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**Guidelines for Using ASLM-Laboratory Information System
(A-LIS)**

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FORWARD

ASLM-Laboratory Information System (A-LIS) is one of the software solutions for Health Laboratory Information Management System (HLIMS). Installing A-LIS in public and private health centers (HC) enables laboratories to receive electronic laboratory result report of referred samples and laboratory test requests from clinicians. Laboratories are also able to generate electronic laboratory test result report, patient laboratory history, data values for HMIS 105-6, 033A, 033B, orders for supplies and laboratory information for referral samples.

The information generated by A-LIS is paramount in supporting evidence-based decision making in the provision and coordination of laboratory services in public HCs. A-LIS is one of the products of HLIMS Master Plan which is a detailed prescription of how to achieve what the strategic and policy documents articulate on laboratory information management in Uganda.

The plan is informed by National Development Plan, MOH Strategic plan, UNHLS policy and plan, MOH E-health policy and plan, HMIS&DHIS2 guidelines, LQMS & SLMTA guidelines, Hub systems guidelines among others, to ensure its relevance to the entire laboratory landscape while achieving the HLIMS vision of, “Quality laboratory information for a productive and healthy Uganda”, and Mission of, “Supporting quality laboratory services through an integrated system that innovatively collects, stores, analyzes and communicates laboratory information”.

These guidelines will promote embracing ALIS in HCs and ensure compliance when using ALIS. This in turn facilitates the generation of quality information and sustainability of ALIS. So I encourage laboratory staff and other health workers who may be involved in A-LIS at all levels to make use of them appropriately.

Mr. Aisu Steven

HEAD CPHL/UNHLS

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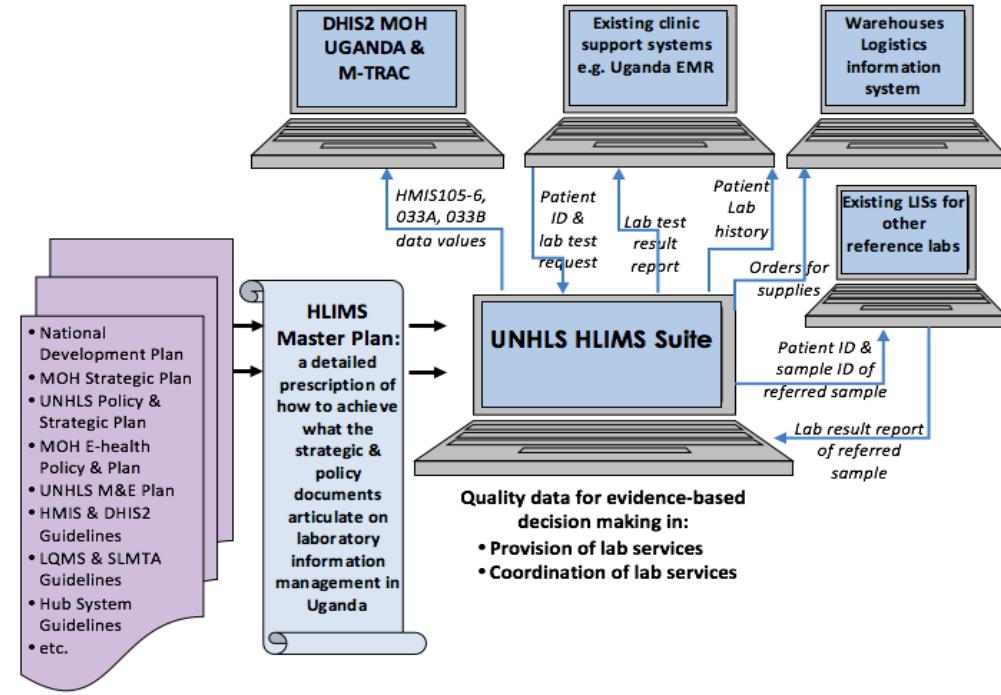
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ACRONYMS

| | |
|---------|---|
| ALIS | ASLM-Laboratory Information System |
| ASLM | African Society of Laboratory Medicine |
| CDC | US Centers for Disease Control |
| CPHL | Central Public Health Laboratories |
| DHIS2 | District Health Information System 2 |
| eHealth | Electronic Health |
| HC | Health Centre |
| HMIS | Health Management Information System |
| HLIMS | Health Laboratory Information Management System |
| ICT | Information Communication Technology |
| IT | Information Technology |
| LQMS | Laboratory Quality Management System |
| MOH | Ministry of Health |
| UNMHCP | Uganda National Minimum Health Care Package |
| UNHLS | Uganda National Health Laboratory Services |
| SLMTA | Strengthening Laboratory Management Towards Accreditation |
| TA | Technical Advisor |
| TWG | Technical Working Group |

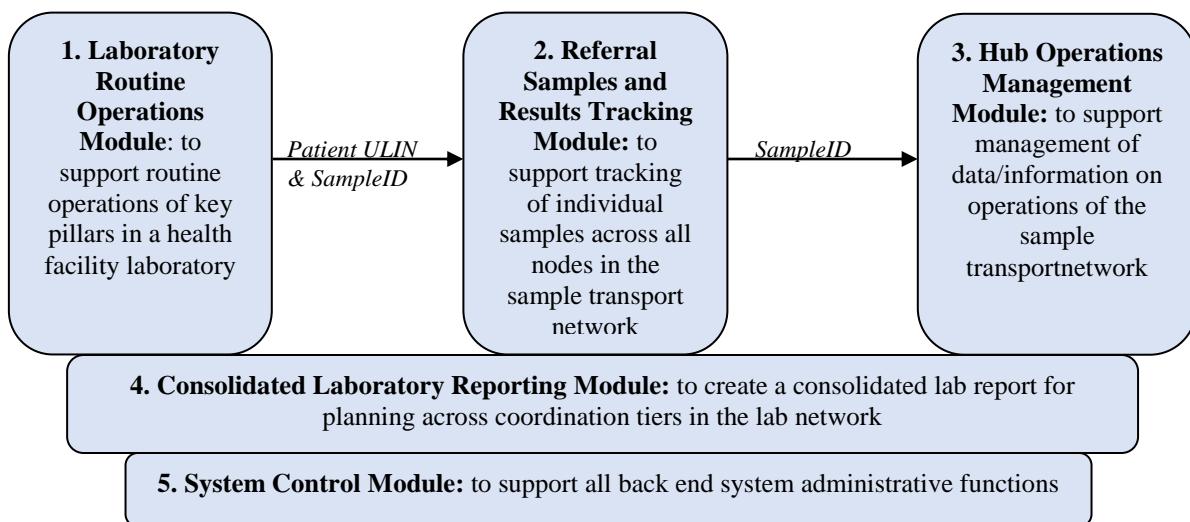
SECTION 1: INTRODUCTION

ALIS is a transaction processing system for supporting operations at a facility laboratory. ALIS is also referred to as LabAPP1, and is one of the critical building blocks of the UNHLS Application Architecture (Suite) in Health Laboratory Information Management Systems (HLIMS) master plan.



ALIS is part of the UNHLS HLIMS Suite

Basing on the UNHLS Business Architecture, ALIS has five (5) major modules that are accessible across the health laboratory network in order to harmoniously support effective management of information on laboratory service delivery.

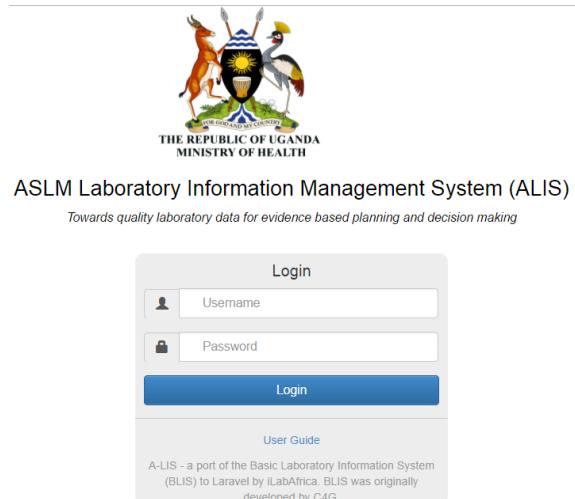


Modules that constitute ALIS

SECTION 2: SYSTEM CONTROL MODULE

2.0 Getting Started with A-LIS

Open ASLM Laboratory Information System (A-LIS) using any web browser e.g. Google Chrome or Mozilla Firefox by entering the IP address of the server e.g. 192.168.0.1 as the URL. This will bring a page requesting for login information that you enter to proceed.



Page requesting for login information



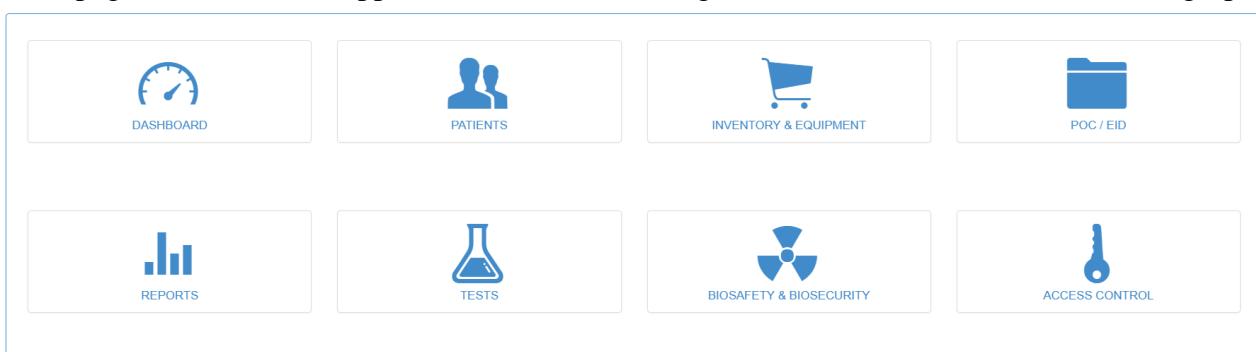
Fill in the username and password then click **Login**
When you don't fill in either of the username or password, you will get errors as displayed below

- The 'Username' field is required.
- The 'Password' field is required.

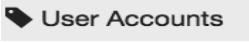
When you fill in wrong username or password, the following errors shall be displayed

Username and/or password invalid.

When you forgot your username and password, kindly contact the lab-in-charge for help.
The page below will appear on successful login and it is the ALIS Landing page



2.1 Creating new user

Click Access Control from the page (far right lower box) or  on the left menu bar, then click on  , then click on  and fill in the form below and click on **Save**

 **Create User**

| | |
|-------------------------------------|---|
| Username | jsiku |
| Password | |
| Retype Password | |
| Full Name | Jay Siku |
| Email Address | j.siku@ilabafrica.ac.ke |
| Designation | Lab Technologist |
| Gender | <input checked="" type="radio"/> Male <input type="radio"/> Female |
| Photo | <input type="button" value="Choose File"/> No file chosen |
| <input type="button" value="Save"/> | |

2.2 Creating a role

To create a new role in the system e.g. Receptionist, Data clerk; Under Access Control click on  roles to bring a page below



| Name | Description | Actions |
|--------------|-------------|---|
| Superadmin | | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| Technologist | | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |
| Receptionist | | <input type="button" value="Edit"/> <input type="button" value="Delete"/> |

Then click on New Role to fill in the form below and click **Save**

 **New Role**

| | |
|-------------------------------------|--|
| Name | |
| Description | |
| <input type="button" value="Save"/> | |

2.3 Assigning a Role to the user

Under Access Control click on  **Assign Roles** , then click on the relevant role for the newly created user and click **Save**

 **Assign roles to Users**

| Users | Roles | Superadmin | Technologist | Receptionist |
|---------------|-------------------------------------|-------------------------------------|--------------------------|--------------|
| administrator | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| ganguyo | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |

 **Save**

2.4 Assigning permissions to Roles

Under Access Control click on  **Permissions** , check the appropriate permissions as shown below and click **Save**

 **Permissions**  **New Role**

| Permissions | Roles | Superadmin | Technologist | Receptionist |
|---|-------------------------------------|--------------------------|--------------------------|--------------|
| Can view patient names | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can add patients | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can receive test requests | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can request new test | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can accept test specimen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can reject test specimen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can change test specimen | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can start tests | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can enter tests results | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can edit test results | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can verify test results | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can send test results to external systems | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can refer specimens | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can manage users | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can manage test catalog | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can manage lab configurations | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can view reports | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can manage inventory | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can request top-up | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| Can manage Quality Control | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

 **Save**

2.5 Changing a Password

Click on your Username in the top right of your screen, then click on  **Edit Profile** , select the **Change Password** tab and fill in the form below and click **Update**.

Edit User Details

| | |
|------------------------------|---------------------------------|
| Edit Profile | Change Password |
| Current Password | <input type="text"/> |
| New Password | <input type="text"/> |
| Retype Password | <input type="text"/> |
| Update | |

2.6 Logging out

Click on your Username in the top right of your screen, and then click on **Logout**

2.7 Tracking User activities

Click on Reports on the left side menu, and then click on User Statistics Report

User Statistics Report

2.8 Creating a new Lab section

Click on Test Catalog **Test Catalog** on the left menu bar, then click on **Lab Sections** and click on Create Lab Section



| Lab Section | | Create Lab Section |
|-------------------|----------------------|----------------------|
| Show | 10 | entries |
| Name | Description | |
| BLOOD TRANSFUSION | View | Edit |
| HEMATOLOGY | View | Edit |
| MICROBIOLOGY | View | Edit |
| PARASITOLOGY | View | Edit |
| SEROLOGY | View | Edit |

Showing 1 to 5 of 5 entries

Previous

Fill in the form below

Create Lab Section

| | |
|----------------------|----------------------|
| Name | <input type="text"/> |
| Description | <input type="text"/> |
| Save | |

2.9 Creating a Specimen type

Click on Specimen Types from test catalogue, then click on New Specimen Type

The screenshot shows a table of specimen types with columns for Name and Description. Each entry has View, Edit, and Delete buttons. A search bar at the top right contains 'PL'. At the bottom, it says 'Showing 1 to 3 of 3 entries (filtered from 24 total entries)' and has Previous, Next, and a page number '1'.

| Name | Description |
|-------------|---|
| Plasma | <button>View</button> <button>Edit</button> <button>Delete</button> |
| Plasma EDTA | <button>View</button> <button>Edit</button> <button>Delete</button> |
| Pleural Tap | <button>View</button> <button>Edit</button> <button>Delete</button> |

Fill in the form below and Save

The form has two text input fields labeled 'Name' and 'Description'. Below them is a large text area. At the bottom is a blue 'Save' button with a download icon.

| | |
|-------------|----------------------|
| Name | <input type="text"/> |
| Description | <input type="text"/> |

Save

2.10 Creating a new Test Type

Click on Test Types from test catalogue and click on New Test Types

The screenshot shows a table of test types with columns for Name, Description, Target Turnaround Time, and Prevalence Threshold. Each entry has View, Edit, and Delete buttons. A search bar at the top right contains 'bs'. At the bottom, it says 'Showing 1 to 2 of 2 entries (filtered from 22 total entries)' and has Previous, Next, and a page number '1'.

| Name | Description | Target Turnaround Time | Prevalence Threshold |
|--------------------|-------------|------------------------|----------------------|
| BS for mps | | | |
| Direct COOMBS Test | | | |

Fill in the form below and check the relevant specimen type/s for the test type

Create Test Type

| | | | |
|--|--------------------------------------|---|---|
| Name | <input type="text"/> | | |
| Description | <input type="text"/> | | |
| Lab Section | <input type="text"/> | | |
| Select Specimen Types | | | |
| <input type="checkbox"/> Ascitic Tap | <input type="checkbox"/> Aspirate | <input type="checkbox"/> CSF | <input type="checkbox"/> Dried Blood Spot |
| <input type="checkbox"/> High Vaginal Swab | <input type="checkbox"/> Nasal Swab | <input type="checkbox"/> Plasma | <input type="checkbox"/> Plasma EDTA |
| <input type="checkbox"/> Peritoneal Tap | <input type="checkbox"/> Pus Swab | <input type="checkbox"/> Rectal Swab | <input type="checkbox"/> Semen |
| <input type="checkbox"/> Serum | <input type="checkbox"/> Skin | <input type="checkbox"/> Sputum | <input type="checkbox"/> Stool |
| <input type="checkbox"/> Synovial Fluid | <input type="checkbox"/> Throat Swab | <input type="checkbox"/> Urethral Smear | <input type="checkbox"/> Urine |
| <input type="checkbox"/> Vaginal Smear | <input type="checkbox"/> Vomitus | <input type="checkbox"/> Water | <input type="checkbox"/> Whole Blood |
| Measures | | | |
| <input type="button" value="Add New Measure"/> | | | |

Click on **Add New Measures** just below the Select specimen types section

| | | | |
|--|--------------------------------------|---|---|
| Select Specimen Types | | | |
| <input type="checkbox"/> Ascitic Tap | <input type="checkbox"/> Aspirate | <input type="checkbox"/> CSF | <input type="checkbox"/> Dried Blood Spot |
| <input type="checkbox"/> High Vaginal Swab | <input type="checkbox"/> Nasal Swab | <input type="checkbox"/> Plasma | <input type="checkbox"/> Plasma EDTA |
| <input type="checkbox"/> Peritoneal Tap | <input type="checkbox"/> Pus Swab | <input type="checkbox"/> Rectal Swab | <input type="checkbox"/> Semen |
| <input type="checkbox"/> Serum | <input type="checkbox"/> Skin | <input type="checkbox"/> Sputum | <input type="checkbox"/> Stool |
| <input type="checkbox"/> Synovial Fluid | <input type="checkbox"/> Throat Swab | <input type="checkbox"/> Urethral Smear | <input type="checkbox"/> Urine |
| <input type="checkbox"/> Vaginal Smear | <input type="checkbox"/> Vomitus | <input type="checkbox"/> Water | <input type="checkbox"/> Whole Blood |
| Measures | | | |
| Name | Measure Type | Unit | Description |
| <input type="text"/> | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Range Values | | | |
| <input type="button" value="Add New Range"/> | | | |
| <input type="button" value="Add New Measure"/> | | | |
| Target Turnaround Time | | | |

Fill in the **Name** of the test measure, **Measure Type** e.g. Numeric, **Unit Description** and Target Turnaround Time and click on **Save**

2.11 Creating a New Drug

Click on  form test catalogue and click on Create Drug

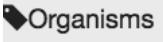
| Drug | | <input type="button" value="Create Drug"/> |
|--|-------------------------------------|--|
| Show | 10 entries | <input type="text"/> |
| Name | Description | |
| AMPICILLIN | <input type="button" value="View"/> | <input type="button" value="Edit"/> |
| AMPICILLIN-SULBACTAM | <input type="button" value="View"/> | <input type="button" value="Edit"/> |
| CHLORAMPHENICOL | <input type="button" value="View"/> | <input type="button" value="Edit"/> |
| Showing 1 to 3 of 3 entries (filtered from 35 total entries) | | |
| Previous | | Next |

Fill in the form below and click **Save**

Create Drug

| | |
|-------------|----------------------|
| Name | <input type="text"/> |
| Description | <input type="text"/> |
| Save | |

2.12 Creating a new Organism

Click on  from test catalogue and click on Create Organism

Organism **Create Organism**

| Name | Description | View | Edit | Delete |
|------------------------------|-------------|---|---|---|
| Beta-haemolytic streptococci | |  |  |  |
| Vibrio cholerae | |  |  |  |

Fill in the form below

Organism **Create Organism**

| Name | Description | View | Edit | Delete |
|------------------------------|-------------|---|---|---|
| Beta-haemolytic streptococci | |  |  |  |
| Vibrio cholerae | |  |  |  |

2.13 Data back up

Daily cron job to dump MySQL database to the backup servers (production environment) every midnight.

- Transfer copy of the back-up to another location using secure FTP aka sftp.

Data archival from facility level to national level

- Implement a cron Job to upload a monthly aggregate report (as JSON data) over https to a central server

SECTION 3: LABORATORY ROUTINE OPERATIONS MODULE

This section is about laboratory routine operations including; pre-analytic, analytic and post analytic tasks managed by receptionist/data person, clinician or a laboratory person. Initial tasks include; patient registration, editing and viewing of patient information in the system. To access this section, click **PATIENTS** (rounded) from ALIS landing page below. This shall display all existing information on patients already registered into the system.



A-LIS landing page

3.1 PRE-ANALYTIC PHASE

3.1.1 Registering a new patient

Click **PATIENTS** from the landing page, then click on the **+ New Patient** (circled) button at the top of the portlet to register a new patient

A screenshot of the A-LIS Patients module. The left sidebar has icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety & Biosecurity. The main area shows a list of patients with columns for OPD/IPD Number, National Identification No. (NIN), Name, Email, Gender, Date of Birth, Village of Residence, Village of Workplace, and Actions. One patient is listed: Mugisha Michael, Male, 1983-01-01, Kironde. At the top of the list, there is a blue button labeled '+ New Patient' with a white circle containing a plus sign, which is circled in red. The URL in the browser is 'KAMPALA / CENTRAL PUBLIC HEALTH LABORATORIES / 2016/2017 / JULY'.

This will bring a page with fields for capturing patient details. Enter patient information in the fields provided and click **Save** to save the information captured as illustrated below.

Create Patient

| | |
|------------------------------------|---|
| Patient OPD/IPD Number. | 1200 |
| Unique Lab Identification Number * | LBK1-2017000007 |
| National Identification No: (NIN) | cm1212k2ef |
| Names * | Besigye Kahunde |
| Date Of Birth * | 30 / May / 2002 |
| Age * | 15 Years |
| Sex * | <input checked="" type="radio"/> Male <input type="radio"/> Female |
| Village of Residence | Iyantonde |
| Village of Workplace | |
| Physical Address | Iyantonde |
| Occupation | |
| Phone Number | 07123456789 |
| Email Address | |
| Save | |

3.1.2 Searching for registered patient

Click **PATIENTS** from the landing page, use the search box to search for a patient of your interest using either the OPD/IPD number or the patient's name and click **Edit** to update patient information or click the **View** (Circled) below to request for a test.

Home / Patients

Besigye Kahunde

Successfully created patient!

| List Patients | | New Patient | | | | | | |
|-------------------------|-----------------------------------|--------------------|-------|------------|---------------|----------------------|----------------------|--|
| Show | 10 entries | Search: | | | | | | |
| Patient OPD/IPD Number. | National Identification No: (NIN) | Name | Email | Gender | Date of Birth | Village of Residence | Village of Workplace | Actions |
| 1200 | | Besigye Kahunde | Male | 2002-06-04 | Iyantonde | | | <input type="button" value="Request For a Test"/> <input checked="" type="button" value="View"/> <input type="button" value="Edit"/> |

Showing 1 to 1 of 1 entries

3.1.2.1 Updating patient details

Click **Edit** to bring a page below and update patient information and **Save**

Edit Patient Details

| | |
|----------------------------------|---|
| Patient OPD/IPD Number. | 1200 |
| messages.nin | |
| Unique Lab Identification Number | LBK1-2017000001 |
| Name | Besigye Kahunde |
| Date of Birth * | 4 / Jun / 2002 |
| Age * | Years |
| Gender | <input checked="" type="radio"/> Male <input type="radio"/> Female |
| Physical Address | |
| Village of Residence | Iyantonde |
| Village of Workplace | |
| Occupation | |
| Phone Number | |
| Email Address | |
| Save | |

3.1.2.2 Requesting for a test

Click **View** above to bring a page below then click **Request For a Test** to request for a test (if your role is assigned to perform such an activity e.g. clinician).

Patient Details **Edit** **Request For a Test** 

| | |
|----------------------------------|---------------------|
| Name | Besigye Kahunde |
| Patient OPD/IPD Number. | 1200 |
| NIN | |
| Unique Lab Identification Number | LBK1-2017000001 |
| External Patient Number | |
| Date of Birth | 2002-06-04 |
| Gender | Male |
| Physical Address | |
| Village of Residence | Iyantonde |
| Village of Workplace | |
| Occupation | |
| Phone Number | |
| Email Address | |
| Registration Date | 2017-05-31 23:18:13 |

This will bring a page below and a clinician fills in the patient's visit type (OPD or in-patient), location (ward, unit or clinic, Bed Number for only in-patients), clinical notes, previous therapy (if applicable), current therapy. Click on the “**Sample type**” drop down menu to select the sample type and click on “**Lab section**” to select where the tests are going to be carried out e.g. microbiology, parasitology, etc. For multiple tests, select the lab section where the different tests are carried out,

select tests and click



to add selected tests to the test request and click



to save the test request.

Patient OPD/IPD Number: 1200 Name: Besigye Kahunde Age: 14 years Gender: Male

Clinical Information and Sample Information

Visit Type: --- Select visit type ---
Ward/Clinic/Health Unit: Select Sample Origin
Bed No:
Clinical Notes:

Previous Therapy: _____
Current Therapy: _____
Test Requested By: A-LIS Admin

Cadre: _____
Phone Contact: _____
E-mail: _____
Programmer: _____

Sample Type: select Specimen Type
Time of Sample Collection: 01 ✓ / 06 ✓ / 2017 ✓ / 23 ✓ / 30 ✓
Time Sample was Received in Lab: 01 ✓ / 06 ✓ / 2017 ✓ / 23 ✓ / 30 ✓
Lab Section: Select Lab Section

Specimen: _____ Lab Section: _____ Test: _____

Full-screen Snip

3.1.3 View and download patient lab history report

Patient lab history report has details of all the tests performed on a patient, samples collected and identities of the clinicians and lab technologists who requested and worked on the patient's sample and may be required when requesting for a new test.

3.1.3.1 View a patient lab history report



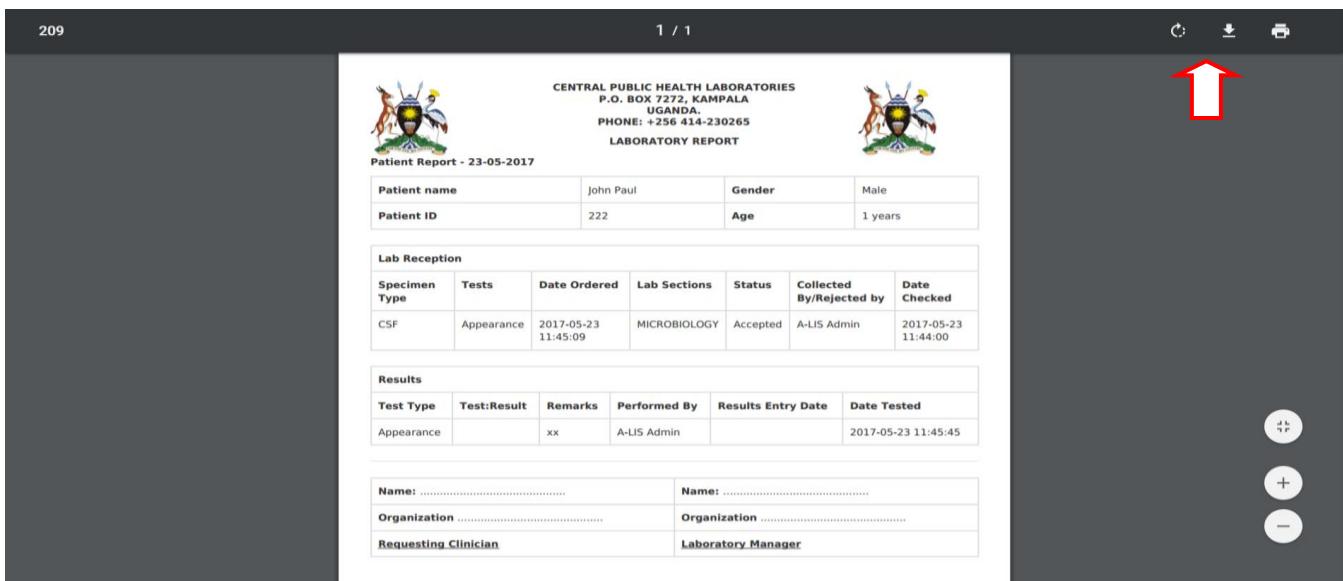
On the side navigation bar, place your cursor on the **Reports** option/button and select **Patient report** to display the list of all patient reports available in the system.

Main Menu

- DAILY REPORTS
 - Patient Report
 - Daily Log
- AGGREGATE REPORTS
 - Prevalence Rates
 - Surveillance
 - Counts
 - Turnaround Time
 - Infection Report
 - User Statistics Report
 - CD4 Report
 - Quality Controls
- INVENTORY REPORTS
 - Stock Levels
- DASHBOARD
 - Dashboard
- Biosafety & ...

| Patient OPD/IPD Number. | Full Name | Gender | Age | Actions |
|-------------------------|---------------------------|--------|----------|--|
| | P Kitutu | M | 124 days | <input type="button" value="View Report"/> |
| | Besigye Kahunde | M | 15 years | <input type="button" value="View Report"/> |
| | Muhoozi Deus | M | 43 years | <input type="button" value="View Report"/> |
| | Nakimbugwe Dorothy Denise | F | 31 years | <input type="button" value="View Report"/> |
| | Cresson | M | 34 years | <input type="button" value="View Report"/> |
| | Paul | M | 17 days | <input type="button" value="View Report"/> |
| | Mudoola Macreen | F | 58 years | <input type="button" value="View Report"/> |
| | Elvis Kato | M | 55 years | <input type="button" value="View Report"/> |

Click on  on the Actions column for a selected patient. This will bring a page with the patient's lab history report shown below for viewing.

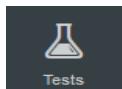


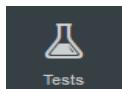
A screenshot of a laboratory report page. At the top, it says "CENTRAL PUBLIC HEALTH LABORATORIES P.O. BOX 7272, KAMPALA UGANDA. PHONE: +256 414-230265 LABORATORY REPORT". Below that is the title "Patient Report - 23-05-2017". The report contains several tables: "Patient name" (John Paul, Male), "Patient ID" (222, 1 years), "Lab Reception" (Specimen Type: CSF, Test: Appearance, Date Ordered: 2017-05-23 11:45:09, Lab Sections: MICROBIOLOGY, Status: Accepted, Collected By/Rejected by: A-LIS Admin, Date Checked: 2017-05-23 11:44:00), and "Results" (Test Type: Appearance, Test:Result: xx, Remarks: A-LIS Admin, Results Entry Date: 2017-05-23 11:45:45). There are also fields for Name, Organization, Requesting Clinician, and Laboratory Manager. On the right side of the report, there are three circular icons with symbols: a circle with a checkmark, a circle with a plus sign, and a circle with a minus sign. A red arrow points upwards from the "View Report" icon in the previous section towards this report page.

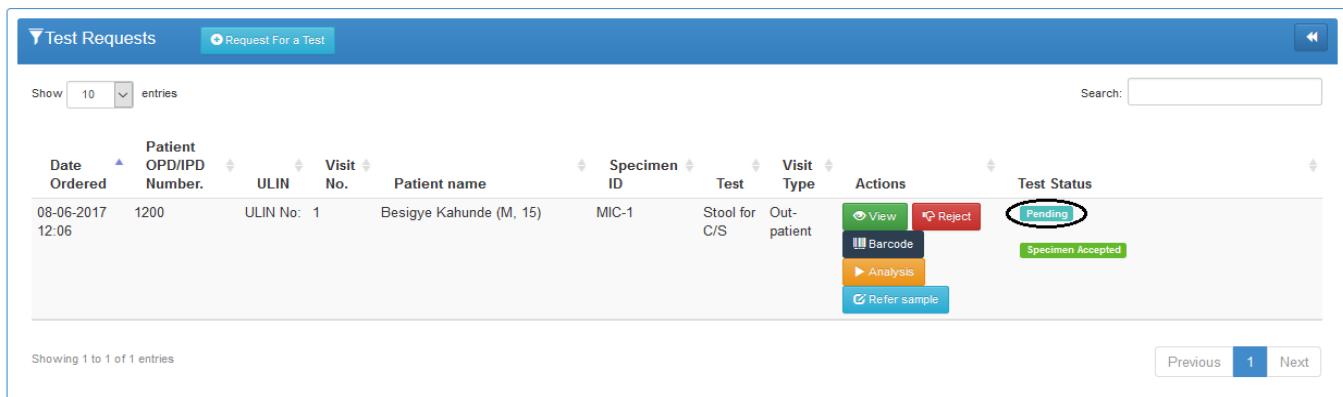
3.1.3.2 Download or Print Patient History Report

Click on the icon  to download or the icon  to print the report.

3.1.4 Accept or Reject sample

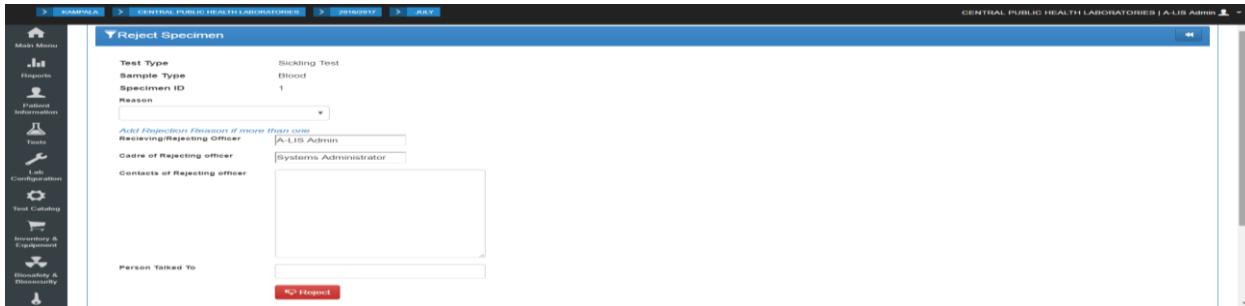


On the side navigation bar, click on  and view all test requests then select **Pending Tests**. Use the search box to search for a patient and click on  to accept and start test on that patient's sample. Note that the **Test Status** of that request changes from  to .



A screenshot of a "Test Requests" table. The columns are: Date Ordered, Patient OPD/IPD Number, ULIN, Visit No., Patient name, Specimen ID, Test, Visit Type, Actions, and Test Status. One row shows: 08-06-2017 12:06, 1200, ULIN No: 1, Besigye Kahunde (M, 15), MIC-1, Stool for C/S, Out-patient, and Test Status: Pending. The "Actions" column contains buttons: View (green), Reject (red), Barcode (black), Analysis (orange), and Refer sample (blue). A green button labeled "Specimen Accepted" is located at the bottom right of the Actions column. A red circle highlights the "Pending" status in the Test Status column. The table has a header row with sorting arrows and a footer showing "Showing 1 to 1 of 1 entries".

To reject, click  button; which will open a page shown below where you specify reasons for rejection.



3.1.5 Assign patient a ULIN; Update patient details as in 3.1.2.1 above

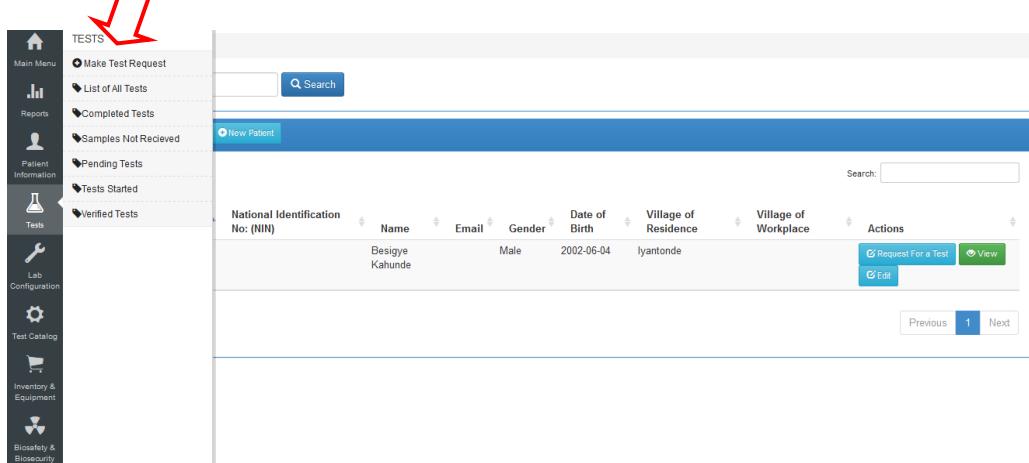
3.2. ANALYTIC PHASE;

3.2.1 Manage Laboratory requests



Click **TEST** from landing page to view details of all laboratory test requests including; “Make Test Request”, “List of All Tests”, “Completed Tests”, “Samples Not Received”, “Pending Tests”, and “Tests Started” or “Verified Tests”

Alternatively, on the side navigation bar, place your cursor on the  option/button to view details of all laboratory test requests.



3.2.2 Make test Request

Click  **Make Test Request** to bring the page below. Search for the patient using either the patient's name or ID and click the **View** button to see the results of the search. Select the patient by clicking on the corresponding radio button and click the  **Next** button to make the lab request as in **3.1.2.2** above.

Create New Test ×

First select a patient below

| kato | |  |
|-------------------------|------------|---|
| Patient ID | Names | |
| <input type="radio"/> 1 | Elvis Kato | |

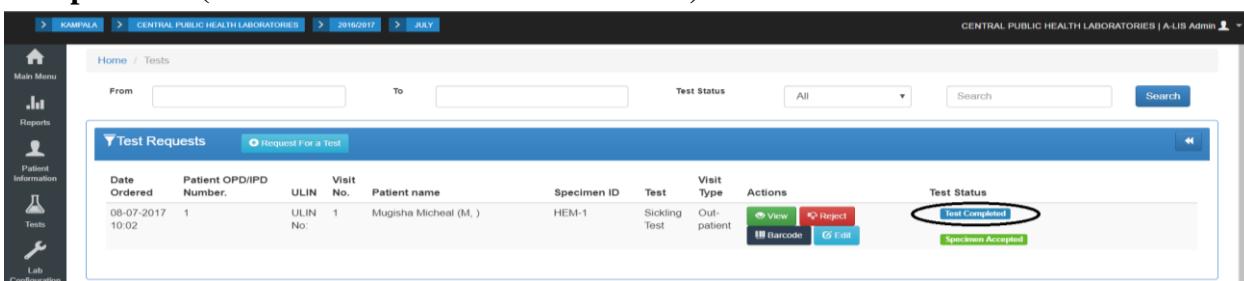
 

3.2.3 Display of all test requests made

Click  **List of All Tests** to display all test requests made to the laboratory.

3.2.4 List of all completed tests

Click  **Completed Tests** to show a list of all completed laboratory tests with a label **Test Completed** (circled in screenshot below) under the **Test Status** column.



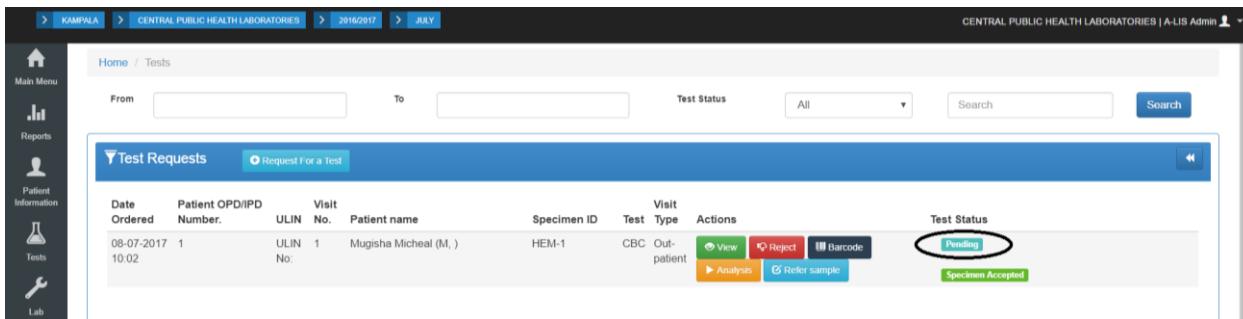
| Date Ordered | Patient OPD/IPD Number. | ULIN | Visit No. | Patient name | Specimen ID | Test | Visit Type | Actions | Test Status |
|---------------------|-------------------------|-------------|-----------|----------------------|-------------|---------------|-------------|--|---|
| 08-07-2017 10:02 | 1 | ULIN No: | 1 | Mugisha Micheal (M.) | HEM-1 | Sickling Test | Out-patient |     |  Specimen Accepted |

3.2.5 Samples not received

Click  **Samples Not Received** to display incoming test request

3.2.6 Pending test requests

Click  **Pending Tests** to display pending test requests with a label **Pending** (circled in screenshot below) under the **Test Status** column.

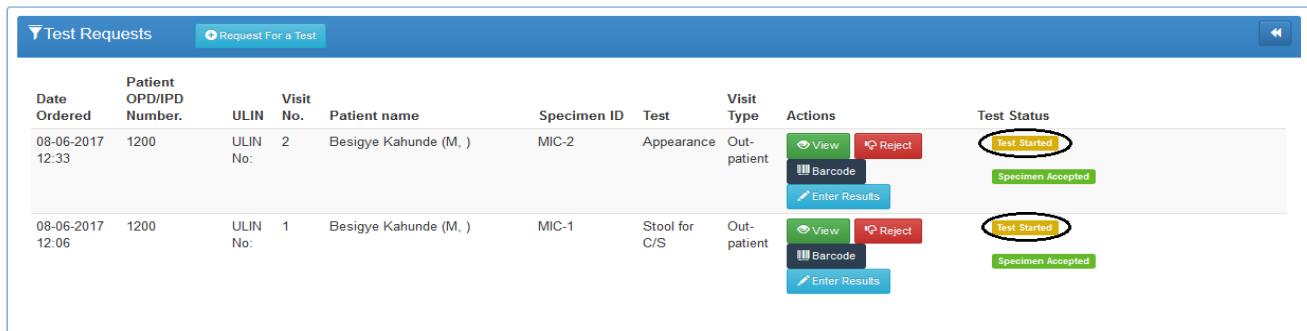


The screenshot shows a table of test requests. One row is highlighted with a yellow background, indicating it is selected. The columns include Date Ordered, Patient OPD/IPD Number, ULIN No., Patient name, Specimen ID, Test Type, Visit Type, Actions, and Test Status. The 'Test Status' column for the selected row shows the status as 'Pending', which is circled in red. Other actions listed in the Actions column include View, Reject, Barcode, Analyse, Refer sample, and Enter Results. A 'Specimen Accepted' button is also visible in the Actions column.

| Date Ordered | Patient OPD/IPD Number. | ULIN No. | Patient name | Specimen ID | Test Type | Visit Type | Actions | Test Status |
|---------------------|-------------------------|----------|-----------------------|-------------|-----------|-------------|---|-------------|
| 08-07-2017 10:02 | 1 | ULIN No: | Mugisha Micheal (M,) | HEM-1 | CBC | Out-patient | View Reject Barcode Analyse Refer sample Enter Results | Pending |

3.2.7 Tests started

Click  **Tests Started** to display a list of all lab tests that have been started with a label **Test Started** (circled in screenshot below) under **Test Status** column.



The screenshot shows a table of test requests with two rows. The 'Test Status' column for both rows is circled in red and shows the status as 'Test Started'. Other actions listed in the Actions column include View, Reject, Barcode, and Enter Results. A 'Specimen Accepted' button is also visible in the Actions column.

| Date Ordered | Patient OPD/IPD Number. | ULIN No. | Patient name | Specimen ID | Test | Visit Type | Actions | Test Status |
|---------------------|-------------------------|----------|-----------------------|-------------|---------------|-------------|--------------------------------------|--------------|
| 08-06-2017 12:33 | 1200 | ULIN No: | Besigye Kahunde (M,) | MIC-2 | Appearance | Out-patient | View Reject Barcode Enter Results | Test Started |
| 08-06-2017 12:06 | 1200 | ULIN No: | Besigye Kahunde (M,) | MIC-1 | Stool for C/S | Out-patient | View Reject Barcode Enter Results | Test Started |

3.2.8 Verified Tests

Click  **Verified Tests** to display a list of all lab tests that have been verified with a label **Test Verified** (circled in screenshot below) under **Test Status** column.

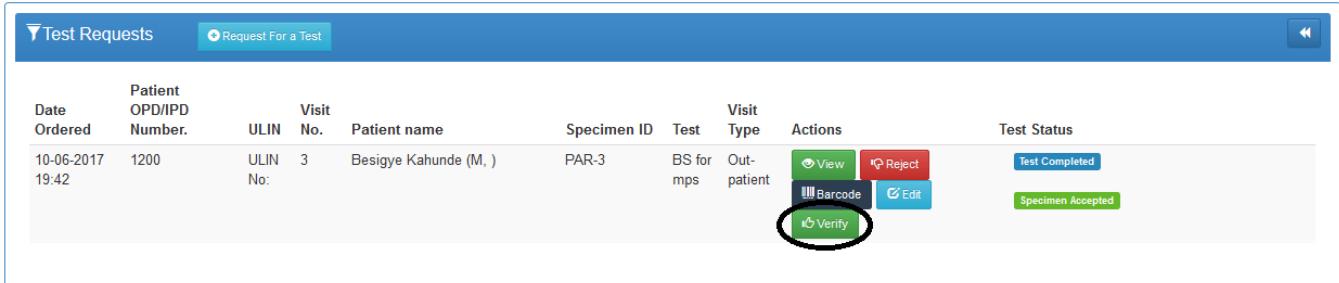


The screenshot shows a table of test requests with one row. The 'Test Status' column for the row is circled in red and shows the status as 'Test Verified'. Other actions listed in the Actions column include View and Enter Results. A 'Specimen Accepted' button is also visible in the Actions column.

| Date Ordered | Patient OPD/IPD Number. | ULIN No. | Patient name | Specimen ID | Test | Visit Type | Actions | Test Status |
|---------------------|-------------------------|----------|-----------------------|-------------|------------|-------------|---------------------|---------------|
| 10-06-2017 19:42 | 1200 | ULIN No: | Besigye Kahunde (M,) | PAR-3 | BS for mps | Out-patient | View Enter Results | Test Verified |

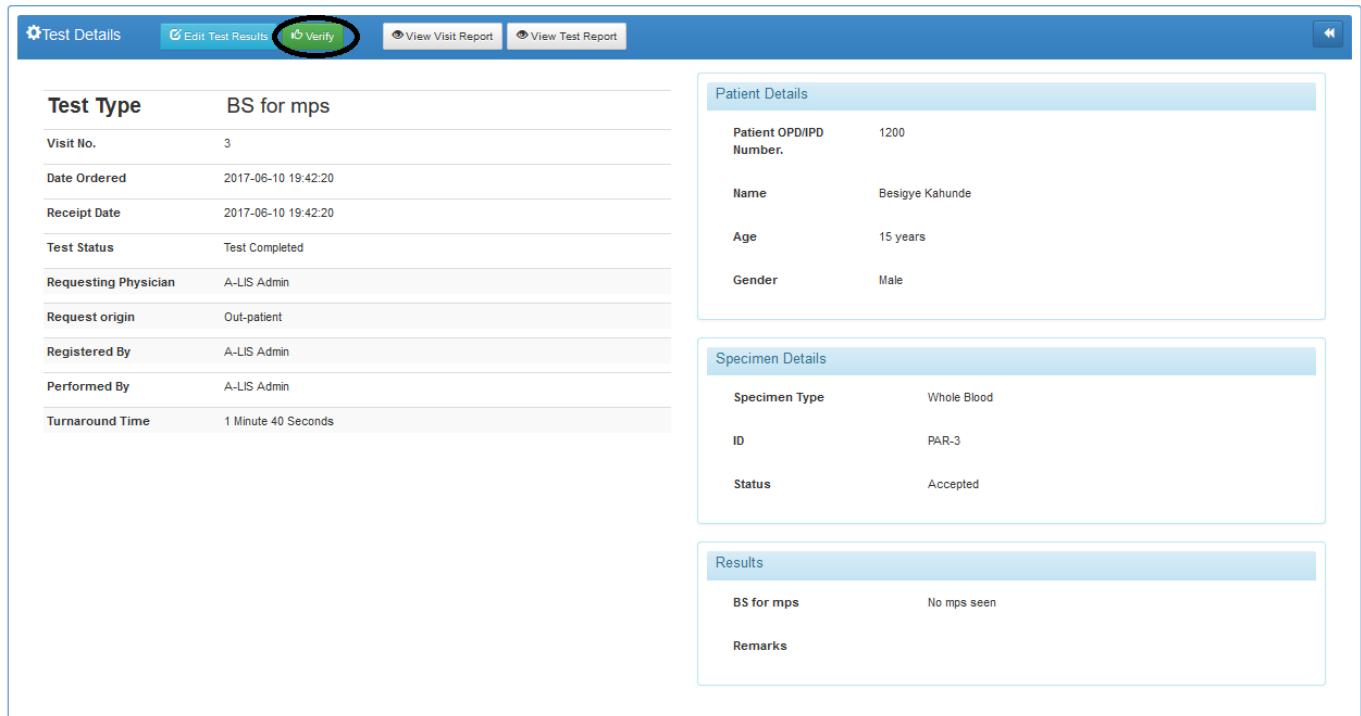
3.2.9 View and Verify lab test request

The person with permission to verify results finds completed tests as in 3.2.4 above, click the  button (circled) below.



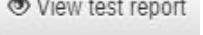
This screenshot shows the 'Test Requests' page. At the top, there are two buttons: 'Test Requests' and 'Request For a Test'. Below is a table with columns: Date Ordered, Patient OPD/IPD Number, ULIN, Visit No., Patient name, Specimen ID, Test, Visit Type, Actions, and Test Status. The first row in the table represents a completed test for patient Besigye Kahunde (M,) with visit number 3. The 'Actions' column contains several buttons: 'View' (green), 'Reject' (red), 'Barcode' (blue), 'Edit' (blue), and 'Verify' (green, circled). The 'Test Status' column shows 'Test Completed' and 'Specimen Accepted'.

This will bring a page to view test results and then click 



This screenshot shows the 'Test Details' page for the selected test. At the top, there are four buttons: 'Test Details', 'Edit Test Results', 'Verify' (highlighted with a green circle), and 'View Visit Report' and 'View Test Report'. The main content is divided into three sections: 'Patient Details', 'Specimen Details', and 'Results'. The 'Patient Details' section shows: Patient OPD/IPD Number (1200), Name (Besigye Kahunde), Age (15 years), and Gender (Male). The 'Specimen Details' section shows: Specimen Type (Whole Blood), ID (PAR-3), and Status (Accepted). The 'Results' section shows: BS for mps (No mps seen) and Remarks (empty).

3.2.10 Generate Lab test result report

The person with permission to generate results finds completed tests as in 3.2.4 above, click the  button (circled) to view test results as in 3.2.8 above then click on  button to view the general lab test result report generated in a PDF format as shown below.

Patient Report: 08-07-2017

| | | | | | |
|------------|---|--------------|-----------------|--------------|-----------------|
| Patient ID | 1 | Patient name | Mugisha Micheal | Gender & Age | Male 34 years |
|------------|---|--------------|-----------------|--------------|-----------------|

Lab Reception

| Specimen Type | Received By | Date Received | Status | Lab Sections | Tests Requested |
|---------------|-------------|---------------|----------|--------------|-----------------|
| Blood | A-LIS Admin | 2017-07-08 | Accepted | HEMATOLOGY | Sickling Test |

Results

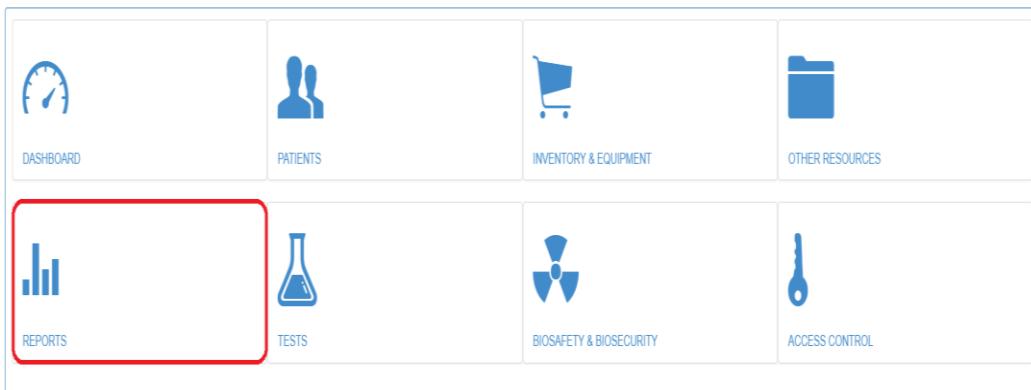
| Test Type | Test Result | Date Entered | Performed By | Verified By |
|---------------|-------------|--------------|--------------|-------------|
| Sickling Test | Positive | 2017-07-08 | A-LIS Admin | Pending |

Comments: N/A

Name: _____
Requesting Clinician
Name: _____
Laboratory Manager

3.3 POST ANALYTIC PHASE

3.3.1 Reports



Click **REPORTS** from landing page to view details of all laboratory reports generated by ALIS.

Alternatively, on the side navigation bar, place your cursor on the option/button to display the list of all reports generated by the system.

DAILY REPORTS

- Patient Report
- Daily Log
- Prevalence Rates
- Surveillance
- Counts
- Turnaround Time
- Infection Report
- User Statistics Report
- CD4 Report
- Quality Controls

AGGREGATE REPORTS

- Stock Levels
- Inventory & Equipment
- Dashboard
- Access Control

DAILY REPORTS

To: 2017-05-24

Patient Records Specimen Rejected Pending Tests Complete Tests All Tests

Select Lab Section Test Type Select Test Type

REPORTS

CENTRAL PUBLIC HEALTH LABORATORIES
P.O. BOX 272, KAMPALA
UGANDA
PHONE: +256 414-230265
LABORATORY REPORT

| Patient name | Specimen ID | Specimen | Receipt Date | Tests | Performed By | Results | Remarks | Results Entry Date | Verified By |
|--------------|-------------|----------|--------------|-------|--------------|---------|---------|--------------------|-------------|
|--------------|-------------|----------|--------------|-------|--------------|---------|---------|--------------------|-------------|

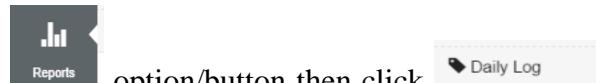
3.3.2 Daily Reports

These include patient reports and daily logs

3.3.2.1 Patient Report

View patient information and history as in “**3.1.3 View and download patient lab history report**” above.

3.3.2.2 Daily Log



On the side navigation bar, place your cursor on the **Reports** option/button then click to daily logs as below.

A screenshot of a web-based laboratory management system. The top navigation bar shows 'KAMPALA', 'CENTRAL PUBLIC HEALTH LABORATORIES', '2016/2017', 'MAY', and 'CENTRAL PUBLIC HEALTH LABORATORIES | A-Lis Admin'. The left sidebar has the same icons as the previous image. The main content area is titled 'Home / Reports / Daily Log'. It contains filters for 'From' (2017-05-24), 'To' (2017-05-24), 'Test Records' (selected), 'Patient Records', 'Specimen Rejected', 'Pending Tests', 'Complete Tests', 'All Tests', 'Lab Sections' (Select Lab Section dropdown), and 'Test Type' (Select Test Type dropdown). Below these filters is a section titled 'Daily Log - Test Records' with the Ugandan coat of arms. It displays a message: 'Test Records - Complete Tests Total 0 For 24-05-2017'. A table with columns for Patient ID, Visit No., Patient name, Specimen ID, Specimen, Receipt Date, Tests, Performed By, Results, Remarks, Results Entry Date, and Verified By shows 'No records found.'

Filter using dates, test records, Patient Records, Specimen Rejected, Pending Tests, Complete Tests, All Tests, lab sections or Test Type and then select **View** to see the daily log for the filter.

A screenshot of the same web-based laboratory management system as the previous image. The 'View' button in the filter section is circled in red. The rest of the interface is identical to the first screenshot, showing the 'Daily Log - Test Records' page with the Ugandan coat of arms and a table showing 'No records found.'

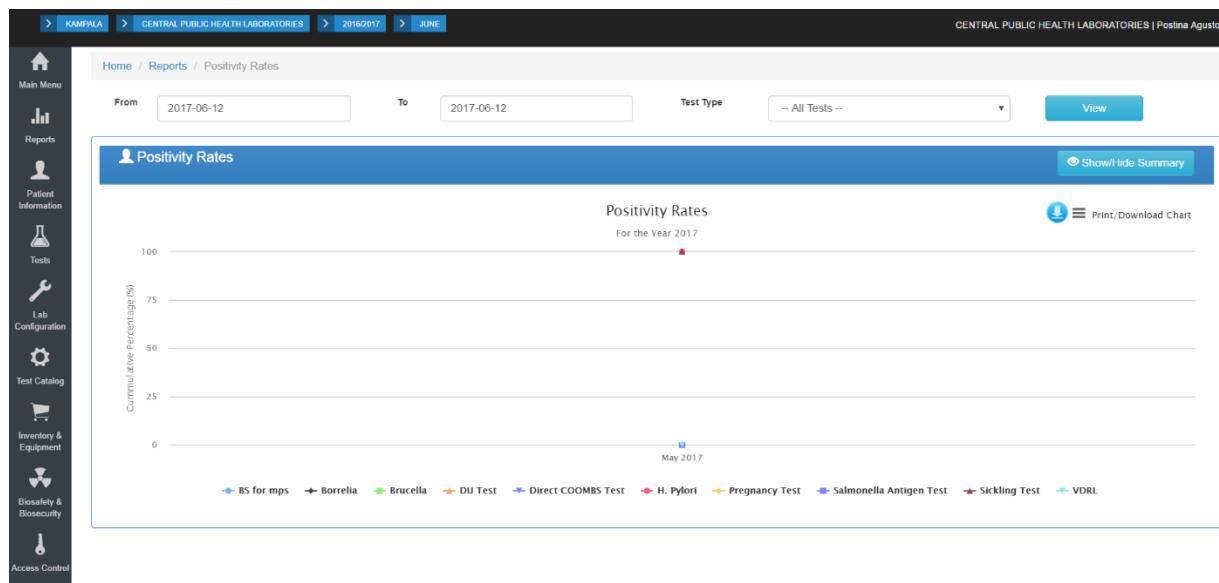
Use **Export to word** button to download and view the filter in a word document.

The screenshot shows the 'Daily Log - Test Records' report. The top navigation bar includes links for KAMPALA, CENTRAL PUBLIC HEALTH LABORATORIES, 2016/2017, JUNE, and a user icon. On the left is a sidebar with icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety & Biosecurity. The main content area has filters for From (2017-06-12), To (2017-06-12), Test Records (selected), Patient Records, Specimen Rejected, Pending Tests, Complete Tests, All Tests, Lab Sections (Select Lab Section dropdown), and Test Type (Select Test Type dropdown). A blue 'View' button is at the top right, and a red circle highlights the green 'Export to Word' button. The report title is 'Daily Log - Test Records'. It features the Ugandan coat of arms and text: 'CENTRAL PUBLIC HEALTH LABORATORIES P.O. BOX 7272, KAMPALA UGANDA. PHONE: +256 414-230265 LABORATORY REPORT'. Below is a table header for 'Test Records - Complete Tests Total For 12-06-2017' with columns: Patient ID, Visit No., Patient name, Specimen ID, Specimen, Receipt Date, Tests, Performed By, Results, Remarks, Results Entry Date, and Verified By. The message 'No records found.' is displayed.

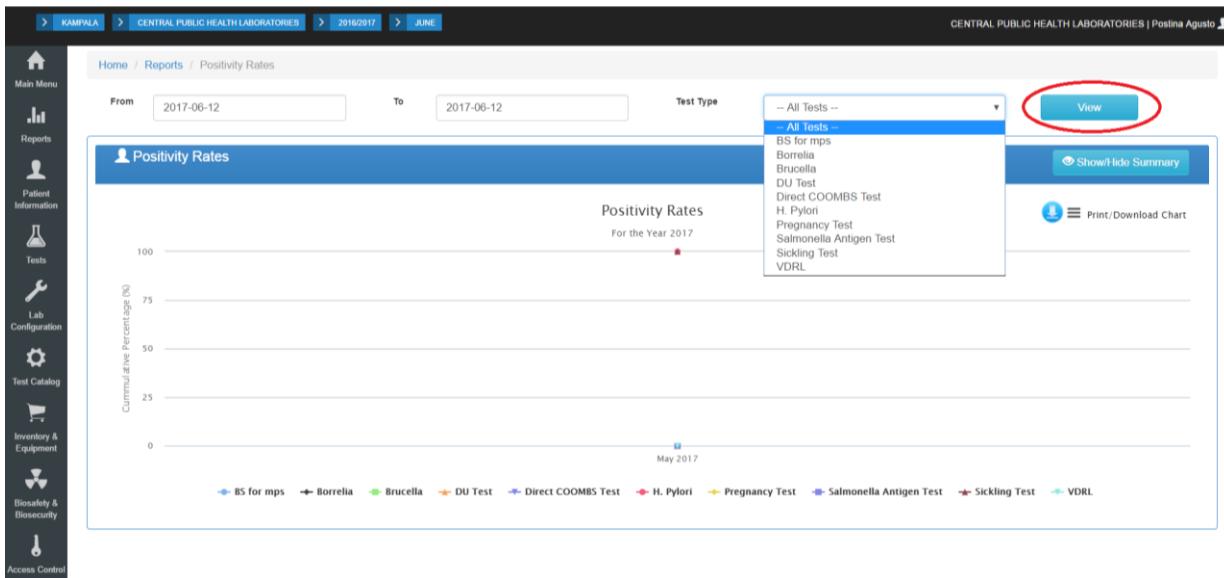
3.3.3 Aggregate Reports

3.3.3.1 Positivity rates

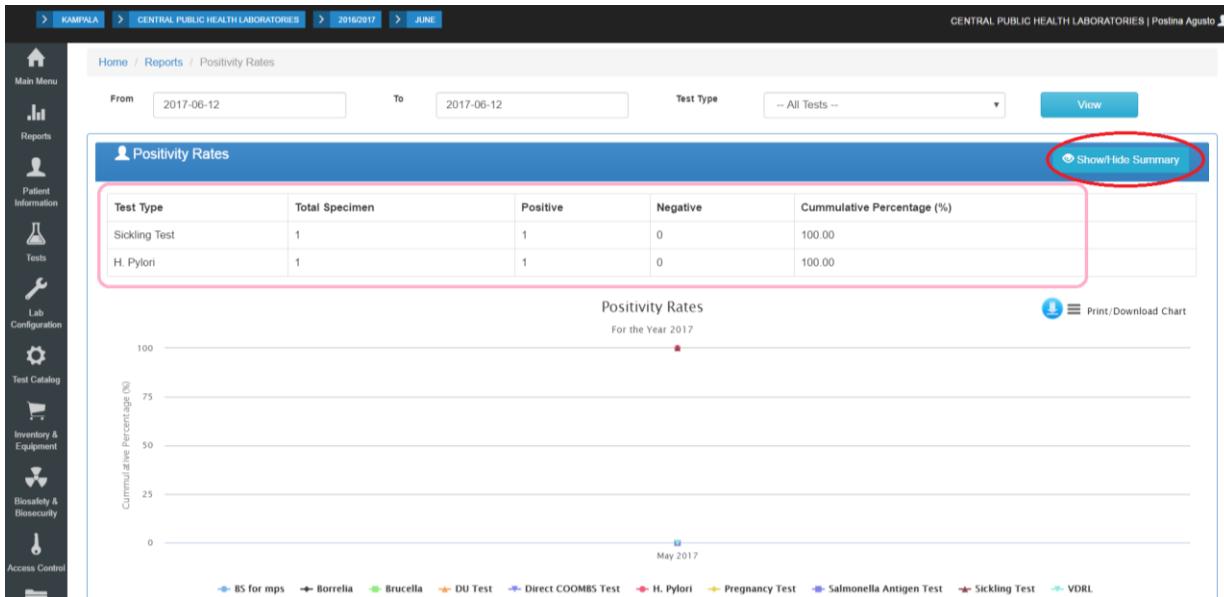
On the side navigation bar, place your cursor on the option/button then click to view the rates. By default, the report loads prevalence rates for the current year. A positivity rate is the total number of cases of a disease existing in a population divided by the total population. **Formula: Positivity Rate of Disease = (n / Total population) x 10ⁿ** Where n - All new & preexisting cases of specific disease



Set a date range to view infection graph and prevalence rates. You can also view by **test type** then click on **View** to load the report with the filters defined.



Select **Show/Hide Summary** to view/hide the numeric data



Click button to choose the various formats then print or download the chart

3.3.3.2 Surveillance

On the side navigation bar, place your cursor on the option/button then click to bring surveillance report on laboratory tests and their outcomes. Monthly reports are generated by default for the tests carried out and the figures for those **Tested** and **Positive** are given for the different age ranges plus the total sum for the tests. Filter for a given period by entering the different date ranges and then click on **View**. Click on the **Export to Word** button to download and view in a word document.

The screenshot shows the A-LIS software interface for Central Public Health Laboratories in Kampala, Uganda. The main menu on the left includes options like Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, Biosafety & Biosecurity, and Access Control. The top navigation bar shows the location: KAMPALA > CENTRAL PUBLIC HEALTH LABORATORIES > 2016/2017 > MAY. The title of the page is 'Surveillance'. The report header includes the laboratory's address: P.O. BOX 7272, KAMPALA, UGANDA, PHONE: +256 414-230265, and the report type: LABORATORY REPORT. The report table shows surveillance data from May 1 to May 24, 2017, categorized by disease and age group.

| Laboratory | < 5 Years | | ≥ 5 Years | | Total | |
|--------------------|-----------|----------|-----------|----------|--------|----------|
| | Tested | Positive | Tested | Positive | Tested | Positive |
| Malaria | | | 0 | 0 | | |
| Typhoid | | | 0 | 0 | | |
| Shigella Dysentery | | | 0 | 0 | | |

3.3.3.3 Counts Report

On the side navigation bar, place your cursor on the option/button then click “Counts” to generate a report for a particular time period for tests and specimens both grouped and ungrouped.

The screenshot shows the A-LIS software interface for Central Public Health Laboratories in Kampala, Uganda. The main menu on the left includes options like Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, Biosafety & Biosecurity, and Access Control. The top navigation bar shows the location: KAMPALA > CENTRAL PUBLIC HEALTH LABORATORIES > 2016/2017 > MAY. The title of the page is 'Counts'. The report header includes three radio button options: 'Test Counts (Ungrouped)' (selected), 'Test Counts (Grouped)', and 'Specimen Counts (Ungrouped)'. The report table shows test counts for various categories from May 1 to May 24, 2017.

| Test Types | Complete Tests | Pending Tests |
|-------------------------|----------------|---------------|
| BS for mps | 0 | 0 |
| Stool for C/S | 0 | 0 |
| GXM | 0 | 0 |
| HB | 0 | 0 |
| Urinalysis | 0 | 1 |
| WBC | 0 | 0 |
| Salmonella Antigen Test | 0 | 0 |
| Direct COOMBS Test | 0 | 0 |
| DU Test | 0 | 0 |
| Sickling Test | 0 | 0 |
| Borelia | 0 | 0 |
| VDRL | 0 | 0 |
| Pregnancy Test | 0 | 0 |
| Brucella | 0 | 0 |
| H. Pytali | 0 | 0 |
| Culture and Sensitivity | 0 | 0 |
| Appearance | 0 | 0 |
| Gram stain | 0 | 0 |
| ZN stain | 1 | 0 |
| Modified ZN | 0 | 0 |
| Wt Saline Iodine Prep | 0 | 0 |
| CBC | 0 | 0 |

The ungrouped tests and specimens, are summaries of the completed and pending test plus accepted and rejected specimens respectively as seen below

i. Test counts(ungrouped)

The screenshot shows the software's main menu on the left with various icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, Biorepository & Biosafety, Access Control, and Other Resources. The central area displays a 'Counts' report titled 'Test Counts (Ungrouped) - From 01-05-2017 To 24-05-2017'. It has three tabs at the top: 'Test Counts (Ungrouped)' (circled in red), 'Test Counts (Grouped)', 'Specimen Counts (Ungrouped)', and 'Specimen Counts (Grouped)'. The report table has columns for 'Test Types' (e.g., RBS for mps, Stool for C/S, GXM, HB, Urinalysis, WBC, Salmonella Antigen Test, Direct COOMBS Test, DU Test, Sickling Test, Röntgen), 'Complete Tests' (e.g., 1 for RBS for mps, 0 for others), and 'Pending Tests' (e.g., 0 for most, 1 for WBC). A 'View' button is at the bottom right.

ii. Specimen counts (ungrouped)

The screenshot shows the same software interface as the previous one. The 'Counts' report is now titled 'Specimen Counts (Ungrouped) - From 2017-05-01 To 2017-05-24'. It has four tabs at the top: 'Test Counts (Ungrouped)', 'Test Counts (Grouped)', 'Specimen Counts (Ungrouped)' (circled in red), and 'Specimen Counts (Grouped)'. The report table has columns for 'Specimen Types' (e.g., Ascitic Tap, Aspirate, CSF, Dried Blood Spot, High Vaginal Swab, Nasal Swab, Plasma, Plasma EDTA, Pleural Tap, Pus Swab, Rectal Swab, Semen, Serum, Skin, Vomitus), 'Accepted' (e.g., 0 for all), 'Rejected' (e.g., 0 for all), and 'Total Specimen' (e.g., 0 for all). A 'View' button is at the bottom right.

The grouped tests and specimens are categorized according to gender and age ranges.

iii. Test Counts (grouped)

| Test Types | Gender | Age Ranges | | | M/F Total | Total Tests |
|-------------------------|----------------|------------|--------|--------|-----------|-------------|
| | | 0-5 | 5-15 | 15-120 | | |
| BS for mps | Male Female | 0 0 | 0 0 | 1 0 | 1 | 1 |
| GXM | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| HB | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Urinalysis | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| WBC | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Salmonella Antigen Test | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Borrelia | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |

| Test Types | Gender | Age Ranges | | | M/F Total | Total Tests |
|------------|--------|------------|------|--------|-----------|-------------|
| | | 0-5 | 5-15 | 15-120 | | |
| | | | | | | |

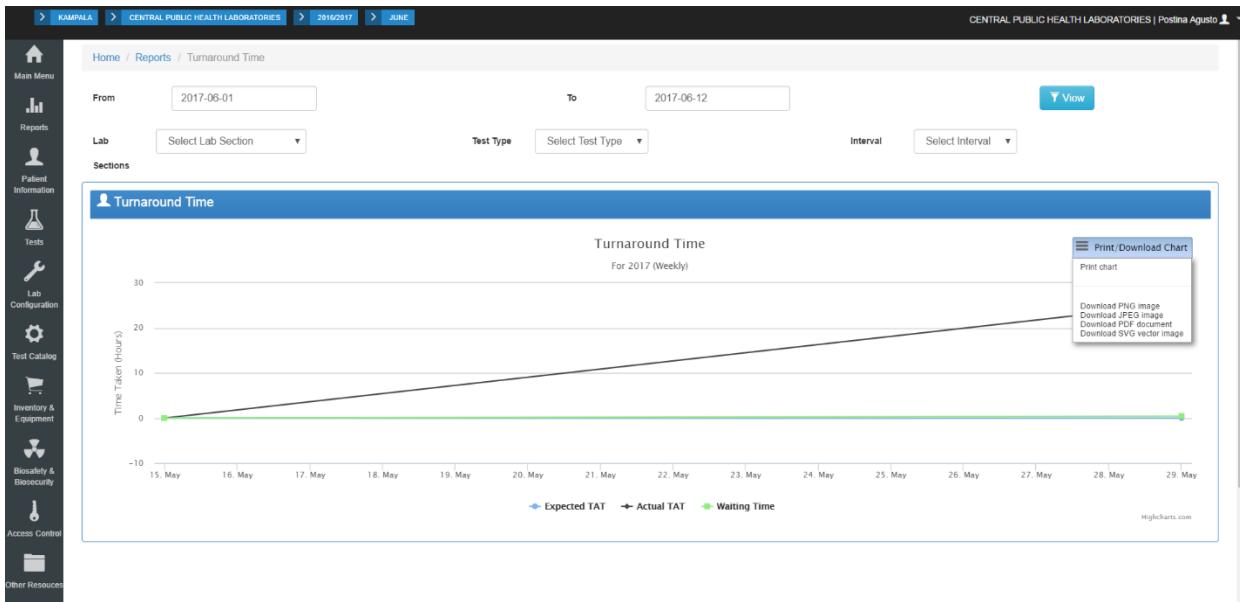
iv. Specimen counts (grouped)

| Test Types | Gender | Age Ranges | | | M/F Total | Total Specimen |
|-------------------|----------------|------------|--------|--------|-----------|----------------|
| | | 0-5 | 5-15 | 15-120 | | |
| Ascitic Tap | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Aspirate | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| CSF | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Dried Blood Spot | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| High Vaginal Swab | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Nasal Swab | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Plasma | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Plasma EDTA | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |
| Pleural Tap | Male Female | 0 0 | 0 0 | 0 0 | 0 | 0 |

3.3.3.4 Turnaround Time Report

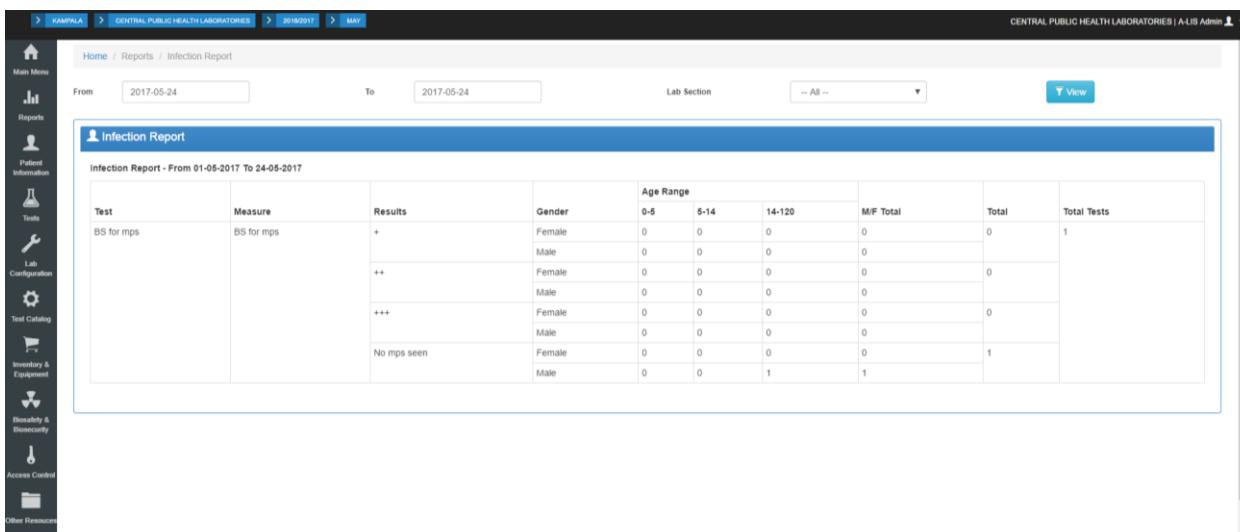
From the option/button, click the button to display the turnaround time from when a test is ordered to completion including specific tests. Select a turnaround time report for the

different intervals (daily, weekly, monthly), date ranges, lab sections and specific test type and then clicking **View**. Click on  to print or download.



3.3.3.5 Test summary Report

From the  option/button, click  to display infections by gender and age. Select a date range and lab section then clicking **View**.



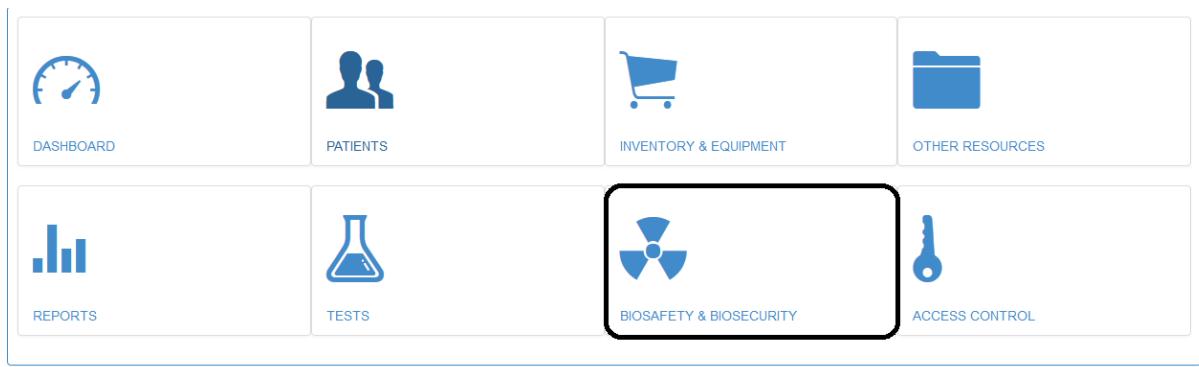
3.3.3.6 User Statistics Report

From the  option/button, click “User Statistics” to display report for users of the system and system activity logs. Filter by User, report type or date range and then click on **View**. Use a search

box to search a user by name and click the drop down of **Show entries** show a number of entries for a defined report.

| Name | Tests Received | Specimen Collected | Specimen Rejected | Tests Performed | Tests Verified |
|--------------------|----------------|--------------------|-------------------|-----------------|----------------|
| 1 A-LIS Admin | 0 | 0 | 0 | 0 | 0 |
| 2 Geoffrey Anguyo | 0 | 0 | 0 | 0 | 0 |
| 3 asim | 0 | 0 | 0 | 0 | 0 |
| 4 Philip Kasibante | 0 | 0 | 0 | 0 | 0 |
| 5 tmkim | 0 | 0 | 0 | 0 | 0 |
| 6 Postina Agusto | 0 | 0 | 0 | 0 | 0 |
| 7 P K | 0 | 0 | 0 | 0 | 0 |
| 8 penny | 0 | 0 | 0 | 0 | 0 |

3.4 BIOSAFETY AND BIOSECURITY



Click **BIOSAFETY & BIOSECURITY** from landing page to view details of all ordinary and emergency BB incidents occurring at a lab facility. Alternatively, on the side navigation bar, place your cursor on the **BB** option/button to display the list of all ordinary and emergency BB incidents.

| Date / Time | Nature of Incident | Cause of Incident | Description | Actions |
|-------------------------|---|---|-------------|--|
| 01 May 2017 12:34:00 | Minor/Physical; Minor/Physical; Minor/Mechanical; Minor/Physical; | Defective Equipment, Lack of Adequate Physical Security, Lack of Personal Protective Equipment; Unsafe Procedure, Unsafe Working Environment; | Point Here | View Edit Delete Clinical Update Analysis Update IHRM Response |
| 11 May 2017 13:56:00 | Minor/Physical; Minor/Chemical; Major/Mechanical; Major/Physical; Minor/Physical; | | Point Here | View Edit Delete Clinical Update Analysis Update IHRM Response |
| 25 May 2017 17:14:00 | Major/Ergonomic and Medical; | | Point Here | View Edit Delete Clinical Update Analysis Update IHRM Response |
| 26 May 2017 23:00:00 | Minor/Physical; | | Point Here | View Edit Delete Clinical Update Analysis Update IHRM Response |
| 04 Jun 2017 09:54:00 | Minor/Physical; Minor/Chemical; Major/Chemical; | | Point Here | View Edit Delete Clinical Update Analysis Update IHRM Response |

3.4.1 Registering a bio-safety/bio-security incident

On the side navigation bar, place your cursor on the BB option/button, then click “Register incident”.

This will bring a page below, then click the “SAVE” button to save details on incident after filling them in.

| Bio-safety and Bio-security Incident/Occurrence Details (to be completed by the person affected or his/her supervisor) | | | | | |
|---|--|-------------------|--|-------------------|--|
| Facility | LBK1 - CENTRAL PUBLIC HEALTH LABORATORIES - Kampala | Occurrence Date * | | Occurrence Time * | |
| Identification No | <input type="text" value="To be generated automatically"/> | | | | |
| Description | <input type="text"/> | | | | |
| First Aid / Immediate Actions | <input type="text"/> | | | | |
| Nature of Incident/Occurrence <input type="checkbox"/> Assault/Fight among staff <input type="checkbox"/> Attack on the Lab <input type="checkbox"/> Back pain from posture effects <input type="checkbox"/> Bike rider accident <input type="checkbox"/> Breakage of sample container <input type="checkbox"/> Chemical burn <input type="checkbox"/> Chemical spillage <input type="checkbox"/> Collapsing building <input type="checkbox"/> Contact with radiological materials <input type="checkbox"/> Contact with VHP suspect <input type="checkbox"/> Death within lab <input type="checkbox"/> Electric shockburn <input type="checkbox"/> Fainting <input type="checkbox"/> Fire <input type="checkbox"/> Injury caused by laboratory objects <input type="checkbox"/> Machine cut/bruises <input type="checkbox"/> Needle prick or cuts by used sharps <input type="checkbox"/> Other <input type="checkbox"/> Other occupational hazard <input type="checkbox"/> Poor disposal of radiological materials <input type="checkbox"/> Poor vision from inadequate light <input type="checkbox"/> Product by unused sharps <input type="checkbox"/> Rupture <input type="checkbox"/> Slip or fall <input type="checkbox"/> Theft of chemical <input type="checkbox"/> Theft of equipment <input type="checkbox"/> Theft of laboratory consumables <input type="checkbox"/> Theft of radiological materials <input type="checkbox"/> Theft of samples <input type="checkbox"/> Unnecessary destruction of lab material | | | | | |
| Check if incident(s) is Minor or Major <input type="checkbox"/> Minor <input type="checkbox"/> Major | | | | | |
| Victim Details (to be completed by the person affected or his/her supervisor) Victim ID: <input type="text"/> Gender: <input type="radio"/> Male <input type="radio"/> Female | | | | | |

When facility name and password are the log-in credentials, then the facility name in the page is automatically filled.

3.4.2 Assessing reported biosafety or biosecurity incidents

On the side navigation bar, place your cursor on the **BB** option/button, and then click “**Summary Log**”.

| Date / Time | Nature of Incident | Cause of Incident | Description | Actions |
|-------------------------|---|---|-------------|--|
| 01 May 2017 12:34:00 | Minor/Physical; Minor/Physical; Minor/Mechanical; Minor/Physical; | Defective Equipment; Lack of Adequate Physical Security; Lack of Personal Protective Equipment; Unsafe Procedure; Unsafe Working Environment; | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 11 May 2017 13:56:00 | Minor/Physical; Minor/Chemical; Major/Mechanical; Major/Physical; Minor/Physical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 25 May 2017 17:14:00 | Major/Ergonomic and Medical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 25 May 2017 23:00:00 | Minor/Physical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 04 Jun 2017 09:54:00 | Minor/Physical; Minor/Chemical; Major/Chemical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |

This will bring a page that displays a list of **BB** (Bio-safety and Bio-Security) incidents as shown below.

| # | ID No | Date / Time | Nature of Incident | Cause of Incident | Description | Actions |
|---|----------------|-------------------------|---|---|-------------|--|
| 1 | BB/LBK1/2017/1 | 01 May 2017 12:34:00 | Minor/Physical; Minor/Physical; Minor/Mechanical; Minor/Physical; | Defective Equipment; Lack of Adequate Physical Security; Lack of Personal Protective Equipment; Unsafe Procedure; Unsafe Working Environment; | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 2 | BB/LBK1/2017/2 | 11 May 2017 13:56:00 | Minor/Physical; Minor/Chemical; Major/Mechanical; Major/Physical; Minor/Physical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 3 | BB/LBK1/2017/3 | 25 May 2017 17:14:00 | Major/Ergonomic and Medical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 4 | BB/LBK1/2017/4 | 25 May 2017 23:00:00 | Minor/Physical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |
| 5 | BB/LBK1/2017/5 | 04 Jun 2017 09:54:00 | Minor/Physical; Minor/Chemical; Major/Chemical; | | Point Here | View Edit Update Clinical Update Analysis Update BHM Response |

Click  to assess the required incident as shown below.



The screenshot shows a detailed incident report for BB/LBK1/2017/1. The report includes:

- BB#:** BB/LBK1/2017/1
- Facility:** UBL - CENTRAL PUBLIC HEALTH LABORATORIES
- Occurrence Date & Time:** 01 May 2017 12:34:00
- Description:** The lab tech fell down and fainted and the fridge cut his hand
- Location:** EID Lab entrance
- First Aid / Immediate Actions:** First aid medicine was given
- Nature of Incident/Occurrence:** Fainting (Minor/Physical) Injury caused by laboratory objects (Equipment) Machine cut/buckles (Minor/Mechanical) Slip or fall (Minor/Physical)
- Completion Status:** Completed
- Victim ID:** Ali Osbert
- Gender:** Not Applicable
- Name:** Ali Osbert
- DOB / Age:** 1990-05-02 /
- Category:** Laboratory Staff
- Email:** ali@cpht.org
- NOK Name:** NOK Email (Next of Kin)
- NOK Telephone:**
- Activity being performed:** Sample processing
- VHF Patient ULIN:**
- Equipment Code:** MOH/PRG/23/2017
- Equipment Name:** Fridge
- Reporting Officer:** Andrew Kato
- Designation:** Lab Supervisor
- Telephone:** 0755676543
- Extent/Magnitude of injury:** severe
- Clinical Intervention:**
- Date/Time of Intervention:** 0000-00-00 00:00:00
- Intervention Followup:**
- Medical Officer:**
- Telephone:**

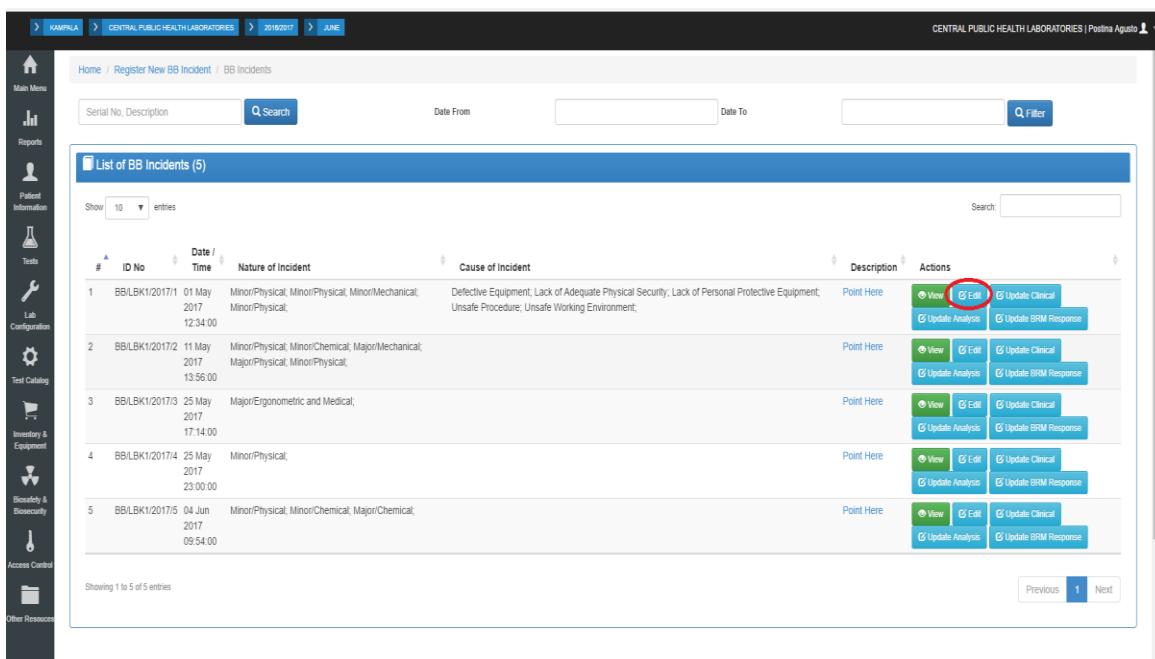
On the right side of the form, there are several icons for interacting with the document:

- rotate clockwise
- print
- download
- fit width
- zoom in(enlarge)
- zoom out(reduce)

3.4.3 Editing Bio-safety and Bio-security incidents

On the side navigation bar, place your cursor on the **BB** option/button, and then click “**Summary Log**

Log” to display a list of **BB** (Bio-safety and Bio-Security) incidents and click “**Edit BB Incident Information**”



| # | ID No | Date / Time | Nature of Incident | Cause of Incident | Description | Actions |
|---|----------------|-------------------------|---|---|-------------|---|
| 1 | BB/LBK1/2017/1 | 01 May 2017 12:34:00 | Minor/Physical; Minor/Physical; Minor/Mechanical; | Defective Equipment; Lack of Adequate Physical Security; Lack of Personal Protective Equipment; Unsafe Procedure; Unsafe Working Environment; | Point Here |      |
| 2 | BB/LBK1/2017/2 | 11 May 2017 13:56:00 | Minor/Physical; Minor/Chemical; Major/Mechanical; Major/Physical; Minor/Physical; | | Point Here |      |
| 3 | BB/LBK1/2017/3 | 25 May 2017 17:14:00 | Major/Ergonomic and Medical; | | Point Here |      |
| 4 | BB/LBK1/2017/4 | 25 May 2017 23:00:00 | Minor/Physical; | | Point Here |      |
| 5 | BB/LBK1/2017/5 | 04 Jun 2017 09:54:00 | Minor/Physical; Minor/Chemical; Major/Chemical; | | Point Here |      |

Showing 1 to 5 of 5 entries

Bio-safety and Bio-security Incident/Occurrence Details (to be completed by the person affected or his/her supervisor)

Facility: LBI1 - CENTRAL PUBLIC HEALTH LABORATORIES - Kampala
Incurrence Date: 2017-05-01
Incurrence Time: 12:34:00

Identification No: BBILBK1/2017/1
Location: EID Lab entrance

Description: The lab tech fell down and fainted and the fridge cut his hand
First Aid / Immediate Actions: First aid medicine was given

Nature of Incident/Occurrence:

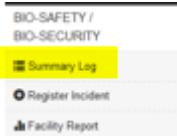
| | | | |
|--|--|---|--|
| <input type="checkbox"/> Needs prick or cuts by used sharps | <input type="checkbox"/> Sample spillage | <input type="checkbox"/> Theft of samples | <input type="checkbox"/> Contact with VHF suspect |
| <input type="checkbox"/> Chemical burn | <input type="checkbox"/> Theft of chemical | <input type="checkbox"/> Chemical spillage | <input type="checkbox"/> Death within lab |
| <input type="checkbox"/> Poor vision from inadequate light | <input type="checkbox"/> Back pain from posture effects | <input type="checkbox"/> Other occupational hazard | <input checked="" type="checkbox"/> Machine cut/bruise |
| <input type="checkbox"/> Electric shock/short | <input type="checkbox"/> Other | <input type="checkbox"/> Assault/Fight among staff | <input checked="" type="checkbox"/> Falling |
| <input type="checkbox"/> Roof/wall/ceiling fall | <input type="checkbox"/> Slip or fall | <input type="checkbox"/> Unnecessary destruction of lab material | <input type="checkbox"/> Theft of laboratory consumables |
| <input type="checkbox"/> Breakage of sample container | <input type="checkbox"/> Prick/stab by unused sharp | <input checked="" type="checkbox"/> Injury caused by laboratory objects | <input type="checkbox"/> Theft of equipment |
| <input type="checkbox"/> Attack on the Lab | <input type="checkbox"/> Collapsing building | <input type="checkbox"/> Bike rider accident | <input type="checkbox"/> Fire |
| <input type="checkbox"/> Contact with radiological materials | <input type="checkbox"/> Theft of radiological materials | <input type="checkbox"/> Poor disposal of radiological materials | |

Victim Details (to be completed by the person affected or his/her supervisor)

Edit and click “Save” to update changes on details of incident.

3.4.4 Updating Clinical Intervention

On the side navigation bar, the clinician places a cursor on the **BB** option/button, and then clicks



“**Summary Log**” to display a list of **BB** (Bio-safety and Bio-Security) incidents and click “**Update Clinical Intervention**”.

List of BB Incidents (5)

| # | ID No | Date / Time | Nature of Incident | Cause of Incident | Description | Actions |
|---|----------------|-------------------------|--|---|-------------|---|
| 1 | BBILBK1/2017/1 | 01 May 2017 12:34:00 | Minor/Physical; Minor/Physical; Minor/Mechanical; Minor/Physical; | Defective Equipment; Lack of Adequate Physical Security; Lack of Personal Protective Equipment; Unsafe Procedure; Unsafe Working Environment. | Point Here | <input type="button" value="View"/> <input type="button" value="Edit"/> <input checked="" type="button" value="Update Clinical"/> <input type="button" value="Update Analysis"/> <input type="button" value="Update BRM Response"/> |
| 2 | BBILBK1/2017/2 | 11 May 2017 13:56:00 | Minor/Physical; Minor/Chemical; Major/Mechanical; Major/Physical; Minor/Physical; | | Point Here | <input type="button" value="View"/> <input type="button" value="Edit"/> <input checked="" type="button" value="Update Clinical"/> <input type="button" value="Update Analysis"/> <input type="button" value="Update BRM Response"/> |
| 3 | BBILBK1/2017/3 | 25 May 2017 17:14:00 | Major/Ergonomic and Medical; | | Point Here | <input type="button" value="View"/> <input type="button" value="Edit"/> <input checked="" type="button" value="Update Clinical"/> <input type="button" value="Update Analysis"/> <input type="button" value="Update BRM Response"/> |
| 4 | BBILBK1/2017/4 | 25 May 2017 23:00:00 | Minor/Physical; | | Point Here | <input type="button" value="View"/> <input type="button" value="Edit"/> <input checked="" type="button" value="Update Clinical"/> <input type="button" value="Update Analysis"/> <input type="button" value="Update BRM Response"/> |
| 5 | BBILBK1/2017/5 | 04 Jun 2017 09:54:00 | Minor/Physical; Minor/Chemical; Major/Chemical; | | Point Here | <input type="button" value="View"/> <input type="button" value="Edit"/> <input checked="" type="button" value="Update Clinical"/> <input type="button" value="Update Analysis"/> <input type="button" value="Update BRM Response"/> |

Show: 10 entries Search: _____

Showing 1 to 5 of 5 entries Previous: 1 Next: 1

The screenshot shows a web-based application interface for updating clinical interventions. The main title is "Updating Clinical Intervention for BB/LBK1/2017/1". The form includes fields for ID#, Occurrence Time, Facility, Description, Laboratory Section, EID Lab entrance, First Aid / Immediate Actions, Completion Status, and Nature of Incident/Occurrence. At the bottom right of the form area, there is a "Save" button with a red arrow pointing to it.

Updates and clicks “Save” to update changes on clinical intervention.

3.4.5 Updating Incident Analysis

On the side navigation bar, the Biosafety officer places a cursor on the **BB** option/button, and



then clicks “**Summary Log**” to display a list of **BB** (Bio-safety and Bio-Security) incidents and click “**Update Incident Analysis**”.

The screenshot shows a list of BB incidents with five entries. The columns include ID No, Date / Time, Nature of Incident, Cause of Incident, Description, and Actions. The 'Actions' column contains several buttons: View, Edit, Update Clinical, Update Analysis, and Update IRM Response. The 'Update Analysis' button for the first incident is circled in red.

| # | ID No | Date / Time | Nature of Incident | Cause of Incident | Description | Actions |
|---|----------------|-------------------------|---|---|-------------|---------|
| 1 | BB/LBK1/2017/1 | 01 May 2017 12:34:00 | Minor/Physical; Minor/Physical; Minor/Mechanical; | Defective Equipment; Lack of Adequate Physical Security; Lack of Personal Protective Equipment; Unsafe Procedure; Unsafe Working Environment; | Point Here | |
| 2 | BB/LBK1/2017/2 | 11 May 2017 13:56:00 | Minor/Physical; Minor/Chemical; Major/Mechanical; | | Point Here | |
| 3 | BB/LBK1/2017/3 | 25 May 2017 17:14:00 | Major/Ergonomic and Medical; | | Point Here | |
| 4 | BB/LBK1/2017/4 | 25 May 2017 23:00:00 | Minor/Physical; | | Point Here | |
| 5 | BB/LBK1/2017/5 | 04 Jun 2017 09:54:00 | Minor/Physical; Minor/Chemical; Major/Chemical; | | Point Here | |

Updates and clicks “Save” to update changes on incident analysis

3.4.6 Updating National Bio-risk Management Response

On the side navigation bar, the National Bio-risk Management person places a cursor on the **BB**



option/button, and then clicks “**Summary Log**” to display a list of **BB** (Bio-safety and Bio-Security) incidents and click “**Update NBRM Response**”.

| # | ID No | Date / Time | Nature of Incident | Cause of Incident | Description | Actions |
|---|----------------|-------------------------|---|---|-------------|--|
| 1 | BB/LBK1/2017/1 | 01 May 2017 12:34:00 | Minor/Physical; Minor/Physical; Minor/Mechanical; | Defective Equipment; Lack of Adequate Physical Security; Lack of Personal Protective Equipment; Unsafe Procedure; Unsafe Working Environment; | Point Here | View Edit Update Clinical Update Analysis Update NBRM Response |
| 2 | BB/LBK1/2017/2 | 11 May 2017 13:56:00 | Minor/Physical; Minor/Chemical; Major/Mechanical; Major/Physical; Minor/Physical; | | Point Here | View Edit Update Clinical Update Analysis Update NBRM Response |
| 3 | BB/LBK1/2017/3 | 25 May 2017 17:14:00 | Major/Ergonomic and Medical; | | Point Here | View Edit Update Clinical Update Analysis Update NBRM Response |
| 4 | BB/LBK1/2017/4 | 25 May 2017 23:00:00 | Minor/Physical; | | Point Here | View Edit Update Clinical Update Analysis Update NBRM Response |
| 5 | BB/LBK1/2017/5 | 04 Jun 2017 09:54:00 | Minor/Physical; Minor/Chemical; Major/Chemical; | | Point Here | View Edit Update Clinical Update Analysis Update NBRM Response |

The screenshot shows the 'Updating Major Incident Response' page. The main content area contains fields for ID#, Occurrence Time, Facility, and various incident details. Below this is a section for 'Major Incident Response' with fields for Investigation Findings, Improvement Plan, Response Date, Response Time, and NBRM representative information. At the bottom left of this section is a blue 'Save' button, which is highlighted with a red arrow.

Updates and clicks “Save” to update changes NBRM response.

3.4.7 Generating BB periodic Report

On the side navigation bar, place your cursor on the **BB** option/button, and then click “**Facility Report**” and a page for the facility BB incident Report will show as a default for the current month (1st to Date) as shown below.

The screenshot shows the 'Facility BB Incident Report' page. It features several summary tables: 'Facility Summary on Incidents' (Physical), 'Summary on Facility Incident Management' (Referral Status, Completion Status), 'Summary on Incident prevalence among Personnel and Other Facility Clients' (Laboratory Staff), and 'Summary on specific causes of Incidents' (Defective Equipment, Hazardous Chemicals). At the bottom of the page are date filters ('Date From' and 'Date To') and a 'Filter' button.

Enter desired dates and click “**Filter**” to show report for a specified period The resultant report shows the period as shown below.

Date From Date To

Facility BB Incident Report (Filtered) - 2017-05-01 to 2017-05-23



| Facility Summary on Incidents | | Summary on Facility Incident Management | | |
|-------------------------------|---|---|---------------------------|---|
| Physical | Attack on the Lab | 0 | Referral Status | |
| | Bike rider accident | 0 | -- | 1 |
| | Collapsing building | 0 | Resolved and not referred | 1 |
| | Fire | 1 | Completion Status | |
| | Theft of equipment | 0 | Completed | 1 |
| | Assault/Fight among staff | 0 | Ongoing | 1 |
| | Breakage of sample container | 1 | | |
| | Fainting | 1 | | |
| | Injury caused by laboratory objects | 1 | | |
| | Prick/cut by unused sharps | 0 | | |
| | Roof leakages | 0 | | |
| | Slip or fall | 1 | | |
| | Theft of laboratory consumables | 0 | | |
| | Unnecessary destruction of lab material | 1 | | |
| | Electric shock/burn | 1 | | |
| | | | | |

Summary on Incident prevalence among Personnel and Other Facility Clients

| | |
|------------------|---|
| -- | 1 |
| Laboratory Staff | 1 |

Summary on specific causes of Incidents

| | |
|------------------------------------|---|
| Defective Equipment | 1 |
| Hazardous Chemicals | 0 |
| Lack of Adequate Physical Security | 1 |

Click “Print” to have a physical copy.

3.5 EQUIPMENT, LOGISTICS AND STORE (ELS)



Click **INVENTORY & EQUIPMENT** from landing page to view laboratory facility inventory and equipment details.

Click on inventory

3.5.1 Registering a new Equipment

Click “**Inventory &Equipment**” on the landing page then click **Equipment** to display a list of all equipment and click “**Add**”.

The screenshot shows the 'Equipment List' page. On the left is a vertical sidebar with icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, and Inventory & Equipment. The main area has a blue header bar with the title 'Equipment List' and a 'Add' button. Below the header is a search bar and a table with columns for Name, Model, Serial number, Location, Procurement type, Purchase date, Delivery date, Verification date, Installation date, Spare parts, Warranty period, Lifetime, Service frequency, and Service contract. A message 'No data available in table' is displayed. At the bottom, it says 'Showing 0 to 0 of 0 entries' and has 'Previous' and 'Next' buttons. A red arrow points to the 'Add' button.

This will bring a page for filling in the equipment information as shown below and click **Submit** to save the new equipment in the system

The screenshot shows the 'Equipment' registration form. The left sidebar includes icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, Biomass & Biomass, Process Control, and Other. The main form has fields for Name, Model, Serial number, Location, Procurement type, Purchase date, Delivery date, Verification date, Installation date, Spare parts, Warranty period, Lifetime (with a dropdown for 'Years'), and Service frequency. A large curly brace on the right side of the form encloses all these fields. To the right of the brace, the text 'All information should be filled in' is written in blue. In the top right corner of the form, there is a blue 'Submit' button.

3.5.2 Search for a registered Equipment

Click “**Inventory &Equipment**” on the landing page then click **Equipment** to display a list of all equipment and enter the name of equipment in the search box as shown below.

List Add

entries Search: fasc caliber

| Serial number | Location | Procurement type | Purchase date | Delivery date | Verification date | Installation date | Spare parts | Warranty period | Lifetime | Service frequency | Service contract |
|---------------|----------|------------------|---------------|---------------|-------------------|-------------------|-------------|-----------------|----------|-------------------|------------------|
| | | | | | | | | | | | |

entries Previous Next

3.5.3 Manage service schedule of equipment

Click “**Inventory & Equipment**” on the landing page then click **Equipment** to display a list of all equipment and enter the name of equipment in the search box then click “**Manage service schedule**” under the action tab to enter information detailing: what machine, when was it serviced, who serviced the machine and when will it be serviced again as shown below. Click **Submit** to save the schedule in the system.

Equipment maintenance

| | |
|---------------------|---------------------|
| Equipment | Select |
| Service date | |
| Next service date | |
| Serviced by | Serviced by |
| Serviced by contact | Serviced by contact |
| Supplier | Select |
| Comment | Comment |

Cancel Submit

Fill in the information in the space provided

3.5.4 Report Equipment Breakdown

Click “**Inventory & Equipment**” on the landing page then click **Equipment** to display a list of all equipment and enter the name of equipment in the search box click “**Equipment Breakdown**” under the action tab to enter occurrence information as required by ISO standards and as shown as below. Click **Submit** to save the occurrence in the system.

3.5.5 Report Equipment Restoration details

Click “**Inventory & Equipment**” on the landing page then click **Equipment** to display a list of all equipment and enter the name of equipment in the search box click “**Equipment Restoration**” under the action tab to enter feedback regarding the repair of given broken equipment and as shown below. Click **Submit** to send the report.

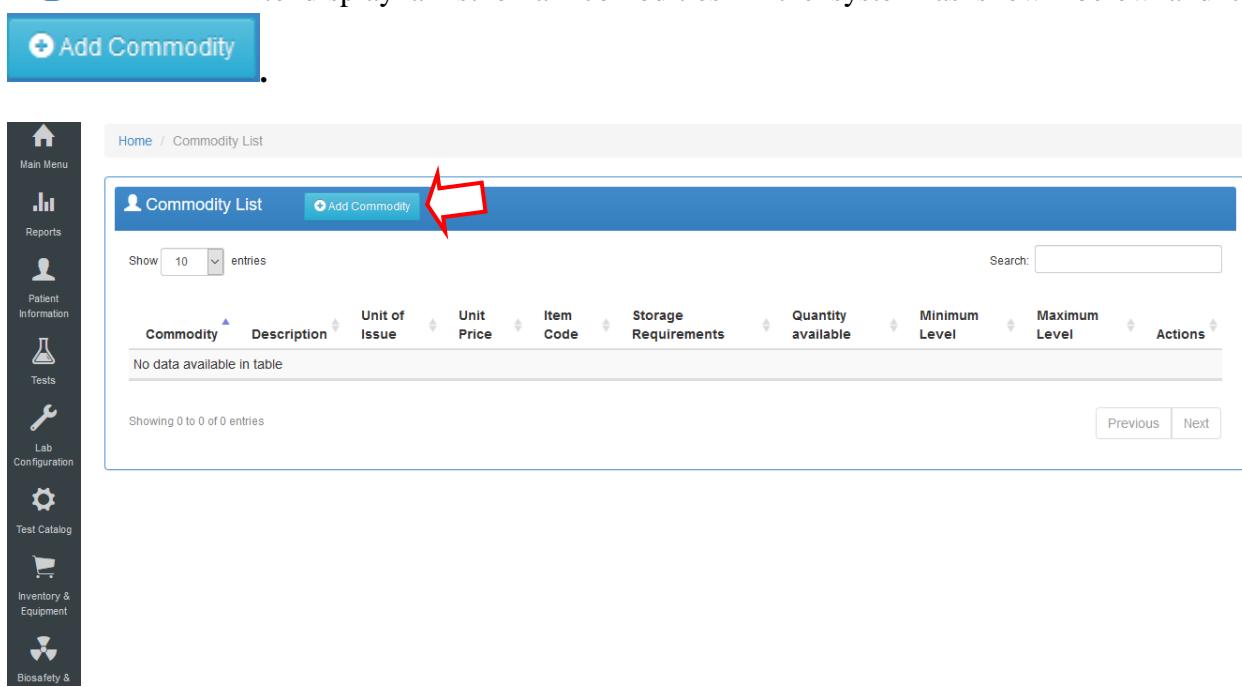
3.5.6 Generate Periodic Equipment Performance Report

(Content coming later)

3.5.7 Update inventory of lab commodities

Click “Inventory & Equipment” on the landing page and click “Inventory” then click

-  [Commodities](#) to display a list of all commodities in the system as shown below and click

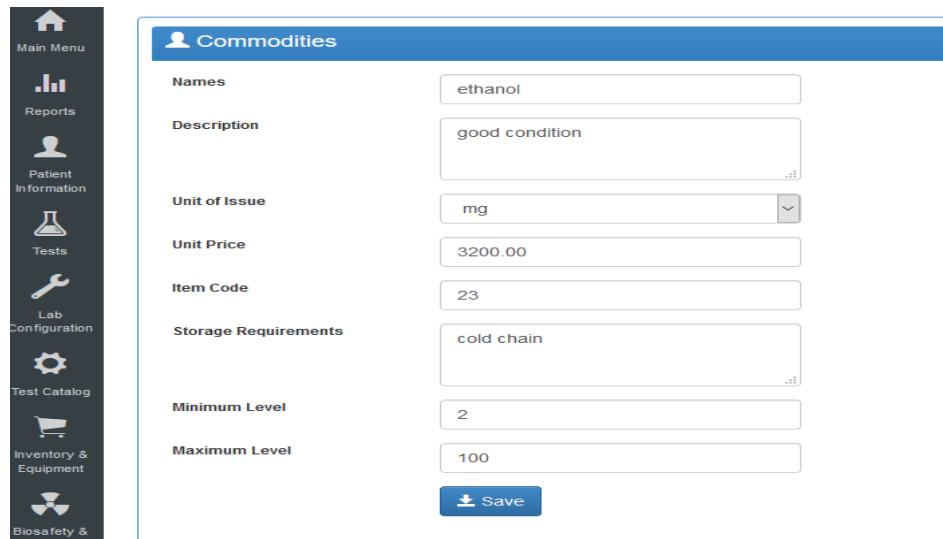


The screenshot shows the 'Commodity List' page. On the left is a vertical sidebar with icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety &.

The main area has a blue header bar with 'Commodity List' and 'Add Commodity' buttons. Below is a table with columns: Commodity, Description, Unit of Issue, Unit Price, Item Code, Storage Requirements, Quantity available, Minimum Level, Maximum Level, and Actions. A message says 'No data available in table'. At the bottom are 'Previous' and 'Next' buttons.

This will bring a page for filling in details of the commodity as shown below and click on

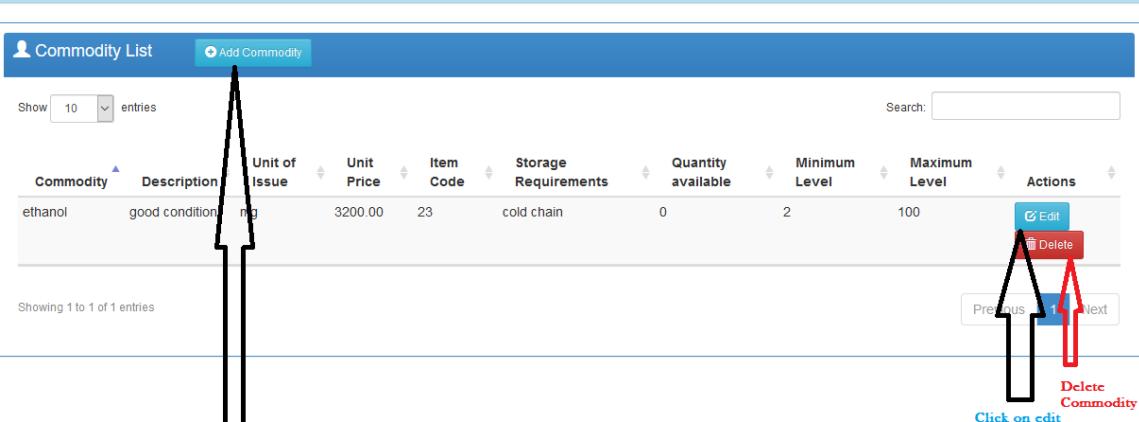
-  [Save](#) to add the commodity in the system.



The screenshot shows the 'Commodities' form page. On the left is a vertical sidebar with icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety &.

The main area has a blue header bar with 'Commodities' and a back arrow. Below is a form with fields: Names (ethanol), Description (good condition), Unit of Issue (mg), Unit Price (3200.00), Item Code (23), Storage Requirements (cold chain), Minimum Level (2), and Maximum Level (100). At the bottom is a 'Save' button.

Use the search box to search for a registered commodity of the commodity. Click  or click  to make other changes then click on  to update as shown below.



The commodity was successfully updated

Commodity List

| Commodity | Description | Unit of Issue | Unit Price | Item Code | Storage Requirements | Quantity available | Minimum Level | Maximum Level | Actions |
|-----------|----------------|---------------|------------|-----------|----------------------|--------------------|---------------|---------------|---|
| ethanol | good condition | ml | 3200.00 | 23 | cold chain | 0 | 2 | 100 |   |

Show 10 entries

Showing 1 to 1 of 1 entries

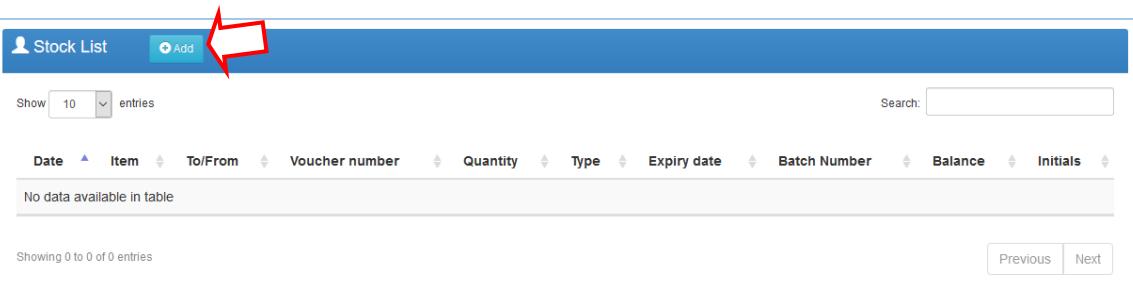
Add Commodity

Main Menu

- Reports
- Patient Information
- Tests
- Lab Configuration
- Test Catalog
- Inventory & Equipment

3.5.8 Issuing requested lab commodities (filling in stock book)

Click “**Inventory &Equipment**” on the landing page and click “**Inventory**” then click “**Stock Card**” to display the stock list. To issue a commodity requested click .



Home / Stock List

Stock List

| Date | Item | To/From | Voucher number | Quantity | Type | Expiry date | Batch Number | Balance | Initials |
|----------------------------|------|---------|----------------|----------|------|-------------|--------------|---------|----------|
| No data available in table | | | | | | | | | |

Show 10 entries

Showing 0 to 0 of 0 entries

Add

Main Menu

- Reports
- Patient Information
- Tests
- Lab Configuration

The requesting staff should know all details of the commodity page will be displayed as shown below. Select the commodity and indicate whether the stock is inbound or outbound. Then click on continue to fill the stock card.

Stock card

| District | Facility | Financial Year | Item | Unit of Issue | Max Stock | Min Stock |
|----------|------------------------------------|----------------|-------------------|---------------|-----------|-----------|
| Kampala | CENTRAL PUBLIC HEALTH LABORATORIES | 2016/2017 | kits (packs good) | good | 9 | 8 |

To:

Voucher number:

Quantity out:

Balance on Hand: 0

Batch number:

Expiry date:

Initials:

Click on button to save the item and a list of the saved item issued will be displayed as seen below

Stock List

| Date | Item | To/From | Voucher number | Quantity | Type | Expiry date | Batch Number | Balance | Initials |
|-------------|------|---------|----------------|----------|------|-------------|--------------|---------|----------|
| 24 May 2017 | kits | | | 13 | 3 | O | 24 May 2017 | 2353 | -3 tk |

Showing 1 to 1 of 1 entries

3.5.9 Record findings from conducted physical count

Click “Inventory &Equipment” on the landing page and click “Inventory” then click to select the item to reconcile with the physical findings then click on submit.

Stockbook

Tracer item:

This will bring a new page of existing stock as shown below

The screenshot shows a search interface for 'Stockbook'. A dropdown menu shows 'Tracer item' set to 'Sysmex Lysing Reagents'. Below it is a 'Submit' button. The main area displays a table for 'Ampicillin' (Item code: AMP). The table includes columns for Period, Quantity received, Quantity issued, Days out of stock, Losses & Adjustments, Balance on Hand, AMC, and Quantity to order. One row is shown for 'June 2016' with values: 10, 9016, 20, 10, 10, 3, and 2 respectively. The sidebar on the left contains various icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety & Biosecurity.

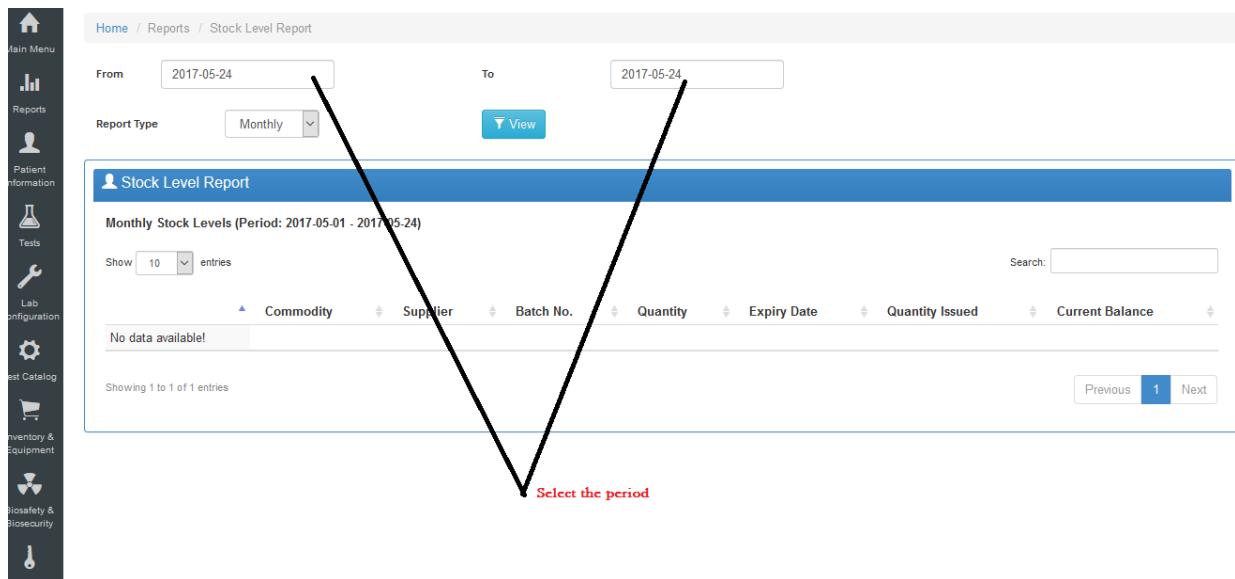
3.5.10 Generate stock status report



Click on **Reports** then click “**Inventory Reports**” and click “**Stock Levels**” as shown below.

The screenshot shows the 'Reports' section of the interface. The sidebar includes icons for Main Menu, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety & Biosecurity. The main content area lists 'Daily Reports', 'Aggregate Reports', 'Inventory Reports', and 'Dashboard'. A callout points to the 'Stock Levels' link under 'Inventory Reports' with the text 'Click on Stock levels'.

Enter period of time for the report then click  as indicated below

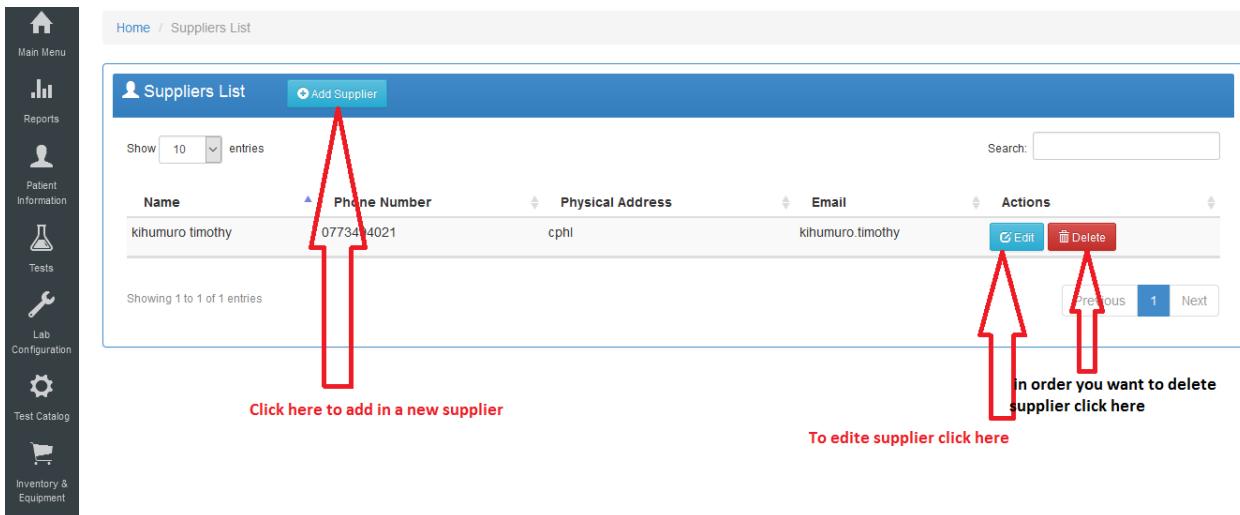


The screenshot shows the 'Stock Level Report' interface. On the left is a vertical 'Main Menu' sidebar with icons for Home, Reports, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety & Biosecurity. The main area has 'From' and 'To' date pickers both set to '2017-05-24'. A 'Report Type' dropdown is set to 'Monthly'. A blue 'View' button with a magnifying glass icon is located to the right of the date fields. Below the buttons is a table header for 'Stock Level Report' with columns: Commodity, Supplier, Batch No., Quantity, Expiry Date, Quantity Issued, Current Balance. The table body displays the message 'No data available!'.

3.5.11 Adding a Supplier

Click “Inventory &Equipment” on the landing page and click “Inventory” then click

-  [Suppliers](#) to display a list of a supplier of an equipment or commodity as shown below.



The screenshot shows the 'Suppliers List' interface. The left sidebar is identical to the previous one. The main area has a table with columns: Name, Phone Number, Physical Address, Email, and Actions. One row is listed: 'kihumuro timothy' with phone number '0773444021', address 'cphl', email 'kihumuro.timothy', and actions 'Edit' (blue button) and 'Delete' (red button). Red arrows point to the 'Edit' button and the 'Delete' button. Red text at the bottom left says 'Click here to add in a new supplier'. Red text at the bottom right says 'In order you want to delete supplier click here' and 'To edite supplier click here'.

Click on  to enter details of a new supplier as shown below and click “Save” to update the list.



Suppliers

Name

Phone Number

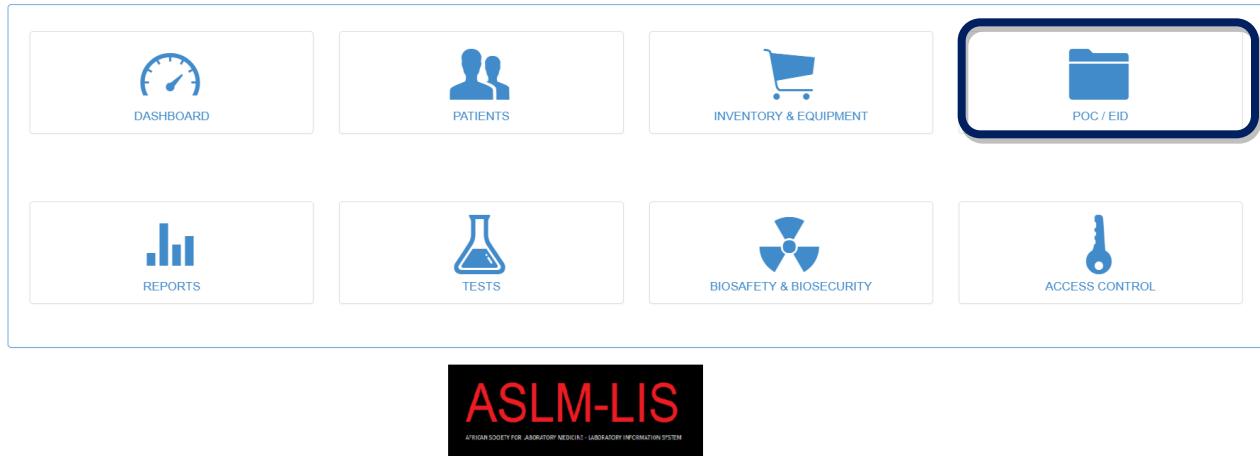
Email

Physical Address

Save

Click or click to make other changes then click on to update as well.

3.6 Registering an EID Patient



Click **POC/EID** from the landing page, then click on the **+ New Patient** (circled) button at the top of the blue portlet to register a new patient.

This screenshot shows the 'POC / EID Patient List' page. On the left is a vertical sidebar with icons for Main Menu, Patient Information, Tests, Lab Configuration, Test Catalog, Inventory & Equipment, and Biosafety & Biosecurity. The main area has a header 'Home / Patients' with a search bar. A message says 'Your filter did not match any records.' Below is a table titled 'POC / EID Patient List'. The 'New Patient' button in the header row is highlighted with a red box. The table has columns for Sample ID, Infant Name, Gender, Age In Months, Caretaker Mobile No., Mother & HIV status, PCR Status, Mother's PMTCTARVs, Infant's PMTCTARVs, Result, Test Date, and Actions. The message 'No data available in table' is displayed below the table, and the footer shows 'Showing 0 to 0 of 0 entries' with 'Previous' and 'Next' buttons.

This will bring a page with fields for capturing patient details. Enter patient information in the fields provided and click **Save** to save the information captured as illustrated below

Patient Details

Infant Name:

Gender: Male Female

Age: (In months)

Expo No.: If Status is not known Is Mother Breastfeeding? Yes No

Caretaker Tel. No.: Admission Date: Ignore if not admitted

Mothers Name: Mothers HIV Status:

Entry Point (Please select one):

Infant PMTCT Codes (Tick): Nutrition Pediatric Inpatient MBCPnMTCT Outpatient Young Child Clinic EPI

Other Entry Point (other than above):

For known HIV Exposed infants, information to enter on this Request Form should be picked from EI register.
For all other infants, use the infant register (HRS 054)

Note: R1 = Any repeat before 2nd PCR, R2 = Any repeat after 2nd PCR before 10 months 2nd PCR is done 6weeks after cessation of breastfeeding

1st or 2nd PCR? (Tick): 1st PCR 2nd PCR

Non Routine PCR: R1 / R2 (Tick): R1 R2

If Mother is HIV positive, Mother's PMTCT ARVs (Select & check circle):

Mother PMTCT ARVs: Lifelong ART No ART UNKNOWN

Circle Number: Daily NVP from birth to 6 weeks NVP for 12 weeks for high risk infants No ARVs taken at birth UNKNOWN

If known HEI: Infant's PMTCT ARVs (Select code):

Daily NVP from birth to 6 weeks NVP for 12 weeks for high risk infants No ARVs taken at birth UNKNOWN

Sample Details

Sample ID: Sample Collection Date: DD/MM/YYYY

Requesting Clinician: A-LIS Admin Mobile Number:

Enter Results

Click on the Enter results and fill in then save.

Successfully saved results information!

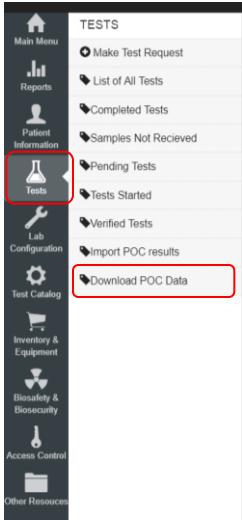
POC / EID Patient List [New Patient](#)

Show 10 entries Search:

| # | Sample ID | Infant Name | Gender | Age in Months | Caretaker Mobile No. | PCR Status | EID Test Result | Test Date | Actions |
|----|-----------|----------------------|--------|---------------|----------------------|------------|-----------------|------------|--|
| 94 | 105 | <input type="text"/> | Female | - | | 1st PCR | | | Enter Results Edit |
| 93 | 036 | <input type="text"/> | Female | - | | 2nd PCR | Negative | 2018-06-11 | Edit Results View |

Download POC Data

This enables one to generate periodic data by specifying dates using the filters. Hover over **Tests** on the sidebar and click on the encircled field.



Below is the page where you specify dates for the data to be generated.

The screenshot shows a page titled 'Generate CSV based on Test Date'. It has two input fields: 'From:' and 'To:', each with a date picker icon. Below these fields is a blue 'Generate CSV' button. The page has a header with 'Home / EID Patient list / Download' and a sidebar with the same main menu icons as the previous screenshot.

After that ensure to create a folder where you will be saving these downloaded files.

UPLOAD FILES

To upload, first login to your EID download account. On the left most corner there is an icon of home, click on it. It will open and click on the icon POC upload on the right. You will see the list of files uploaded if any. Then click on the upload button where you will need to browse to folder you created on the desktop and choose the downloaded file to upload then click save.

3.7 FAQs

| Inquiries and questions | Responses |
|--|---|
| 1. Since the Hub module majorly depends on internet connectivity, will CPHL Provide Internet services to the Site. | We are using this period to study the use of data bundles before committing to the sustainability of the support. |
| 2. How different is the A-LIS from the other Lab Information systems? | A_LIS has been customized to the Uganda laboratory setting. |
| 3. How will the A-LIS help the facility link its service data to DHIS 2? | A-LIS will later be able to upload data to DHIS2 but for now it is able to summarize data according to the HMIS 105 Lab section which can be printed and attached to the Monthly facility report. |
| 4. Will A-LIS improve on the data reporting from the automated equipment and how? | We shall have A-LIS integrated with the automated equipment to enable automated data capture and reporting, but this will be done in the next sequent build. |
| 5. Is 12 days enough for the UNHLS-CPHL data officer to stay at the site? | The 12 days will be enough to get a feedback on the HUB module, but this person will also assist in the utilization of the HLIMS paper based data collection tools. |
| 6. Who will support the maintenance of the A-LIS equipment? | We are asking the IPs to take this role, since they are already very activate in this area. |
| 7. Who will provide stationary for printing results? | The UNHLS-CPHL team came with a rim of paper for now for the duration of the pilot. There will be a cost analysis after this pilot to review the sustainability of provides paper. |
| 8. The biggest struggle with utilizing any LIS is the poor HR numbers in the laboratory, so is UNHLS-CPHL providing a data clerk to assist in data collection and entry within the laboratory? | The UNHLS-CPHL-HLIMS-TWG cannot recruit and does not have that mandate. We are advocating for a HLIMS data person through the DHO's office. Otherwise for now we ask that someone is assigned the role within the laboratory or facility HMIS focal points/departments. |
| 9. Can CPHL-HLIMS team be invited for CMEs with clinicians and other stakeholders. | Yes, all we need is an early communication. |
| 10. How will we use ALIS and the HMIS105 monthly forms (HMIS 105, 033A, 033B)? | 033A and 033B are catered for in the next build but monthly reports can be automatically generated from ALIS. |
| 11. If we use electronic ALIS and we have no counter books, how shall we populate HMIS105? | The system will automatically generate reports according to a specified date range. |
| 12. What happens when power goes off? | Always revert back to the HMIS paper based tools then later on have the back log entered into A-LIS once the power is restored. |
| 13. What happens when ALIS is not working? | Contact the HLIMS coordinator at UNHLS-CPHL after trying out abit of basic trouble shooting with the HLIMS focal persons onsite. |
| 14. Who does the facility officer call for help whenever there is a technical problem? | Contact the HLIMS Coordinator at UNHLS-CPHL. |
| 15. I forgot my pass word, what do I do? | Contact the site super user (HLIMS focal person) to reset your password. |