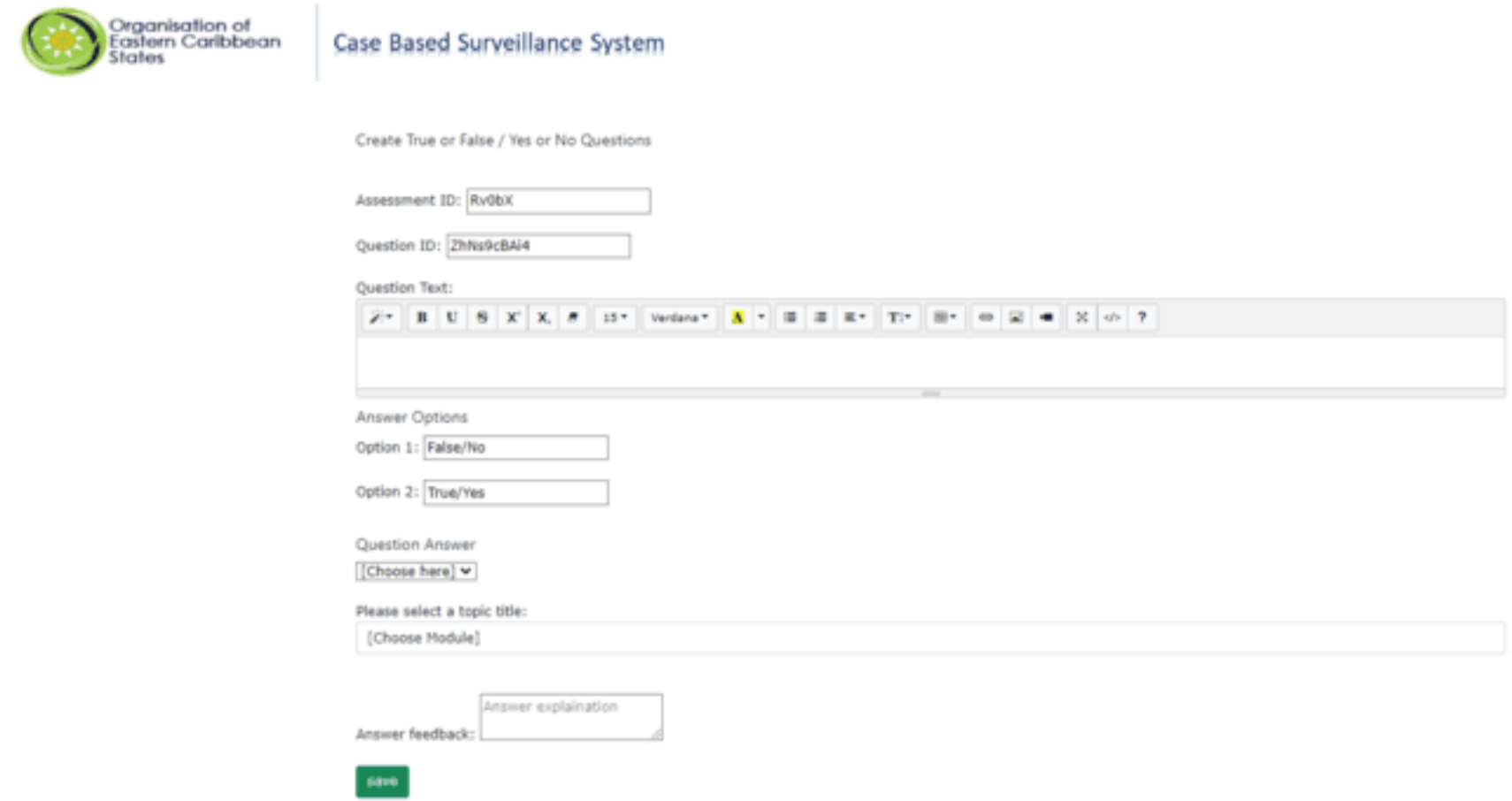


Figure 61: True or false question form

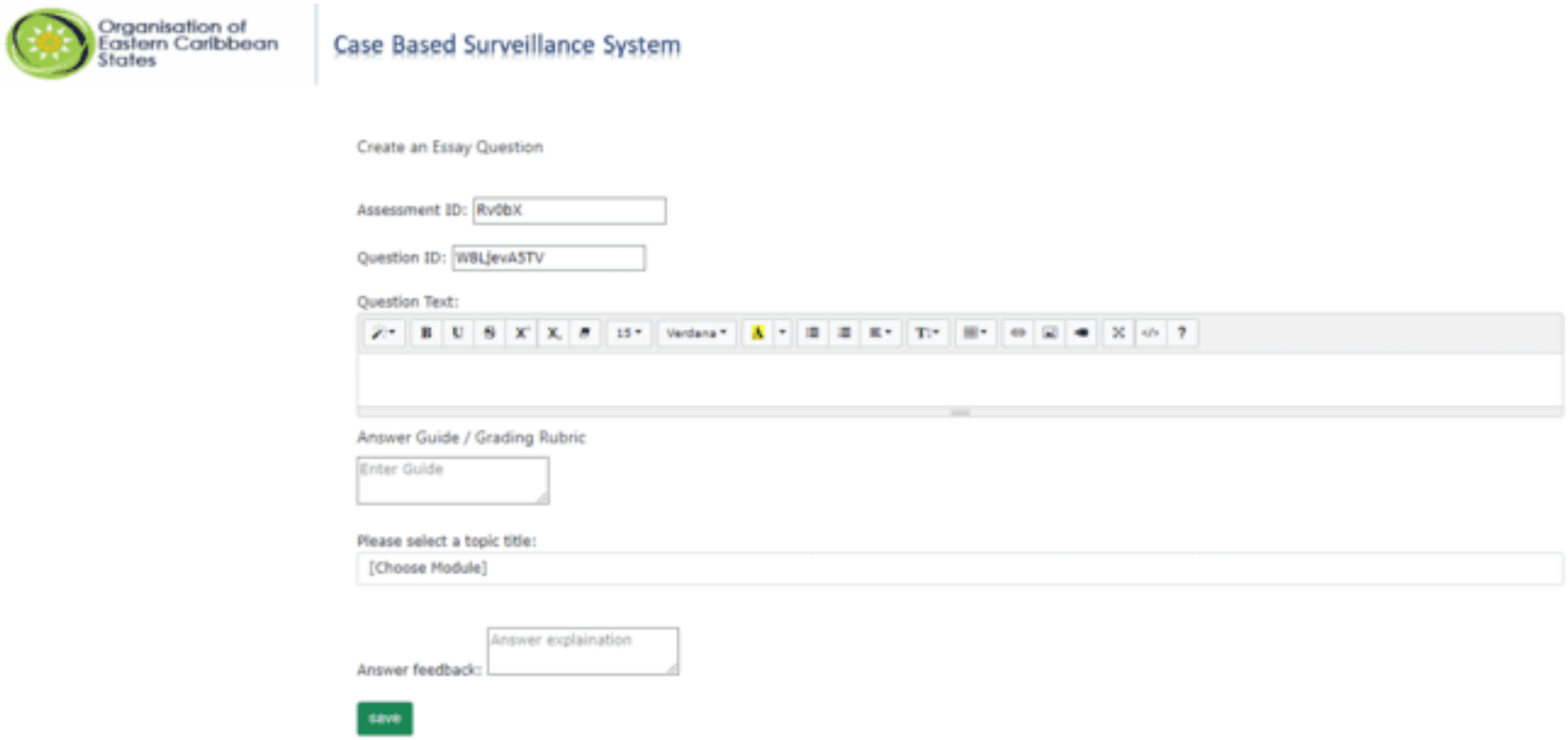


Figure 62: Essay-Type question form

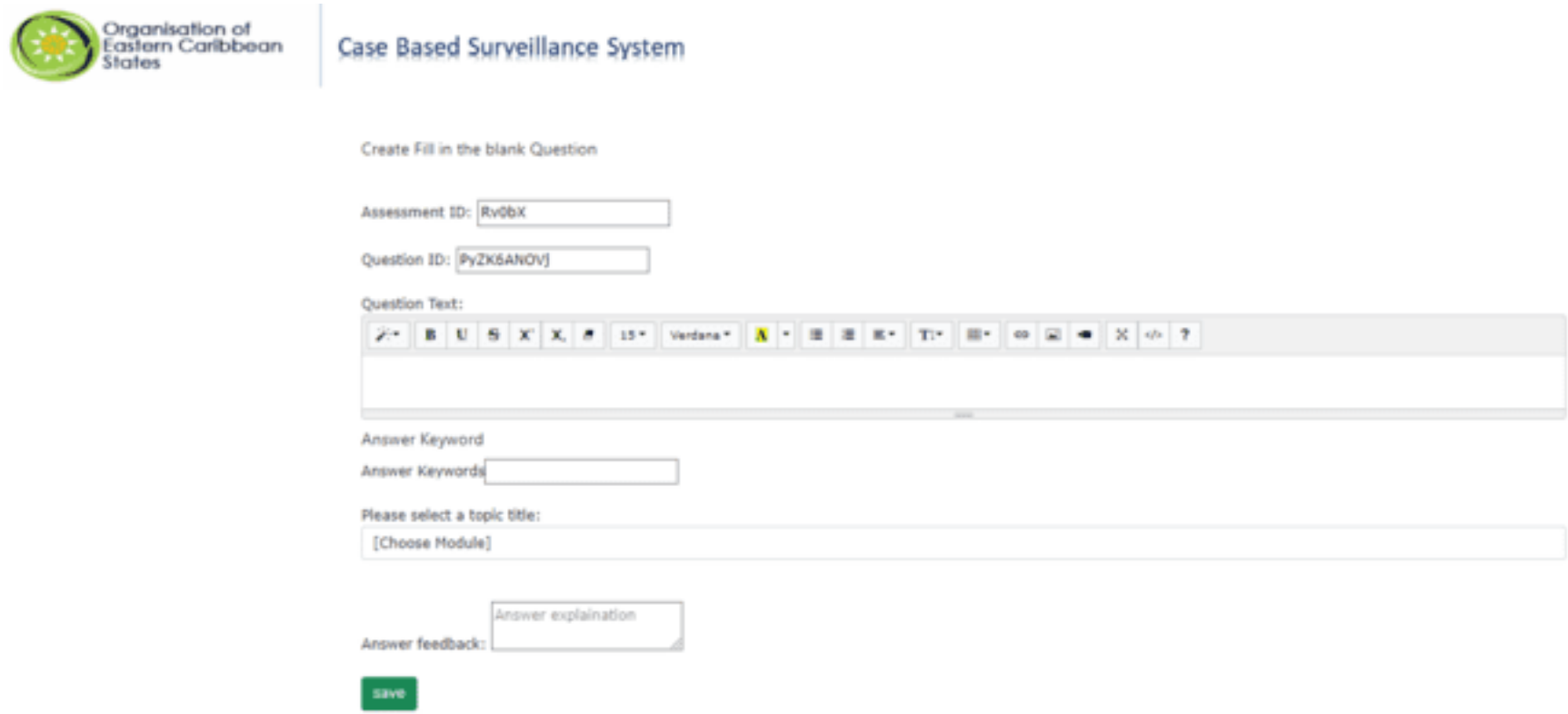


Figure 63: Fill in the blank question type

Figure 64: The page showing questions. Each question can be edited or deleted by clicking on the edit or delete button on the question row,

After adding all questions, click on the "submit for review" button.

Once submitted, a message indicating that the assessment has been submitted replaces the “submit for review.” Once reviewed and approved, a message informing the user of the approval replaces the add question button. See the image below.

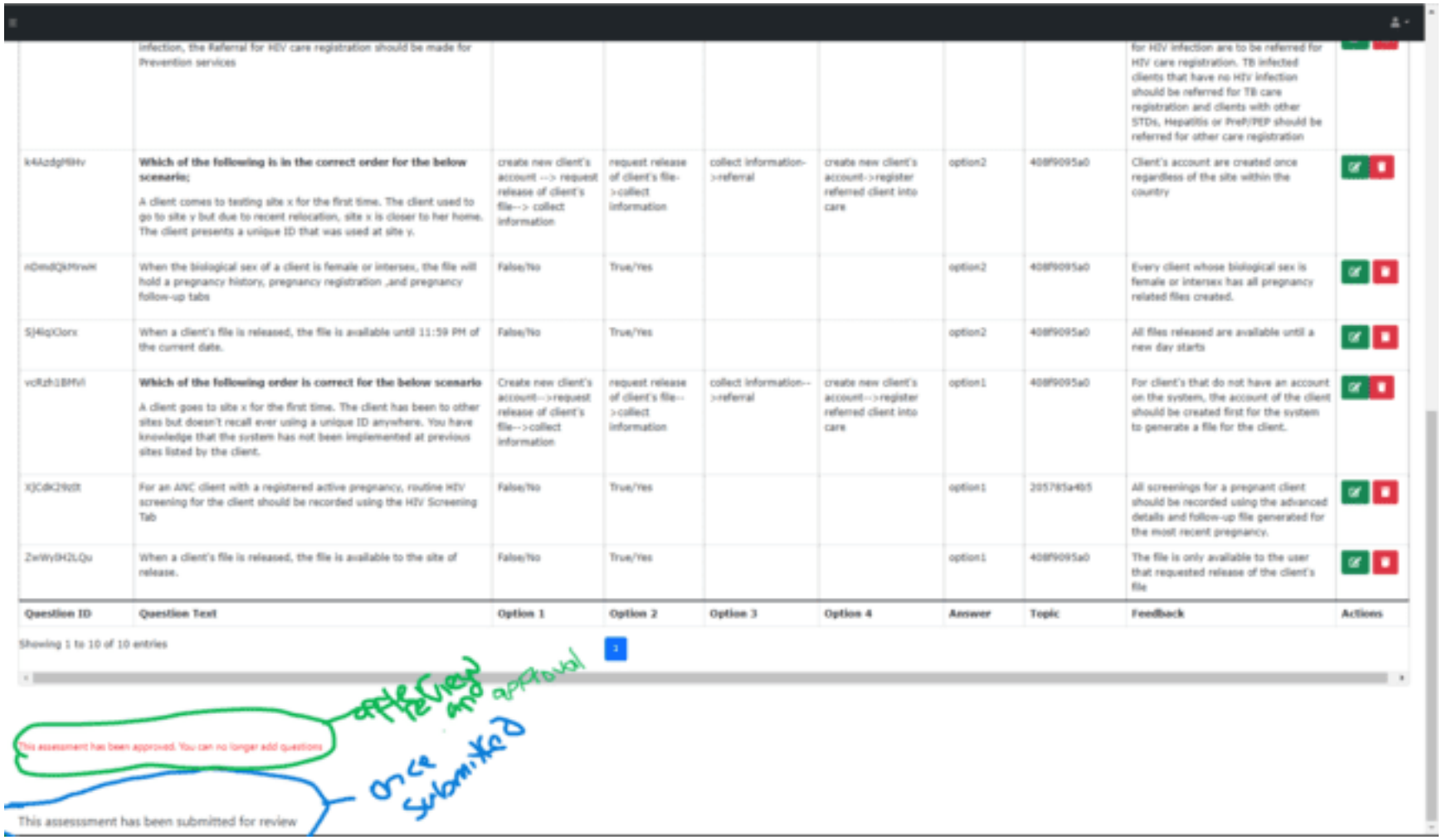


Figure 65: The page after submitting for review and when reviewed and approved.

6.2.2.2 Review an assessment

Click on the "review an assessment" link to review a submitted assessment. The page presented holds two tables. The first table holds unreviewed assessments; click on the view assessment button to open the assessment questions for review. The second table holds the reviewed and approved assessments. Click on the change approval button to reverse the review and approval.

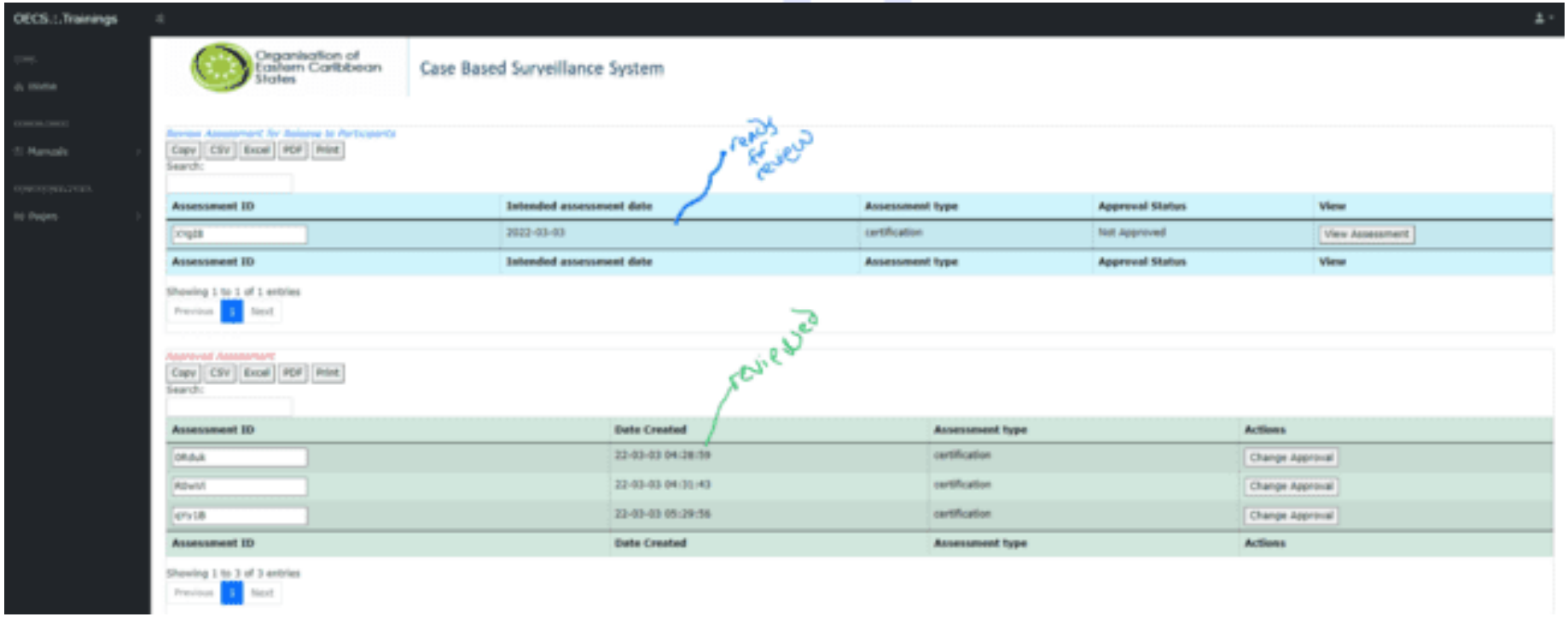


Figure 66: Review an assessment page

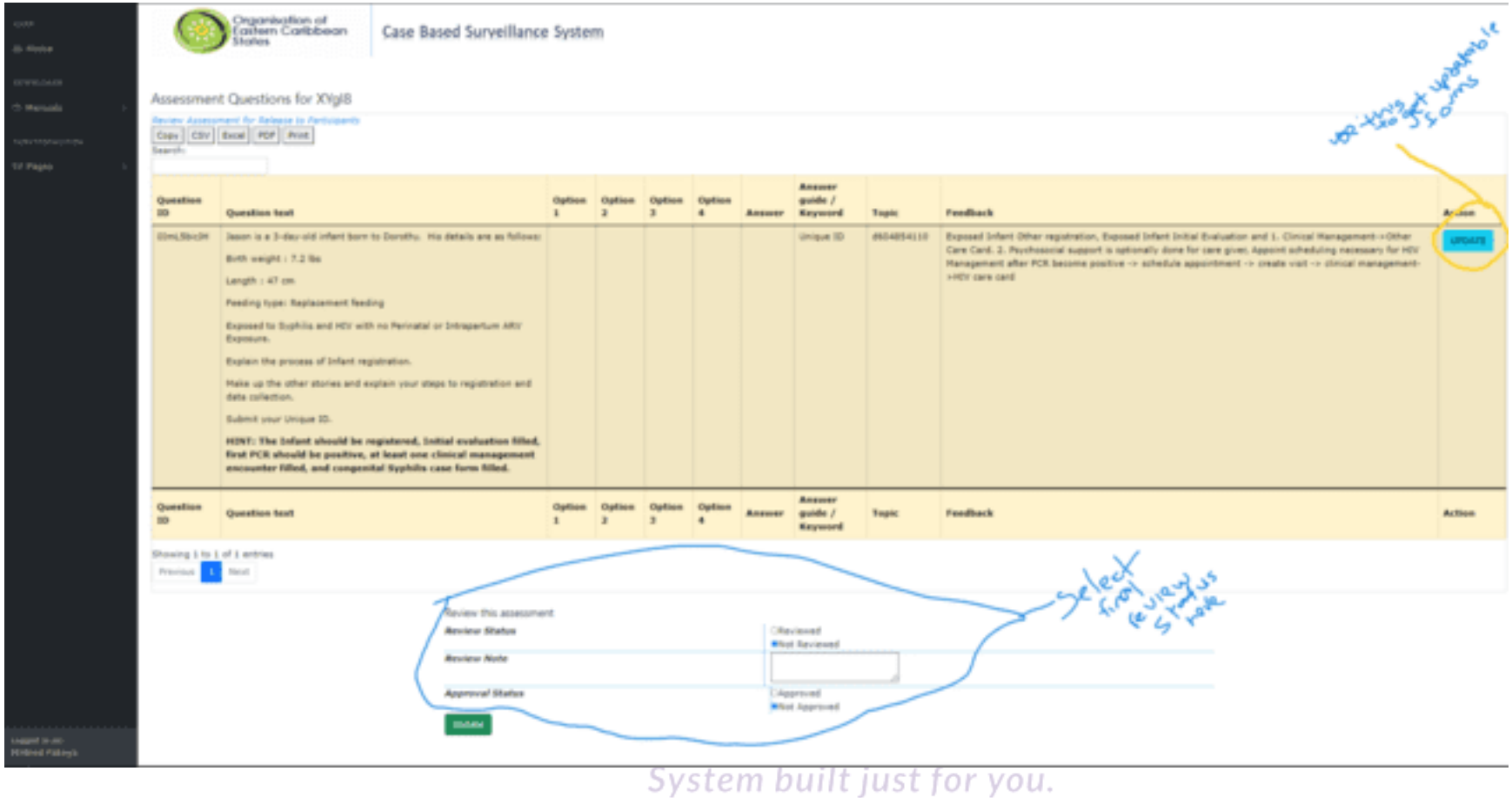


Figure 67: Page after selecting the view assessment button. Click on the update button to put the questions in an updateable form, and when done, use the form beneath the questions table to update the review and approval status

6.2.2.3 Unlock an assessment

This page holds buttons for assessments that are locked. To unlock an assessment, click on the button that holds the assessment I.D. of the assessment to open.

6.2.2.4 Proctor training assessment

On this page are buttons labeled with the assessment I.D. of the assessments on the system. Click on a button that holds the assessment I.D. to start proctoring. In a setting where participants take assessment live via web conference, use this link to view the submission for each participant and confirm receipt of all question submissions before they log off.

After participants submit, the facilitator can lock the assessment by selecting the "click to lock" button.

6.2.2.5 Grade an assessment

To grade an assessment, select the button that holds the assessment I.D. Each submission appears on the page with a grade button to the right of the participant's name if participants submit. Click on the grade button. Compare the student's answer with the correct answer and enter the score for each question. When done grading all questions, click on the grade button. The system calculates the final score and saves it in the database.

6.2.2.6 Release graded assessments for participants' feedback

Click on the button that holds the assessment I.D. This releases the grades and feedback on the participant's pages.

6.3 The Participant Role

The participant role holds functionalities to join live training sessions, download resources, view announcements, participate in assessments and view grades and feedback.

Figure 68 shows the participant's home page and all the functionalities available to the participants.

The main content area of the home page shows the announcement section. All training announcements appear in this section.

The “Your schedule” session holds a table of all scheduled training sessions. Click on the “Join Live” highlighted in blue to join a live session.

The “Your resources” section holds a link to download training resources. Click on the (View / Download resource) link to download a resource.

The Notes section marked in red ink holds training notes, if any.

To the left of the page is the page's menu. This menu holds links for Assessments and Certifications. There are three types of Assessments. For certification assessment, click on the Certifications menu. For Pre-Assessment, click on the pre-assessment menu, and for summative assessment, click on the summative assessment menu. Figure 69 shows the assessment access page. Enter the access code on the row that holds the assessment I.D and click on get to access the assessment questions. When answering the questions, save the assessment answers on the go. The assessment ID of all submitted assessments is listed on the assessment page.

To view grades and feedback when released, Click on the Grade and Feedback menu of the pages menu

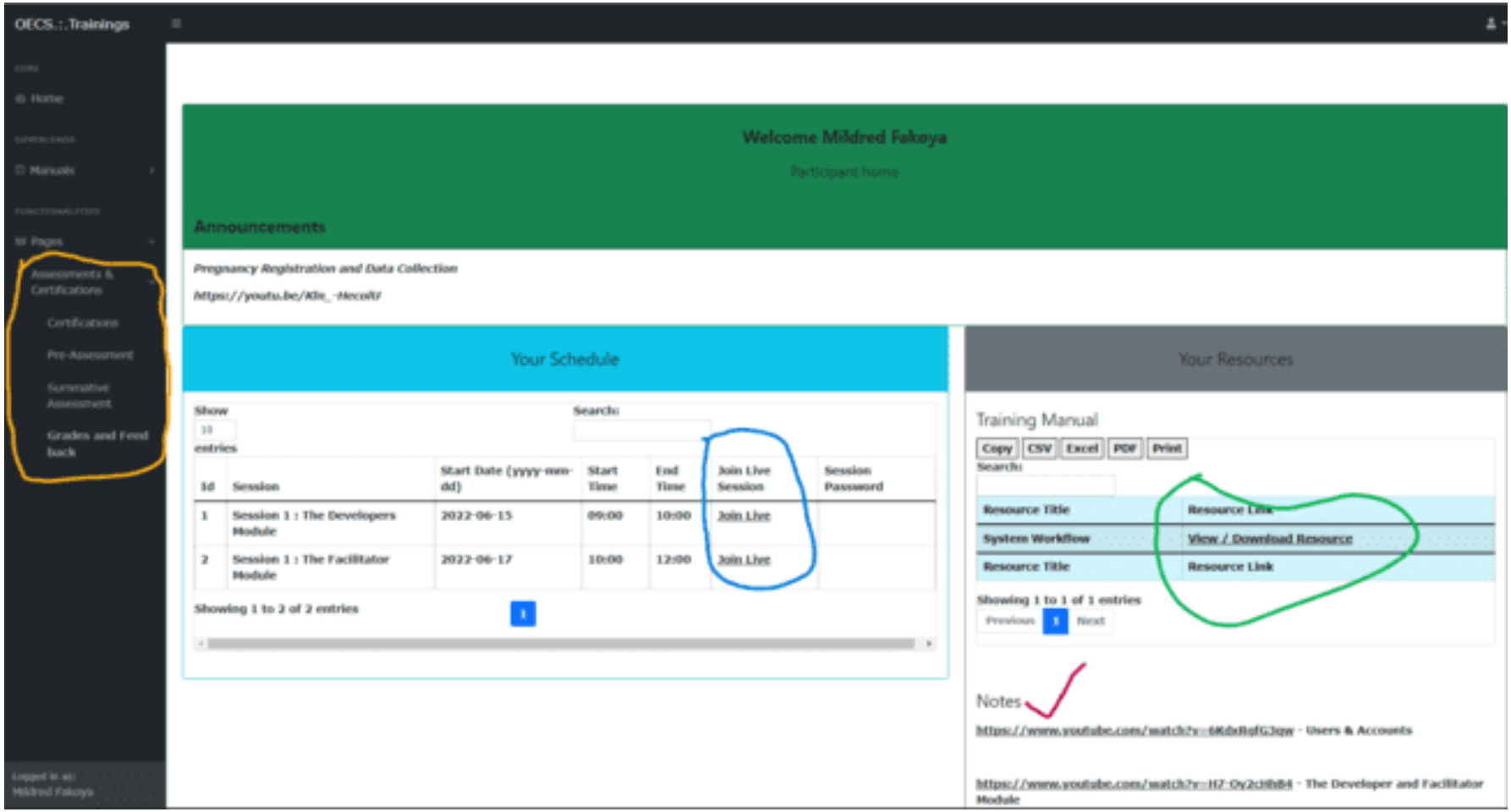


Figure 68: The participants' home page

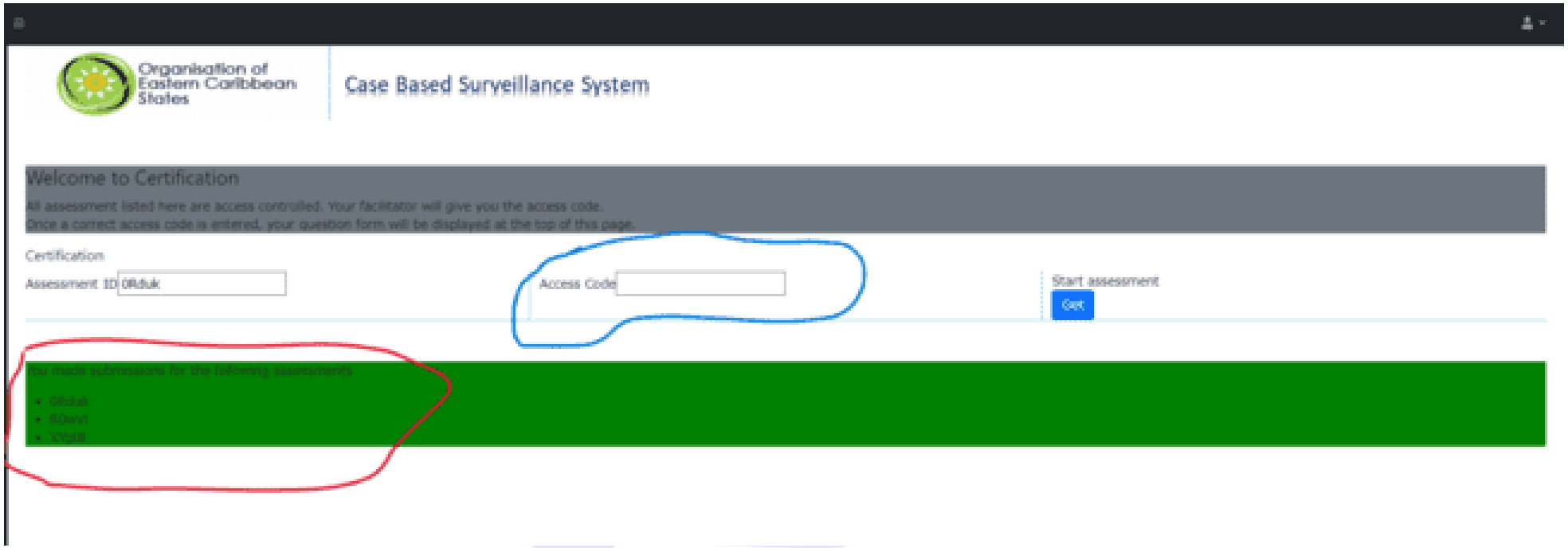


Figure 69: The assessment access page

6.4 The Guest Role

The Guest role has all the functionalities of the participant role except the Assessment and Certifications functionalities.

7 SELF-TEST (INTERNAL AND EXTERNAL REPORTING)

Notice the application's Index page (figure 7), to the right of the main content area, the form with the header title “Report HIV/Syphilis self-test,” is the external form for self-test reporting, and it is a mobile-friendly form. When clients receive a self-test kit, they should receive it along with the site address to self-report their test results or their partners once done. If they cannot self-report, the provider can help record their test result, as illustrated in 5.2.2.1.3 (The twelfth tab). The kit serial number, the category of test, the result, and the date are the required fields on the form. Encourage clients with an account on the system to enter their unique I.D. when reporting results.

8 PRACTICE CASE SCENARIOS AND WALK-THROUGH

8.1 CASE 1: SCREENINGS, REFERRALS, AND PREVENTION

Jeff is a 40-year-old married (to a biological female) father of 2 children who has a male partner for casual sex. He lives at 25 Halfway house, Grand Estate, Rivertown, Parkland. Jeff has 5-9 sexual partners; Heterosexual but romantically attracted to more than one gender. He uses alcohol occasionally & smokes tobacco to curb his anxiety, and recently had an anal unprotected sexual encounter with a new male friend he met at a party and shared needles while injecting drugs. Four months ago, he had an N.gonnorhoea and C.trachomais infection. He was treated with 240mg Gentamicin IM plus azithromycin 2g PO single dose. He is allergic to cephalosporins. He presents at the health center today with Mucocutaneous lesions on the palms of his hand. He received a transfusion of platelets for hemorrhagic fever during his high-school years. Due to his risk behaviors, he was screened for Hepatitis B, HTLV, HIV, and Syphilis through routine serological testing at the STI Clinic. His result returned with a reactive RPR /VDRL(1:64) and reactive TPPA/TPHA. He could not recall being treated for Syphilis previously. He was told to ask his wife and partners to come in for screening and treatment. Jeff does not want to tell his wife but knows she is at risk.

8.1.1 Walkthrough case 1: Under the pages menu, expand the general population counseling and testing option

- Create an account for Jeff (a one-time process), and take note of the unique I.D used. (see 5.2.2.1.1)
- Request Release of the client's file using the Unique I.D. (see 5.2.2.1.2)
- Collect Information using the Unique I.D. (see 5.2.2.1.3)
- Continue the process using directions from 5.2.2.1.3, 5.2.2.2.3 and 5.2.2.4.2

8.2 Case 2: Screenings, Prevention, and Risk Reduction

Jane is a 35 years old accountant who lives alone and has two male sexual partners (Jack, her steady boyfriend, and James, whom she sees casually) and one injection drug partner. James uses condoms always, but Jack never does. Occasionally she may do some marijuana when she hangs out with James. She presents at the clinic today for routine screening. Her provider gave her a risk reduction plan, educational brochures & condoms. She was encouraged to discuss with her partners for testing.

8.2.1 Walkthrough case 2: Under the pages menu, expand the general population counseling and testing option

- Create an account for Jane (a one-time process), and take note of the unique I.D used. (see 5.2.2.1.1)
- Request Release of the client's file using the Unique I.D. (see 5.2.2.1.2)
- Collect Information using the Unique I.D. (see 5.2.2.1.3)
    - List Jack and James as contacts for risk reduction.
- Continue the process using directions from 5.2.2.1.3, 5.2.2.2.3 and 5.2.2.4.2

- Create accounts for James and Jack and follow the procedures from step 1 for each. (Read case 4 to inform you of the labs for James)

8.3 Case 3: Pediatric HIV, Prevention and Other STDs Screenings, Referal, Prevention, and Management

Grace is an 11-year-old girl brought to the Accident and Emergency room by her mother because her neighbor's son has raped her. She has been abused physically by her parents because of her perceived disobedience, and she admits to the nurse that she has been sexually active since she was 9. Routine blood screening reveals that grace is Syphilis positive, has genital warts, and is HIV positive.

8.3.1 Walkthrough case 3: Under the pages menu, expand the general population counseling and testing option

- Create an account for Grace (a one-time process), and take note of the unique I.D used. (see 5.2.2.1.1)
- Request Release of the client's file using the Unique I.D. (see 5.2.2.1.2)
- Collect Information using the Unique I.D. (see 5.2.2.1.3)
    - List her neighbor as her contact.
- Continue the process using directions from 5.2.2.1.3, 5.2.2.2.3, and 5.2.2.4.2 (make sure to refer to Grace for HIV care and Other care. Because Grace is Pediatric, it is required to do the two referrals. If Grace were an Adult, then only HIV referral would be required)

8.3.2 Case 3: care registration and management

A referral exists for Grace from testing site x; the date confirmed positive = seven days prior to the current date, with a reactive VDRL/TPHA titer 1:64.

- Expand the care registrations and Initial registration sub-menu of the pages menu
    - Select the view other care referrals option and ensure that Grace was referred and was categorized as pediatric.
    - Select other care registration, and use the unique I.D to retrieve the registration form. (5.2.2.3.7)
    - Select the view HIV care referrals option and ensure that Grace was referred and categorized as pediatric.
    - Select HIV Care registration (Adult/Adolescent/Pediatric) and register grace into care (5.2.2.2.1)
    - Select Pediatric Initial and Clinical Evaluation and fill out the forms. (5.2.2.3.9)
- Expand the psycho-social support/adherence counseling sub-menu of the pages menu. (follow the process in 5.2.2.6)
    - Select Schedule counseling appointment (schedule for adherence readiness assessment).
    - Select start counseling encounter and fill out the forms
- Expand the Appointments and Patient Monitoring sub-menu of the pages menu (follow the process in 5.2.2.7)
    - Select the Schedule new clinical management / CD4 / VL appointment.
    - Create Visit/record vital signs
- Expand the Clinical Management
    - HIV care card and fill out the forms. (follow the process in 5.2.2.8.2)
    - Other Care Card and fill out the forms. (follow the process in 5.2.2.8.4)

8.4 CASE 4: DO IT YOURSELF

James is a client who came in for testing via partner notification service via case 2. He is heterosexual, has three female sexual partners, and was incarcerated for three months about two years ago for shoplifting. With Jane, his casual sexual partner, he uses a condom consistently, and he rarely uses a condom with his other two sexual partners. Screenings for HIV and Syphilis revealed a reactive HIV, and RPR/VDRL returned reactive (1:128). The confirmatory screening revealed a positive HIV-EIA and reactive TPPA/FTA/TPHA.

8.5 CASE 5 – ANC, PMTCT, PREVENTION, AND MANAGEMENT:

Josette is a 15-year-old Form 5 student. After not seeing her period for two months, she presents to the health center. A pregnancy test reveals that she is pregnant. Her last LMP was 13 weeks ago. This is her first pregnancy with no history of chronic medical illnesses, a family history of diabetes and hypertension, and no surgical history or medications. She presents with a mild nonproductive cough. Her HIV and Syphilis screening returned non-reactive. Josette breaks up with her partner (and baby father) Philip during the pregnancy and has a new boyfriend named John. About three months later (Gestation age 26 weeks), they go for screening since they have become sexually intimate. She now presents a mild rash on the palm of her hands and is a bit more tired at the end of the day.

Her serology results show that she is HIV positive and RPR/VDRL reactive 1: 16. Other results include HTLV1 negative, TPHA reactive, HBsAg positive, Hemoglobin 9.8, HB Electrophoresis - AA, blood group A with Rhesus null, vaginal swabs positive for

bacterial vaginosis, and endocervical swabs negative. Her 25 years old partner John is also HIV positive and has Syphilis positive RPR reactive 1: 128 and positive for Herpes.

An ultrasound scan reveals that the fetus had a gestational age of 25 weeks and four days, a fetal heartbeat of 140bpm, with no congenital disabilities.

Josette has had her entire course of immunizations at birth. She received treatment for Syphilis with three weekly injections of Penicillin. She is immediately started on antiretroviral therapy. She is given the standard single-tablet combination of TDF/FTC/EFV. As a policy for all antenatal clients, the Clinic tested Josette for HIV drug resistance with a genotype test. (The clinical team will decide the treatment outcome, including her cd4 and viral load, plus edit the PMTCT intervention given).

She later had a vaginal delivery of a 7lb baby boy at 39 weeks gestation. (The clinical team will discuss the baby's outcome, the intervention, screenings, and immunizations).

When the infant was seven weeks old, Josette brought him to the Clinic for his first infant checkup. He was asymptomatic. There, his AZT medication was stopped, and he was continued on Septrin and given his second DNA PCR test. Josette continued her HIV care at the Clinic. Her HIV Drug resistance test results returned, showing that she had K65R and K103N mutations, which made her 1st line regimen inferior. She was subsequently switched to second-line AZT/3TC and Atazanavir /Ritonavir. Her follow-up STI screening showed that she was positive for Chlamydia, and she revealed that she had made up with her child's

father but was still seeing John. Given her risk behavior, she was given a risk reduction plan. She listed her baby's father as a contact for provider referral screening and testing.

8.5.1 Case 5 Walkthrough

Follow the process from 8.3.1 and 8.3.2 with the following adjustments.

- Collect information: On the collect information screen, follow the directions below
  - Fill in the forms in the personal information, risk behaviors, and comorbidities /other's tab.
  - Skip the HIV screenings, TB screenings, Syphilis Screenings, and other Screenings, and upload screening results and vaccination history tabs.
  - Optionally fill the contact listing and extra notes tab depending on the lab results and the risk.
  - Follow the rest of the directions from 5.2.2.1.3 starting from the pregnancy history tab to the update baby tab
  - Follow the directions from 5.2.2.3.8, 5.2.2.3.10, 5.2.2.4, and the drug resistance testing tab information from 5.2.2.5.1

  The above process is a simplified, summarized process. This case tests the intimate knowledge of all the screenings and management functionalities.

8.6 CASE 6: DO IT YOURSELF

Susan is a 42-year-old gravida 4 para 2 Aborta 1 female presenting for an antenatal checkup in the last trimester of her pregnancy. Her last menstrual period was on November 27, 2021. She has a history of oligohydramnios. She currently complains of occasional headaches and swollen feet at the end of the day. She works as a loans officer at the local Bank. Her mother and father had hypertension and diabetes; the father died of myocardial infarction, while the mother died of a stroke. She had a dilation and curettage for her second pregnancy following a fetal demise.

Her serology screening on this first follow-up visit indicates that she is negative for HIV and Syphilis (non-reactive TPHA and RPR). The rest of her serology results for HTLV and Hepatitis are both negative. Blood group AB with RH positive and glucose results were normal. Susan has had all previous immunization and does not require any during this pregnancy.

On her physical exams, the vitals are within the normal range, and there are no signs of anemia, lymphadenopathy, or fever. Her abdomen is soft and distended with a fundus height of --- cm, 4 cm above the umbilicus. Fetal movements are present, and the doppler shows a heartbeat of 90bpm. Her cardiovascular, respiratory, neurological, and musculoskeletal exams are normal except for some mild pitting edema of her legs. Breast and genital examinations are also normal. The overall assessment shows that her pregnancy is not developing well, and she is again at risk of miscarriage.

Susan delivers a healthy baby girl weighing 6.2 lbs via cesarean section due to respiratory distress and a cord around her neck. They spent six days in the hospital and were discharged with a clean bill of health. Susan ensured that she adhered to her six weeks follow-up for her baby girl and to see her primary care physician for her hypertension.

8.7 CASE 7: DO IT YOURSELF

Isabel is a 27 years old pregnant client Gravida 5 para 4 presenting for labor without any antenatal visits. She has four children, all under ten years old. She is currently in mild distress and has some contractions and ruptured membranes. A rapid HIV & Syphilis blood test is done for her. The results indicate that she is HIV negative but Syphilis reactive and is guided through labor and given a stat dose of Penicillin. Her full serology was taken immediately after labor for Hepatitis B, C, HTLV, Syphilis, and HIV. All were negative except for Syphilis VDRL/TPHA 1:64. Her infant was also given a full serology test and was negative for all tests except Syphilis with an RPR titer of ----. The infant was immediately given Penicillin stat dose for Syphilis.

9 TRAINING AND ASSESSMENT SCENARIOS

9.1 CASE 1:

Bruno is a 42-year-old Caucasian male presenting at the health center with reports of several weeks of generalized weakness, nausea, headaches, clay-colored stool, and joint stiffness. He has never left or resided elsewhere; he is single, unemployed, has sex with men only, and never uses condoms. He uses injection drugs and has had over ten sexual and injection drug partners in the last year. He received a transfusion of blood two years ago. He has no existing medical condition. He was incarcerated about three years ago, was homeless after release, and has sex in exchange for food and drugs.

Screening Information

He was screened for HIV, Syphilis, and Viral Hepatitis.

His result is as follows:

VDRL reactive Titre 1:256 TPHA reactive

HIV Rapid non-reactive

HBsAg: Positive

HCV antibody: reactive

HCV RNA: detected (Genotype 1 HCV)

Contacts

Household:

Brown James -222-2222

John Green – 444-4444

Injection Drugs and Sexual Partners Listed

Noah Oliver – 45, park street 888-8888

Lucas Benjamin – 999-9999

Philip James - 876-4567

Jacob Mason 111-1111

Elijah Logan 555-5555

Alexander Jackson 333-3333

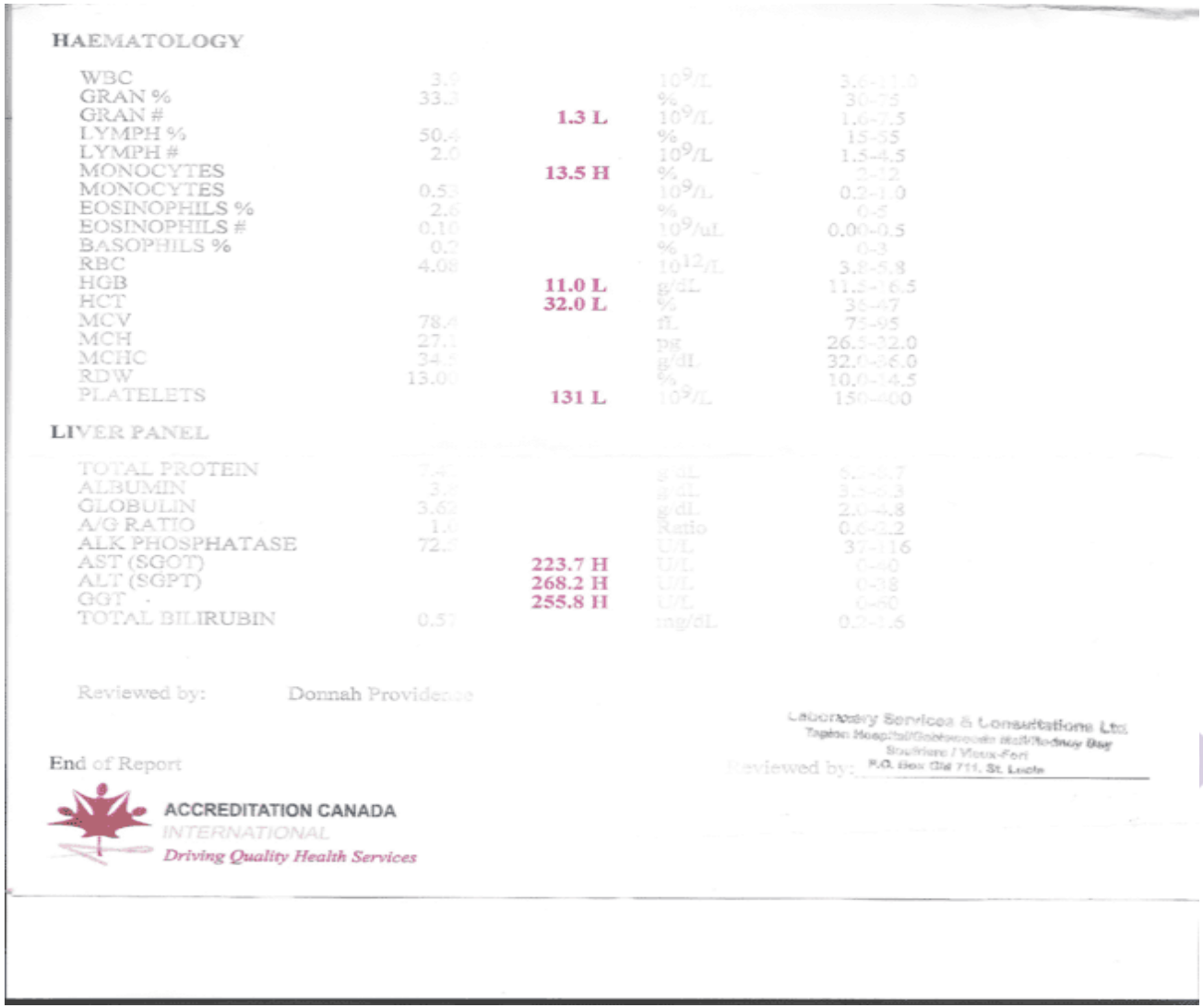
Mateo Owen 777-7777

After confirmation, Bruno was referred for Registration and Management.

9.1.1 Clinical Management of Bruno

Physical examination revealed an ulcerated plaque on the upper lip, a macular rash with three crater-like scarred painless lesions (healing Chancres) on the glans, a nonpruritic hyperkeratotic maculopapular palmar rash, and bilateral submandibular lymphadenopathy. No ocular or cardiovascular abnormalities were noted. Other symptoms are Fever, Fatigue, and Jaundice.

Other Evaluation attached below:



HAEMATOLOGY

WBC	3.8		10^9/L	3.6-11.0
GRAN %	33.3		%	30-75
GRAN #		1.3 L	10^9/L	1.6-7.5
LYMPH %	50.4		%	15-55
LYMPH #	2.0		10^9/L	1.5-4.5
MONOCYTES		13.5 H	%	2-12
MONOCYTES	0.53		10^9/L	0.2-1.0
EOSINOPHILS %	2.6		%	0-5
EOSINOPHILS #	0.10		10^9/uL	0.00-0.5
BASOPHILS %	0.2		%	0-3
RBC	4.08		10^{12}/L	3.8-5.8
HGB		11.0 L	g/dL	11.5-16.5
HCT		32.0 L	%	36-47
MCV	78.4		fL	75-95
MCH	27.1		pg	26.5-32.0
MCHC	34.5		g/dL	32.0-36.0
RDW	13.00		%	10.0-14.5
PLATELETS		131 L	10^9/L	150-400

LIVER PANEL

TOTAL PROTEIN	7.4		g/dL	6.2-8.7
ALBUMIN	3.8		g/dL	3.5-5.3
GLOBULIN	3.62		g/dL	2.0-4.8
A/G RATIO	1.0		Ratio	0.0-2.2
ALK PHOSPHATASE	72.7		U/L	37-116
AST (SGOT)		223.7 H	U/L	0-40
ALT (SGPT)		268.2 H	U/L	0-38
GGT		255.8 H	U/L	0-60
TOTAL BILIRUBIN	0.57		mg/dL	0.2-1.6

Reviewed by: Donnah Providence

Laboratory Services & Consultations Ltd.
Tapion Hospital/Soufrière Multi-Purpose Bay
Soufrière / Vieux-Fort
P.O. Box Old 711, St. Lucia

End of Report

Reviewed by: _____

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Figure 70: Lab evaluation for Bruno

Fibro Test Score: 0.28 F1 -Minimum Fibrosis

Encephalopathy: None (1 Point)

Ascites: Absent (1 Point)

Prothrombin time: < 4 seconds

Staging of Cirrhosis (Child-Pugh): A (5-6)

Weight: 230lbs

Make up other Vital Signs

Drug allergies: Penicillin, Codeine

Diagnosis: Secondary Syphilis, Hepatitis B & C

Treatment: Doxycycline 100 mg PO BID x 2/ 52 *add other treatments based on assessments. He was hospitalized, later discharged after 72 hrs., and sent back to the Health Center for Prevention Services Due to his risk behaviors.

9.1.2 Other Partner Screenings for Prevention and Expedited Partner Therapy for Bruno Injection Drugs and Sexual Partners Listed

Noah Oliver – 45, park street 888-8888

Lucas Benjamin – 999-9999

Philip James - 876-4567

Jacob Mason 111-1111

Elijah Logan 555-5555

Alexander Jackson 333-3333

Mateo Owen 777-7777

Household:

Brown James -222-2222

John Green – 444-4444

All clients should be screened at the health center (use their names and make up their story) as part of contact tracing and referred for Expedited Partner Therapy. Also, every client should have a risk reduction session.

9.2 CASE 2:

Elijah Logan is a client screened as part of Partner Notification Service. He is an Injection drug partner of Case 1. He reported feeling weak, with body pains and headaches. He is heterosexual, and Serology screening reveals the following:

HIV Rapid Test: Reactive

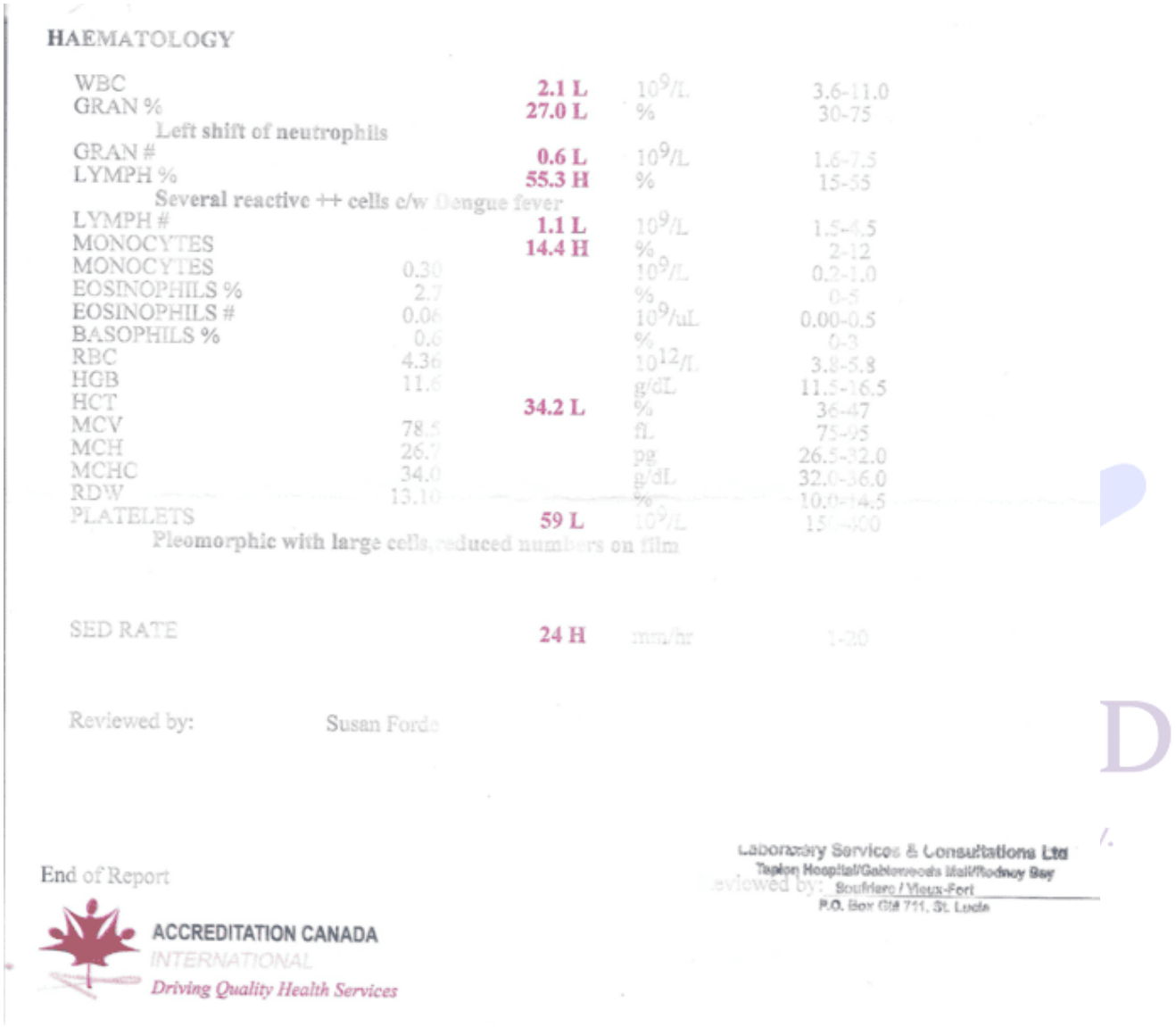
VDRL and TPHA: Reactive titre 1:128

HIV EIA: Positive

Xpert MTB/RIF: MTB detected RIF Resistant

He was referred from the Testing site for Care Registration and Management.

Other lab reports below



HAEMATOLOGY

WBC		**2.1 L**	10^9/L	3.6-11.0
GRAN %		**27.0 L**	%	30-75
Left shift of neutrophils				
GRAN #		**0.6 L**	10^9/L	1.6-7.5
LYMPH %		**55.3 H**	%	15-55
Several reactive ++ cells c/w Dengue fever				
LYMPH #		**1.1 L**	10^9/L	1.5-4.5
MONOCYTES		**14.4 H**	%	2-12
MONOCYTES	0.30		10^9/L	0.2-1.0
EOSINOPHILS %	2.7		%	0-5
EOSINOPHILS #	0.06		10^9/uL	0.00-0.5
BASOPHILS %	0.6		%	0-3
RBC	4.36		10^{12}/L	3.8-5.8
HGB	11.6		g/dL	11.5-16.5
HCT		**34.2 L**	%	36-47
MCV	78.5		fL	75-95
MCH	26.7		pg	26.5-32.0
MCHC	34.0		g/dL	32.0-36.0
RDW	13.10		%	10.0-14.5
PLATELETS		**59 L**	10^9/L	150-400
Pleomorphic with large cells, reduced numbers on film				

SED RATE	**24 H**	mm/hr	1-20

Reviewed by: Susan Forde

End of Report

Laboratory Services & Consultations Ltd
Tapion Hospital/Gablewoods Mall/Rodney Bay
Soufriere / Vieux-Fort
P.O. Box GM 711, St. Lucia

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Figure 71: Lab evaluation results Elijah

Case 3:

Dorothy, a 28-year-old female gravida 2 para 1 of gestational age 38 weeks and five days duration, presents for antenatal for the first time. Her daughter Princess is a 3 ½ years old girl whose mother has been brought in for an HIV test because of fear that her child could be HIV infected. Such fears stem from the fact that Dorothy was diagnosed with HIV infection on another island four years ago but never came in for treatment, nor did she receive antenatal care during this current pregnancy. Princess is not developing like other children her age. She has recently lost quite a bit of weight and has recurrent respiratory tract infections, intermittent fevers, skin rashes, and swollen lymph glands, which have been more frequent over the past six months.

Dorothy fears her daughter Princess might be HIV positive and is even more concerned for her unborn child. She cannot live any longer in denial and wants to be retested for HIV and have Princess tested.

On assessment by the midwife, Dorothy was 2 cm dilated. She was asked to check into the maternity unit at the hospital. Both Dorothy and Princess were confirmed HIV positive and immediately referred for care registration and Management. A few hours later, Dorothy arrived at the hospital, where her labor progressed rapidly. Jason was born weighing 5.5 lbs, 45 cm length, HC = 33 cm CC = 32 cm

URINE GLUCOSE	Negative		mg/dL	Negative
KETONES	Negative		mg/dL	Negative
BLOOD		Trace-Lysed		Negative
PROTEIN	0		mg/dL	<30
BILIRUBIN	Negative			Negative
UROBILINOGEN	0.2			0.0-1
NITRITES	Negative			Negative
LEUKOCYTES		2+		Negative
URINE MICROSCOPY	SeeBelow			
URINE WBC		4-8	/HPF	None
URINE RBC		Occ	/HPF	None
EPITHELIAL CELLS		2-4	/HPF	0-2
BACTERIA		2+		None
MUCUS	None			None
YEAST		1+		None
CRYSTALS	None			None
CASTS	None		/LPF	None

MICROBIOLOGY

GRAM STAIN See Note

4+ gram variable bacilli, 4+ gram positive cocci, 1+ yeast/oil
Suggestive of bacterial vaginosis.

URINE CULTURE FINAL REPORT
SOURCE: URINE

No significant growth

ENDOCERV CULT. FINAL REPORT
SOURCE: HVS

No significant growth

WET PREP SCREEN

TRICHOMONAS	None	
YEAST		Trace

Figure 72: Dorothy's laboratory result after delivery

In addition, she was VDRL and TPHA reactive Titre 1:64. Both Princess and Dorothy were confirmed HIV Positive.

For the Clinical Management team

Princess is a 3 ½ years old girl referred from the testing site and has been diagnosed as HIV+ on testing. Her mother Dorothy was HIV positive five years ago and retested positive during her last antenatal visit. Princess recently has not been feeling well and plays less with her friends in preschool, and she has had a bad cough over the past month.

History:

Presenting complaint:

Recurrent productive cough yellow sputum associated with fever for four weeks,

Weight loss in three months

Past medical history:

Birth weight 6lb 5onces in Princess Margret Hospital Dominica, non-breastfed. Immunizations are up to date except for BCG. Remained in Neonatal unit for one week due to respiratory insufficiency.

Health center: Recurrent respiratory tract infections at pediatric clinics

Medication History: Multivitamins, no known allergies

Social History: lives with mother, attends preschool, mild developmental delay at three-year assessment

Surgical Hx: Nil

Physical Examination:

She looks lethargic, thin

Vitals: Temp 100 HR 100 RR 26 BP 120/80 SPo2 92%

Weight: 27 lbs

+ axillary Lymph node, pale mucous membranes, anicteric

Ear, nose, and throat: Erythematous tympanic membrane, Nose Normal, erythematous pharynx, small patches on buccal mucous membranes

Chest: bi lateral chest expansion, bilateral wheeze, rales, RR 26

Cardio: S1, S2 no Murmurs, Normal JVP, BP 100/70 HR 100 + capillary refill

Abdomen: soft non-distended, N Bowel Sounds no hepatosplenomegaly

CNS: grossly intact

Skin: widespread macular rash on arms and legs + excoriations

Laboratory results (after registration into care)

Hemoglobin level of 8.1 g/dL, (12.0-15.5 grams/dL)

White blood cell (WBC) count of 12.0 $X10^9$ (4.5 to 11.0 × 109/L).

Platelet count of 130,000/mcl (150,000 to 450,000/mcL)

Baseline Cd4 count of 330 cells/μL (CD4 percentage: 18%)

Liver function test: AST, ALT: Normal

Renal Function test: creatinine: normal

HIV test: rapid test reactive

Viral Load: 20,000 copies/ml

PPD test done: negative

Syphilis: RPR Non-reactive

Diagnosis

- ¶ Bronchopneumonia
- ¶ Papular urticaria
- ¶ HIV+ Stage 3

First Clinical Encounter

- ¶ She was prescribed trimethoprim-sulfamethoxazole (TMP-SMX, cotrimoxazole)
- ¶ Multi-vitamins

- Iron and Folic Acid
- Nutritional support:
- Paracetamol 500mg po qid 1/52
- Adherence counseling
- Psychosocial support
- Hydrocortisone cream 1% applied to the affected area

Second Clinical Encounter

She returned to the clinic two weeks later with resolution of the cough and fever and no adverse effects from the medication. Her rash on her arms is beginning to clear, and she has gained 3 lbs.

Her confirmatory Eliza test was positive and was started immediately on ART with the combination of TDF 300mg PO OD +FTC 200mg PO OD+EFV 600 MG PO OD. Follow-up was given for two weeks.

Labs: CBC: Hb normal, Platelets normal, WBC normal

LFT: AST, ALT: Normal

RFT: creatinine: normal

Viral load: 20,000 copies/ml

Third Encounter:

Princess was asymptomatic and adherent to her medication with no side effects. She has become more active in school and continues to gain weight and eat well.

9.3 Central Medical Unit Scenario

The CMS has received the following and would need to populate the ARV medication list.

Drug	Strength	Form	Manufacturer/supplier	Expiry date	Batch number	packaging	Amount per pack	Quantity
Abacavir	20mg /ml	Oral Solution	ViiV Healthcare	08-2022	01-001	HDPE Bottle	240ml	2000
Abacavir	20 mg /ml	Oral Solution	Aurobindo Pharma Ltd	09-2023	01-002	HDPE Bottle	240 ml	2000
Abacavir (as sulphate)	60 mg	Dispersible Tablet	Cipla Ltd	01-2025	01-003	HDPE Bottle	60	500
Abacavir	300mg	Tablet	ViiV Health Care	01-2025	01-004	Blister Film Package	60	1000
Efavirenz + Lamivudine + Tenofovir	400mg + 300mg + 300mg	Table FDC	Macleods	12-2022	01-005	HDPE Container	30	7000
Emtricitabine + Tenofovir	200mg +	Tablet	Gilead Sciences	03-2022	01-006	HDPE bottle	30	1000

	300mg							
Lamivudine (3TC)	150 mg	Tablet	Microlabs Ltd	05-2022	AH644	Alu/PVC/dC blister /HDPE Bottle	60	2000
Dolutegravir (as Sodium Salt)	50 mg	Tablet, Film coated	Mylan Laboratories	11-2022	NDA210237	HDPE Bottle	30	200

Pharmacy A and B have no stock of the above-listed medications, and the CMS is to distribute these medications to the Pharmacies.

Adams James on receipt signed for pharmacy A supplies.

Grace Paul on receipt signed for pharmacy B supplies.

9.4 PHARMACY SCENARIO

Pharmacy A has received the following supplies for CMS

Drug	Strength	Form	Manufacturer/supplier	Expiry date	Batch number	packaging	Amount per pack	Quantity

Abacavir	20mg /ml	Oral Solution	ViiV Healthcare	08-2022	01-001	HDPE Bottle	240ml	500
Abacavir	20 mg /ml	Oral Solution	Aurobindo Pharma Ltd	09-2023	01-002	HDPE Bottle	240 ml	500
Abacavir (as sulfate)	60 mg	Dispersible Tablet	Cipla Ltd	01-2025	01-003	HDPE Bottle	60	200
Abacavir	300mg	Tablet	ViiV Health Care	01-2025	01-004	Blister Film Package	60	350
Efavirenz + Lamivudine + Tenofovir	400mg + 300mg + 300mg	Table FDC	Macleods	12-2022	01-005	HDPE Container	30	3000
Emtricitabine + Tenofovir	200mg + 300mg	Tablet	Gilead Sciences	03-2022	01-006	HDPE bottle	30	700
Lamivudine (3TC)	150 mg	Tablet	Microlabs Ltd	05-2022	AH644	Alu/PVC/ dC blister /HDPE Bottle	60	1500
Dolutegravir (as Sodium Salt)	50 mg	Tablet, Film coated	Mylan Laboratories	11-2022	NDA210237	HDPE Bottle	30	100

Pharmacy B has received the following supplies for CMS

Drug	Strength	Form	Manufacturer/supplier	Expiry date	Batch number	packaging	Amount per pack	Quantity
Abacavir	20mg /ml	Oral Solution	ViiV Healthcare	08-2022	01-001	HDPE Bottle	240ml	1200
Abacavir	20 mg /ml	Oral Solution	Aurobindo Pharma Ltd	09-2023	01-002	HDPE Bottle	240 ml	1500
Abacavir (as sulphate)	60 mg	Dispersible Tablet	Cipla Ltd	01-2025	01-003	HDPE Bottle	60	200
Abacavir	300mg	Tablet	ViiV Health Care	01-2025	01-004	Blister Film Package	60	500
Efavirenz + Lamivudine + Tenofovir	400mg + 300mg + 300mg	Table FDC	Macleods	12-2022	01-005	HDPE Container	30	3000
Emtricitabine + Tenofovir	200mg + 300mg	Tablet	Gilead Sciences	03-2022	01-006	HDPE bottle	30	400
Lamivudine (3TC)	150 mg	Tablet	Microlabs Ltd	05-2022	AH644	Alu/PVC/ dC blister /HDPE Bottle	60	500
Dolutegravir (as Sodium	50 mg	Tablet, Film	Mylan Laboratories	11-2022	NDA210237	HDPE Bottle	30	100

Salt)		coated						

9.5 PSYCHO-SOCIAL SUPPORT AND ADHERENCE COUNSELLING SCENARIO

Unique ID	Type of Counselling Session	Session Details
Select an existing client	Adherence Follow-up Assessment	Did not miss any ARV yesterday; missed one dose 2 and 3 days ago. She is not on any other medication, The client said that she needs a Treatment assistant to help her adhere. She missed the meds because she was traveling and did not want anyone to know. She said stigma needs to be addressed. In the counselor's opinion, she is an adherent client.
Select an existing client	Adherence Follow-up Assessment	Missed all ARVs and TB meds in the last three days; the client complained about the drug's side effects and decided to stop the

		meds. The patient needs a support group, adherence team support, and transportation to the clinic. In the counselor's opinion, the client is not adherent, and the adherence team must reevaluate the client's condition.
Select an existing client	Adherence Assessment Follow-up	Make up your story
Select an existing client	Adherence Assessment Follow-up	Make up your story
Select an existing client	Adherence Assessment Follow-up	Make up your story
Select an existing client	Adherence Assessment Follow-up	Make up your story