REPUBLIC OF UGANDA
MINISTRY OF HEALTH

National eHMIS Data Repository
User Manual

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List of Acronyms and Abbreviations

DH	District Hospital
DHIS	District Health Information System
GIS	Geographic Information System
GPS	Global Positioning System
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
MoH	Ministry of Health
TEI	Tracked Entity Instance
OSM	OpenStreetMap

Chapter 1: Introduction to the National eHMIS Data Repository

Overview

The National eHMIS Data Repository was developed for the Ministry of Health in Uganda using the DHIS2 platform, with the aim of integrating the different data silos that had been created from the multiple revisions of the Health Management Information System (HMIS) in a bid to incorporate the ever-changing data requirements for improved service delivery.

Implementation Process for the National eHMIS Data Repository

The existing data silos include data for the periods: 2011-2014, 2015-2019, and 2020+. The main objective of integrating the different health data silos/ instances into a single health data repository was to create unified data access for all users, easing the burden of data analysis, interpretation and use of data.

The National eHMIS Data Repository was developed based on the last revised HMIS tools for the period 2019-todate. Thereafter, legacy data was imported for the periods: 2015-2019 and 2020-2021. However, data for the period 2011-2014 was unavailable for import, and therefore excluded from the current implementation.

Subsequent data for the period 2022+, would be pushed to the repository using an automated, scheduled job to minimize human interactions. Below is an illustration of the implementation of the National eHMIS Data Repository.

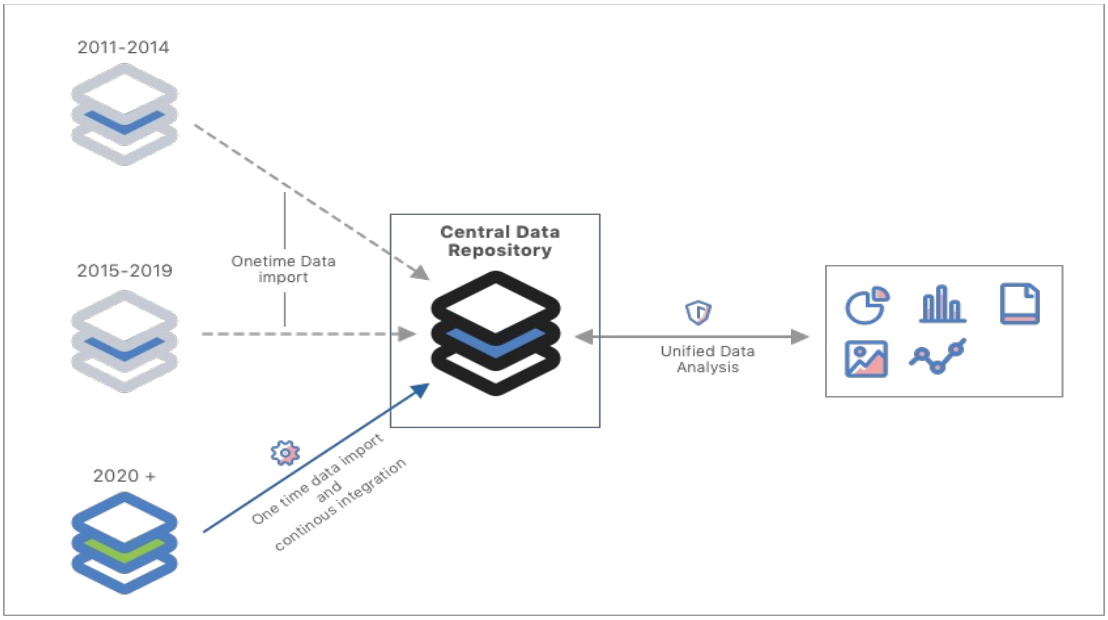


Figure 1: Integration Architecture for the National eHMIS Data Repository

Chapter 2: Getting started with the National eHMIS Data Repository

Overview

The DHIS2 platform supports the authentication and authorization of a user before they can log into a system to view or modify the data. Therefore, this section describes the process of logging in and out of the National eHMIS Data Repository. It also introduces the DHIS2 homepage and the App menu, as well as the Apps that can be accessed by the user.

Note that use of this repository is premised on sufficient knowledge of the DHIS2 platform

Logging in to the National eHMIS Data Repository

In this section you will learn how to log into the DHIS2 based National eHMIS Data Repository

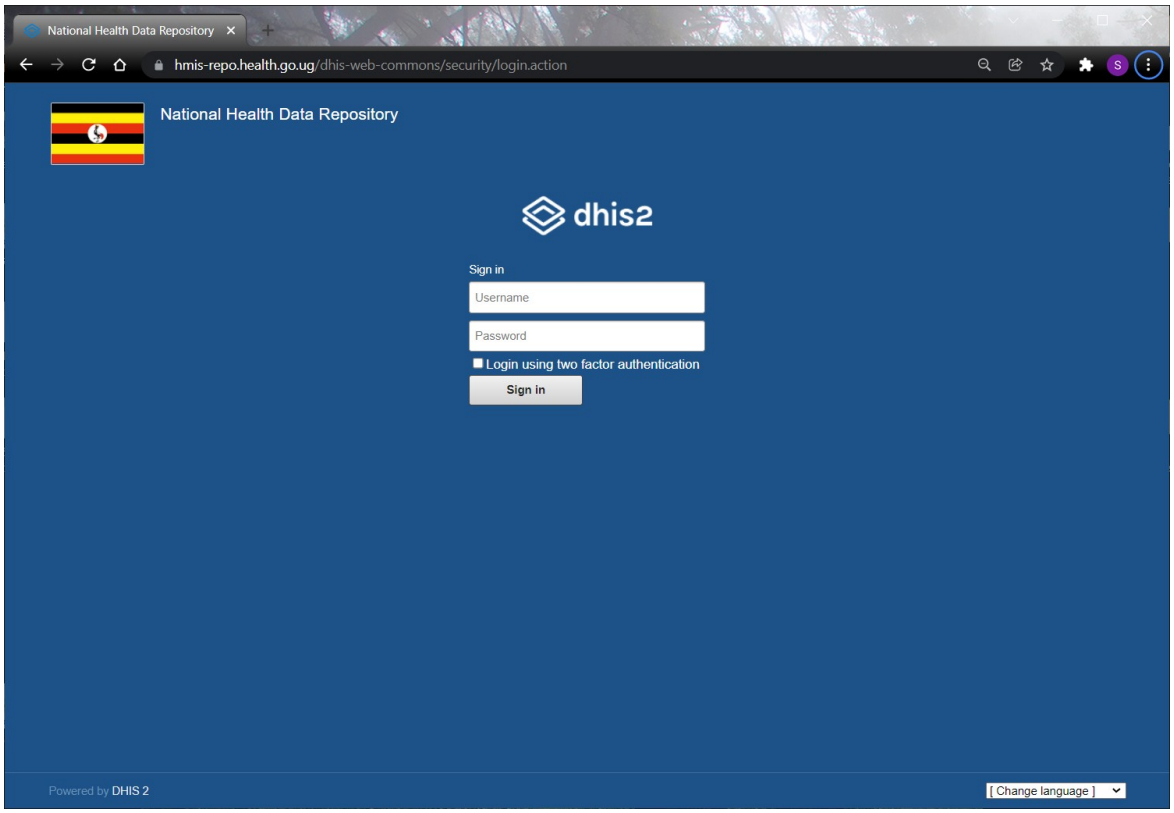
1. Open your web browser. DHIS2 works best with the latest versions of Google Chrome or Mozilla Firefox.

 - or - 

2. In the address bar of your web browser, type the web address of the National eHMIS Data Repository: https://hmis-repo.health.go.ug and press enter.

3. The first screen you see will be the login screen as shown below. Complete the following:
   - Enter your **username** and **password.**
   - If you forget your password, click on **Forgot password?** and follow instructions to recover your password. To recover your password, you will be required to know your username.

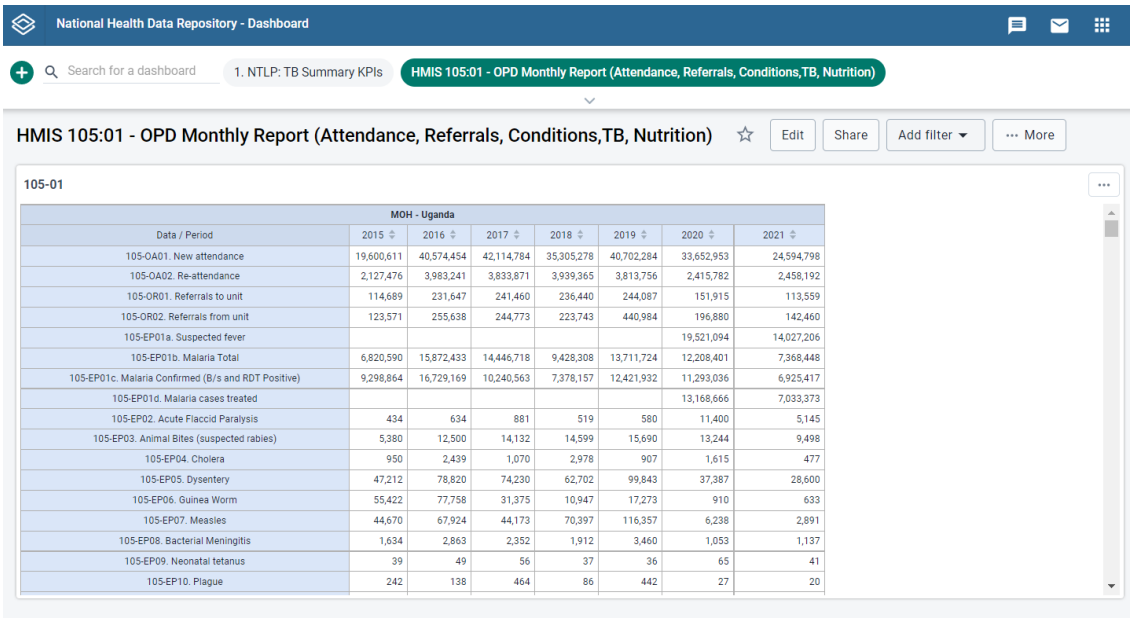
TIP: The username and password are both CASE sensitive. In other words, the following: '**A**nwaaraddin' and



4. Press the **Enter** key on your keyboard or click '**Sign in**' to log into the National eHMIS Data Repository.
5. If the username and password are correct, the National eHMIS Data Repository homepage will be opened as shown as below:

National eHMIS eRepository Homepage (Dashboard)

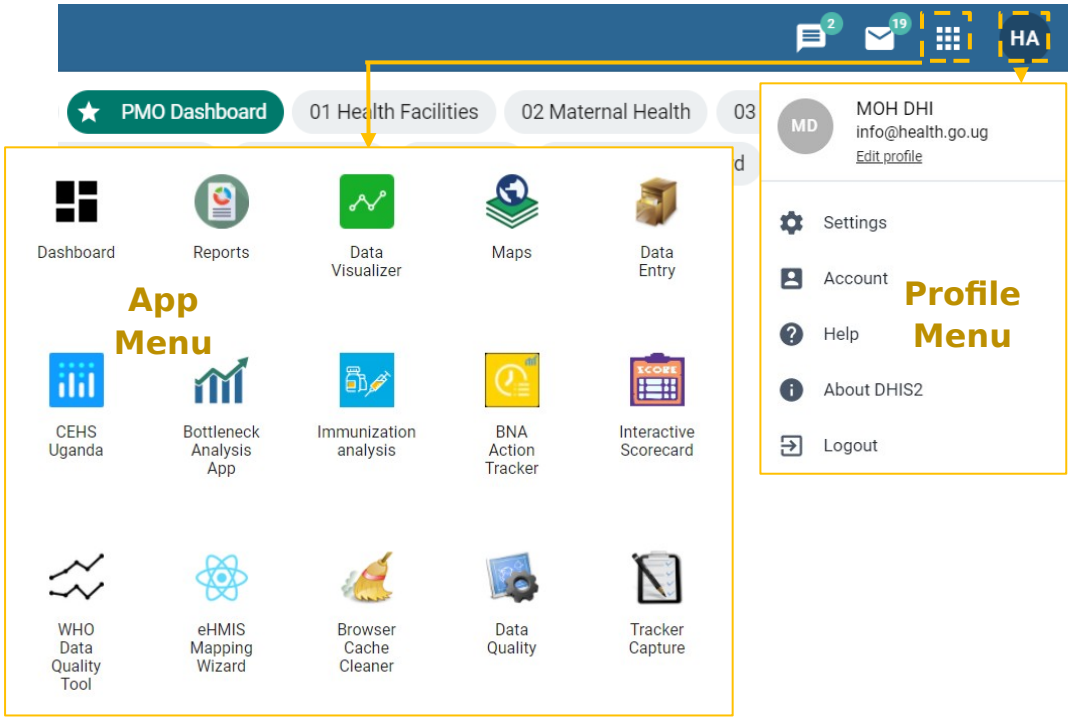
The homepage is your gateway to DHIS 2. It includes the means to navigate to different areas, primarily through the '**Apps**' and '**Profile**' menus on the top right; and it contains the dashboard with options to search, add, manage and share.



MOH - Uganda

Data / Period	2015	2016	2017	2018	2019	2020	2021
105-OA01. New attendance	19,600,611	40,574,454	42,114,784	35,305,278	40,702,284	33,652,953	24,594,798
105-OA02. Re-attendance	2,127,476	3,983,241	3,833,871	3,939,365	3,813,756	2,415,782	2,458,192
105-OR01. Referrals to unit	114,689	231,647	241,460	236,440	244,087	151,915	113,559
105-OR02. Referrals from unit	123,571	255,638	244,773	223,743	440,984	196,880	142,460
105-EP01a. Suspected fever						19,521,094	14,027,206
105-EP01b. Malaria Total	6,820,590	15,872,433	14,446,718	9,428,308	13,711,724	12,208,401	7,368,448
105-EP01c. Malaria Confirmed (B/s and RDT Positive)	9,298,864	16,729,169	10,240,563	7,378,157	12,421,932	11,293,036	6,925,417
105-EP01d. Malaria cases treated						13,168,666	7,033,373
105-EP02. Acute Flaccid Paralysis	434	634	881	519	580	11,400	5,145
105-EP03. Animal Bites (suspected rabies)	5,380	12,500	14,132	14,599	15,690	13,244	9,498
105-EP04. Cholera	950	2,439	1,070	2,978	907	1,615	477
105-EP05. Dysentery	47,212	78,820	74,230	62,702	99,843	37,387	28,600
105-EP06. Guinea Worm	55,422	77,758	31,375	10,947	17,273	910	633
105-EP07. Measles	44,670	67,924	44,173	70,397	116,357	6,238	2,891
105-EP08. Bacterial Meningitis	1,634	2,863	2,352	1,912	3,460	1,053	1,137
105-EP09. Neonatal tetanus	39	49	56	37	36	65	41
105-EP10. Plague	242	138	464	86	442	27	20

DHIS2 Apps and Profile Menu



App Menu

This comprises Applications (Apps) that are used for customizing the system, maintaining the system, data capture, data analysis and communication. However, the end users of the National eHMIS Data Repository will only interact with the following Apps:

Data Analysis Apps:

- Dashboard – Visual display for selected, analyzed key performance indicators (KPI)
- Reports – Pre-built reports like dataset reports or reporting rates from aggregated data
- Data Visualizer – Analysis with tables/charts like column or pie chart for aggregated data
- Maps – Geospatial analysis for both aggregated and non-aggregated data
- Data Quality –

Customized Data Analysis Apps:

- CEHS Uganda –
- Bottleneck Analysis App –
- Immunization Analysis –
- BNA Action Tracker -
- Interactive Scorecard –
- WHO Data Quality Tool –

System Maintenance Apps:

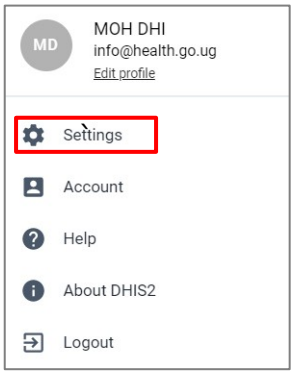
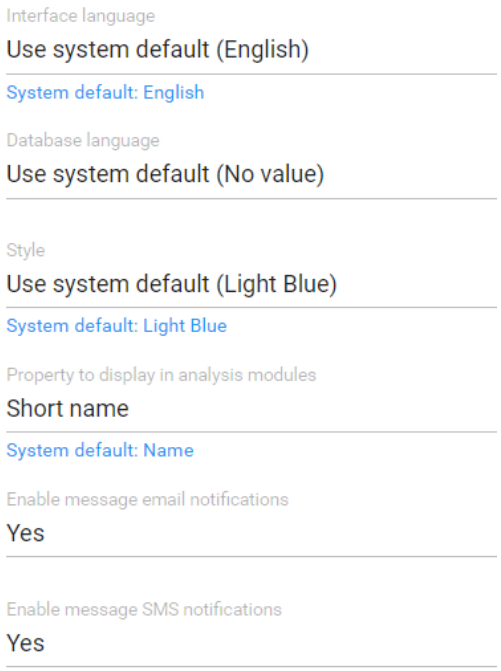
- Browser Cache Cleaner – Updating the system with latest changes (Metadata)
- eHMIS Mapping Wizard –

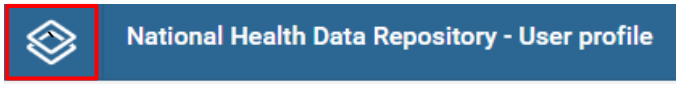
Profile Menu

This profile menu enables you to change the user settings, profile and password.

The **Settings** allows you to change the configuration settings, such as the language (English) and appearance of your user account in the National eHMIS Data Repository. Follow the steps below to edit your user profile settings.

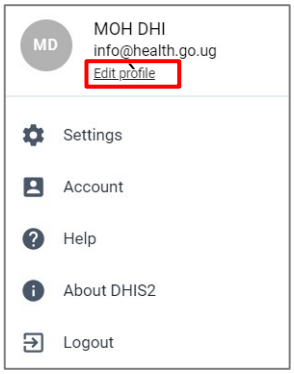
Job Aid 1-1: Changing User Settings:

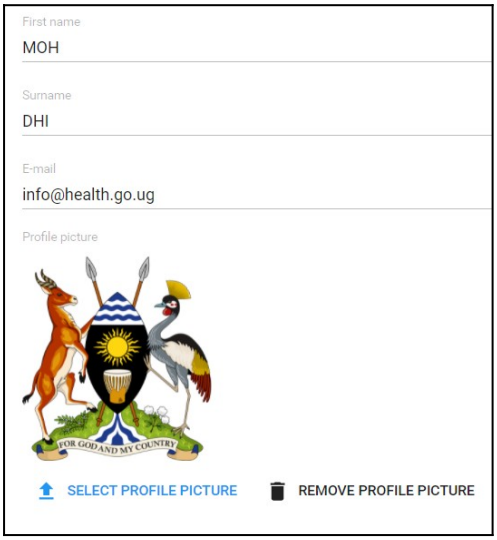
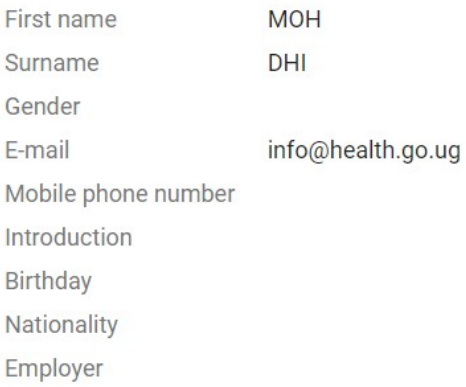
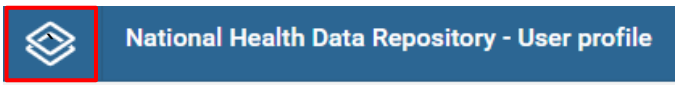
1. From the '**Profile**' menu, click the **Settings** link. Alternatively, from the profile menu, click the '**Edit user settings**' link.	
2. Select your desired options from the drop-down menus, for each of the settings: *The **language** can be left to the default (**English**) for both the user interface and the meta-data, such as the names of the data elements, indicators and organization unit.* *Set '**Short name**' in the **Property to display in analysis modules** dropdown menu to make the analysis screen easier to see.* *Also set '**Yes**' to the properties for enabling message email*	

notifications and SMS notifications if you want to receive them from the system. *All changes are saved automatically.*	
3. When you have finished, click the '**DHIS** link to return to the homepage	

The '**Profile**' function allows you to update your user profile details such as email, contact number, employer, education and more. Follow the steps below to edit your profile.

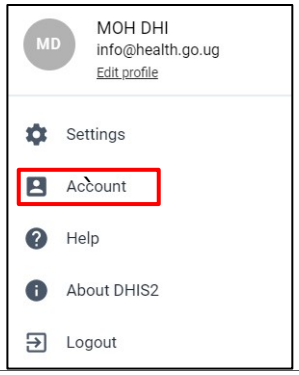
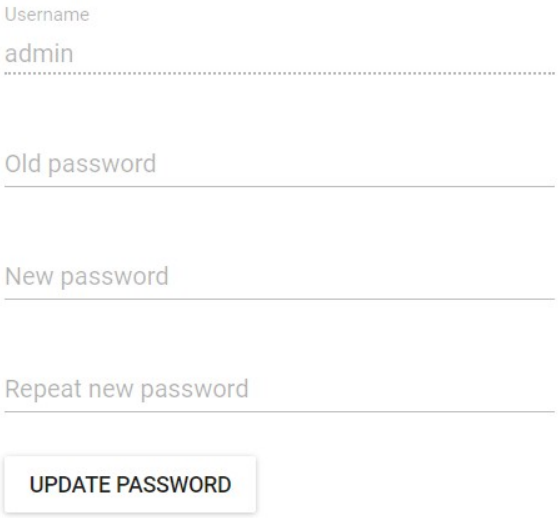
Job Aid 1-2: Changing User Profile:

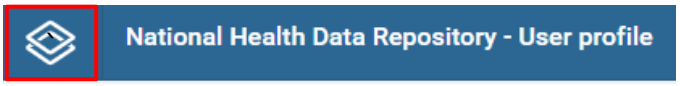
1. From the '**Profile**' menu, click the **Edit profile** link. Alternatively, from the profile menu, click the '**Edit user profile**' link.	

2. Complete the user profile fields with the required information. **Note: *email*** and ***phone number*** are the most important. The Phone number should start with the country code, but WITHOUT the plus (+) sign at the beginning i.e. (**256…**) *Besides what is displayed, other fields that follow the* ***Job title*** *include* ***Gender***, ***Birthday***, ***Nationality***, ***Employer***, ***Education***, ***Interests*** *and* ***Languages***. *All changes are saved automatically.*	
3. After capturing the user profile information, click on the '**View full profile**' menu option to see all the information.	
4. When you have finished, click the '**DHIS** link to return to the homepage	

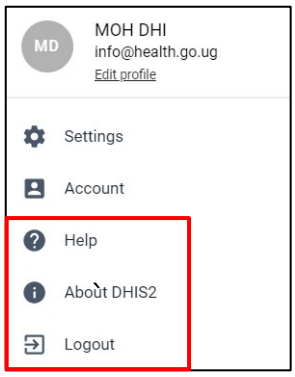
The ‘**Account settings**’ allows you to change your password. You can update your email and phone numbers on this page too. Follow the steps below to change your password:

Job Aid 1-3: Changing User Account Password

1. From the ‘**Profile**’ menu, click the **Account** link. Alternatively, from the profile menu, click the ‘**Edit account settings**’ link.	
2. Type in your old (current) password once, and your new password twice. **Note:** Your new password must contain: ● At least one **capital letter**, ● Atleast one **symbol** ● Atleast one **number**. The new password cannot be any of the previous three (3) passwords, it must also be from **8** to **35 characters long**. *After entering the new password, click ‘**UPDATE PASSWORD**’ for the change to take effect. If successful, you should see the prompt, ‘**Your password was updated successfully**’*	

3. When you have finished, click the '**DHIS** link to return to the homepage	

Other 'Profile' Options



The '**Profile**' menu also enables you to:

- **Help -** Visit the DHIS 2 Help Center.
- **About DHIS2 -** View the DHIS2 version information
- **Logout:** Log out of National eHMIS Data Repository

Chapter 3: DHIS2 Core Metadata Configurations

In this section you will learn about the fundamental principles of DHIS 2; including key dimensions, organization hierarchy, data structure and common terms.

The Building Blocks of DHIS2

DHIS 2 operates by bringing together five (5) main dimensions with regards to data.

- **What:** This is the data you are capturing, or put another way, the question being asked and measured. It is captured in the form of **Data Elements** and **Indicators.**

- **Where:** Also called the **Organization Unit hierarchy**, this is the geographic location(s) at which data is collected.

- **When:** The **period** (frequency) at which data is captured.

- **Who:** The **Users** capturing and analyzing the data.
    - **User Roles** define what a user can do in the system.
    - **User Groups** are groupings of specific users for ease of information sharing
    - **Users** have details like passwords and are assigned to specific Organization Units (OU's) for data entry and analysis, are assigned roles for various permissions and are allocated a group for sharing information.

- **Why:** The very reason data is being collected… **Reporting and Analysis.**

Data Elements

- Data Elements represent the ***what*** dimension in DHIS 2.

- They explain what it is that is being collected or analyzed (raw data).

- They usually represent a count of something. For e.g., the number of attendees at a meeting.

- Data Elements can, however, be more than a simple count. They can have different value types: **Numbers, Text, Dates, Yes/No**
    - Numbers can be further broken down into number types: **Integer** (both **positive** and **negative**), **Zero or positive integer**, Number (allowing **decimals**).

- Data Elements can be further disaggregated into **Categories**. However, this is best described using an illustration.

Table 2-1: DHIS2 Category Model Illustration

Category Option	Age Options	< 5 years
		>= 5 years
	Gender Options	Male
		Female
Category	Age	<5 years >=5 years
	Gender	Male Female
Category Combination	Age and Gender	Male, <5 years Male, >=5 years Female, <5 years Female, >=5 years

Indicators

· In DHIS 2, an indicator is calculated using data elements. It is an instant form of analysis.

- ***Note:*** *this is a slightly different meaning to 'indicators' as used in the M&E world.*

· An indicator represents a formula/calculation made up from data elements. They can provide **coverage rates**, **incidence rates**, **attendance ratios**, **percentages** and other formula-based units of analysis.

- An indicator is made up of a factor (e.g., 1, 100, 1000, 10,000, etc.); as well as a numerator and a denominator. For e.g., the Indicator: "% **Institutional deliveries**" would be calculated:

$$\frac{\text{Total Institutional deliveries}}{\text{Total Births}} \times 100$$

Where:

- "100" is the factor of the 'Percentage' also called the indicator type;
- "Total Institutional deliveries" is the numerator;
- And, "Total Births" is the denominator.

Organization Unit Hierarchy

· The Organization Unit (OU) hierarchy defines the structure of the MOH health facilities, and the administrative boundaries where they are located. The OU is used in data collection and analysis.

· An OU hierarchy in the National Health Data Repository consists of health facilities (e.g., NRH, RRH, DH, HCIV, HCIII and HCII) and geographical boundaries (e.g., country, region, district, and subcounty level in Uganda).

· The hierarchy is defined with one root unit (i.e., MOH - Uganda) and any number of levels/nodes below it.

· The OU Hierarchy is built upon parent-child relationships

a) MOH – Uganda; the national level the root/first parent, with 15 regions (children).
b) Each of the 15 regions (parents) is divided into the districts.
c) The districts are divided into sub counties.
d) And finally, the sub counties are divided by health facilities are at the lowest level.

Note: The example shown is taken from the National Health Data Repository, showing the '**Bukwo Town Council** health facilities, which is

also found in **Bukwo District**; which is also found in **Bugisu** region in Uganda.

- The hierarchy (geographic dimension) defines the way in which DHIS 2 will aggregate data.
- Each individual level/node within the hierarchy is called an **Organization Unit** (org unit).

- An Org Unit represents the ***where*** dimension in DHIS 2.

Data Sets

- A Data Set is a collection of data elements that are reported with the same frequency (period type i.e., Weekly or Monthly) by the same organization units.

- Data entry in DHIS 2 can be organized using Data Sets; which resembles the data collection form.

- A Data Set has a **Period** which controls the frequency of data collection and determines ***when*** data is collected. (green box).

The following are the datasets in the National Health Data Repository, for which analysis can be done.

Table 3-1: Datasets in the DHIS2 System

Directorate/ Department	**Frequency**	**Data Capture Form**
DDI CEHS datasets	Yearly	DDI CEHS Annual District Population Report
	Monthly	DDI CEHS Monthly dataset
HMIS 033b – Weekly Epidemiological Surveillance Report	Weekly	HMIS 033b - Weekly Epidemiological Surveillance Report
HMIS 097b - VHT/ICCM	Quarterly	HMIS 097b - VHT/ICCM Quarterly Report

Quarterly Report		
HMIS 104 - NTDS MDA Implementation Report	Monthly	HMIS 104 - NTDS MDA Implementation Report
HMIS 105 - OPD Monthly Report	Monthly	HMIS 105:01 - OPD Monthly Report (Attendance, Referrals, Conditions, Nutrition)
	Monthly	HMIS 105:02-03 - OPD Monthly Report (MCH, FP, EID, EPI & HEPB)
	Monthly	HMIS 105:04-05 - OPD Monthly Report (HTS & SMC)
	Monthly	HMIS 105:06-09 - OPD Monthly Report (Supplies, Outreaches & Supervision, Finances)
	Monthly	HMIS 105:10 - OPD Monthly Report (Lab)
HMIS 106a: HIV Quarterly Report	Quarterly	HMIS 106a:01-02 - HIV Quarterly Report
	Quarterly	HMIS 106a:03 - TB/Leprosy Quarterly Report
	Quarterly	HMIS 106a:04 - Lab Quarterly Report
HMIS 107 - Health Unit Population Report	Financial year (July)	HMIS 107 - Health Unit Population and Annual Report
	Yearly	HMIS 107a - Subcounty Annual Population Projection Report
	Yearly	HMIS 107c - Health Facility Human Resource Inventory
HMIS 108 - IPD Monthly Report	Monthly	HMIS 108 - IPD Monthly Report

Groups and Group Sets

· Groups are used in DHIS2 to organize entities (such as data elements, category options, indicators and organization units), by allowing those with common attributes to be added to the same group.

· The most common application is the grouping of data elements or Indicators by program area such as Surveillance, Mental Health, Maternal and Child health, etc.

Table 2-2: Illustration of DHIS2 Group and Group Set

Entity Type	Entity	Group	Group Set
Data Elements	Janitor Salary	Support Staff Salaries	Staff Salaries
	Driver Salary		
	Guard Salary		
	Nurse Salary	Core Staff Salaries	
	Doctor Salary		
	Surgeon Salary		
Organisation Units	Gulu RHH	RRH	Facility Level
	Mbale RRH		
	Bushenyi HCIV	HCIV	
	Kitintale HCIV		
	Iganga Hospital	Government	Ownership
	Kamuli Hospital		
	Kisaasi COU HC III	PNFP	
	Amuria COU HC II		

· Groups ease selection of data during analysis by simply specifying the group.

· The Group Sets make it possible to analyze data for one group collectively and compare the results to those from another group.

Chapter 4: Data Integration Process

Chapter 4 Overview

This section describes the methodology that was adopted in the integration of the different data sources to manage the variation aspects in the metadata definition.

System Design Considerations for Data Migration

The 3 instances for integration were assigned the acronyms: L1, L2 and CT to easily reference them in the integration process. The meaning of each is shown in the table below.

Database Instance	Start Period	End Period
Legacy 1 (L1)	July 2011	June 2015
Legacy 2 (L2)	July 2015	December 2019
Current (CT)	January 2020	Ongoing

The following are the possible scenarios for data element and corresponding category options (COs).

No	Possible Scenarios	Actions
1	Data Elements in only L1	L1 data element adopted
2	Data Elements in only L2	L2 data element adopted
3	Data Elements in only L3	L3 data element adopted
4	Data Elements in L1 and L2 with same Category Options (COs)	L2 data element adopted with COs
5	Data Elements in L1 and L2 with different COs	L2 data element created with Union of COs
6	Data Elements in L1 and L3 with same COs	L3 data element adopted
7	Data Elements in L1 and L3 with different COs	L3 data element created with Union of COs
8	Data Elements in L2 and L3 with same COs	L3 data element adopted
9	Data Elements in L2 and L3 with different COs	L3 data element created with Union of COs
10	Data Elements in in L1, L2 and L3 with same COs	L3 data element adopted
11	Data Elements in L1, L2 and L3 with different COs	L3 data element created with Union of COs

1 2	Data Elements with different disaggregation; where one or two DEs has no disaggregation in any of the instance	An **Uncategorised** CO was created and added to the Union of COs from the different instances. E.g., **Uncategorised_sex**, or **Uncategorised_age**
1 3	Data Elements without any disaggregation in all of the instances	Data Element was adopted with the **default** CO (Total)

Chapter 5: Data Analysis

Chapter 5 Description

In this section you will learn about the three (3) main DHIS2 Analytical Apps tools which include the Pivot Table, Data Visualizer and GIS (Maps). Furthermore, you will also be introduced to the dashboards where all the created visualizations can be displayed. The last section will be about the Interpretations.

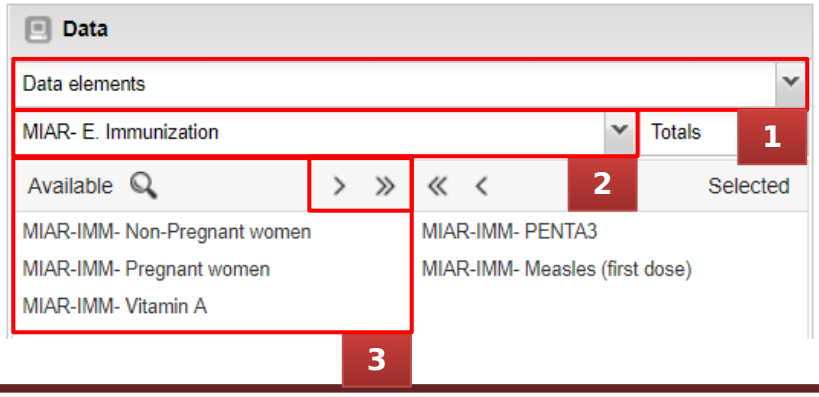
Dimensions in DHIS2 Data Analysis

The following are the dimensions which can be used to analyze data in the National eHMIS Data Repository:

- Data (**WHAT**) - Representing the Data elements, indicators and events
- Period (**WHEN**)- Representing the time period for the data
- Organization unit (**WHERE**) - Representing the geographical location of the data
- **Dynamic** dimensions – These are derived from the core dimensions and include **Data Element group set** and **Organization Unit group set** (i.e., the '**Facility Type'** which is broken down into the Sub Health Centre (SHC), Mobile Health Team (MHT), Basic Health Centre (BHC), Comprehensive Health Centre (CHC), District Hospital, Provincial Hospital (PH) and the Regional Hospital (RH)). Another dynamic dimension is the **Category** such as the '**Grant**' is an additional analysis dimension, also allowing for analysis by **Implementing Partner**, **Program** and **Donor**.

Data Dimension

The data dimension in data entry refers to what is being collected, in analytics, it refers to what you want to analyze. There are 3 steps in selecting the data dimension.



Job Aid 6-1-1: Selection of a Data Dimension for Analysis

STEP 1: Selection from the five (5) data dimension TYPES which are described in detail in Table 6-1. They Include: Indicators, Data Elements, Data Sets, Event Data Items and Program Indicators.

Table 6-1: Data Dimension Types

Data dimension type	Definition	Examples
Indicators	An indicator is a calculated formula based on data elements.	% Institutional Deliveries
Data elements	Represents the phenomenon for which data has been captured.	PENTA3
Data sets	A collection of data elements grouped for data collection. You can select: **Reporting rates**: the percentage of actual reports compared to the expected number of reports **Reporting rates on time**: the reporting rates based on timely form submissions. A timely submission must happen within a number of days after the reporting period. **Actual reports**: the actual number of reports **Actual reports rates on time**: the actual number of reports based on timely form submissions. A timely submission must happen within a number of days after the reporting period. **Expected reports**: the number of expected reports based on organization units where the data set, and the reporting frequency has been assigned.	Reporting rates for immunization and morbidity forms.
Event data items	A data element that is part of a program representing events that have been captured.	Test results
Program indicators	A calculated formula based on data elements in a program representing events.	

STEP 2: The second step is dependent on the selection of the data dimension **TYPE** in the first step. For:

- **Data Element** or **Indicators** – You will have to select a '**Group**' with the respective items. It should be noted that the data elements groups names are similar to the sections where the variables are found in the hard copy form. I.e.

'**PENTA3**' in the '**MIAR- E. Immunization**' data element group, and '**% Institutional Deliveries**' in the '**HMIS- Maternal Health**' Indicator group.

- **Dataset** – You will select one of the definitions for the dataset as shown in Table 6-1.
- **Event Data Items** or **Program Indicators** - You will be required to select the '**Program**' with the data items or indicators you want to see. i.e. '**Test results**' from the '**Line list**' program.

STEP 3: The last step is also dependent on the selection made in Step 1:

- **Data Element -** Select the data element i.e. '**PENTA3**'.
- **Indicators** – Select the Indicator i.e. '**% Institutional Deliveries**'.
- **Dataset** – Select the dataset for which you want to see the reporting rates or reports.
- **Event Data Items** – Select the program data item (program attributes or data elements).
- **Program Indicators** – Select the program indicator.

Period Dimension

The Period dimension refers to the period of interest for the data to be analyzed. The period in Analytics is either a fixed period or a relative period.

Fixed Period: When a report is created usi report is generated, the data values will be for the period that was selected at the time the report was created. An example of a fixed period is "January 2019". Fixed Period are useful for creating adhoc reports and mixing different reporting periods.

Relative Period: When a report is created using a 'Relative period', then, each time the report is generated, the data values will be for the period, relative to the current date in the system, following the selected reporting period parameter. An example of a relative period is "Last 3 months". Relative periods are ideal when the report will be saved to the dashboard to always reference the most recent data.

Figure 7-1-2: Period Dimension

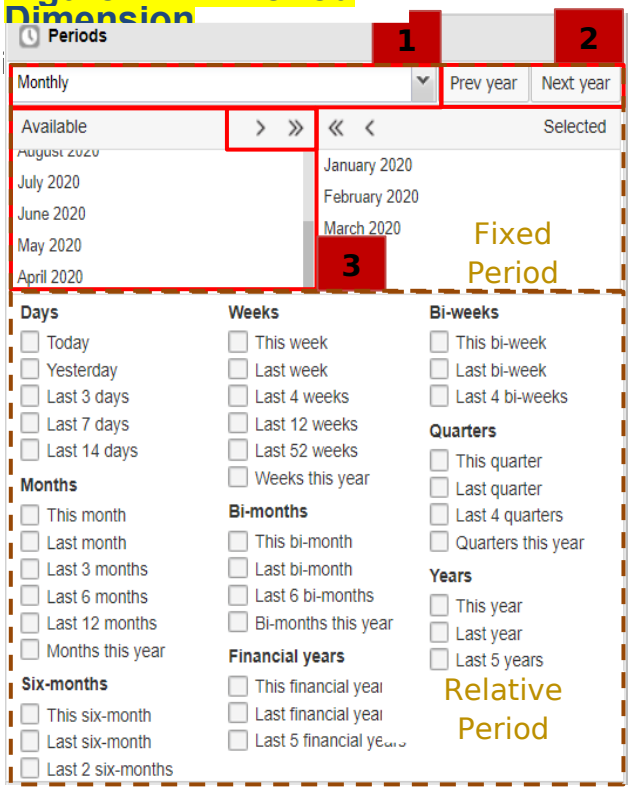


Table 6-1-2: Fixed Period Types

Fixed Periods		
Period Types	**Example**	**Comments**
Daily	2019-04-01	
Weekly	Week 14 - 2019-04-01 - 2019-04-07	Monday – Sunday
Bi-Weekly	Bi-Week 8 - 2019-04-08 - 2019-04-21	Monday (wk2) – Sunday (wk4)
Weekly (Start Wednesday)		N/A in Uganda
Weekly (Start Thursday)		N/A in Uganda
Weekly (Start Saturday)		N/A in Uganda
Weekly (Start Sunday)	Week 14 - 2019-03-31 – 2019-04-06	Default Epi Week for Uganda
Monthly	April 2019	
Bi-monthly	March - April 2019	
Quarterly	April - June 2019	
Six-monthly	January – June 2019	
Six-Monthly April	April – September 2019	
Yearly	2019	
Financial year (Start October)	October 2018 – September 2019	
Financial year (Start July)		N/A in Uganda
Financial year (Start April)		N/A in Uganda

Job Aid 6-1-2: Selection of Fixed Period Types for Analysis

STEP 1: Select the '**Period Type**' as shown in Figure 6-1-1, for the period dimension.

STEP 2: Use the '**Prev Year**' or '**Next Year**' to navigate between the years for the selected period type.

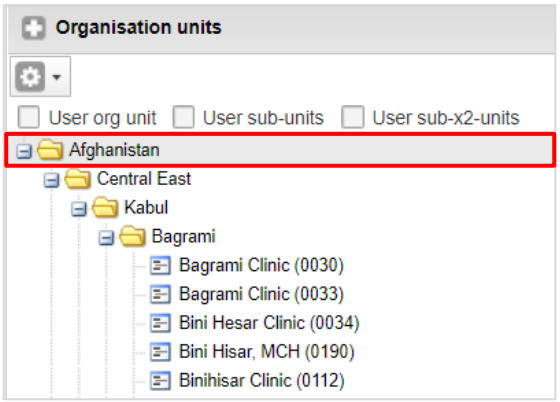
STEP 3: Move the fixed period from the '**Available**' side to the '**Selected**' side on the Right.

Organization Unit Dimension

The Organization Unit dimension, which is also abbreviated as the Org unit dimension refers to the geographical location for the data that you want to analyze.

User Organization Unit for Analysis

- It is the level in the org unit hierarchy that the user has been assigned for data output and analysis
- It is the highest level that the use can see in the org unit hierarchy.
- It controls the level of information that can be accessed by the user.

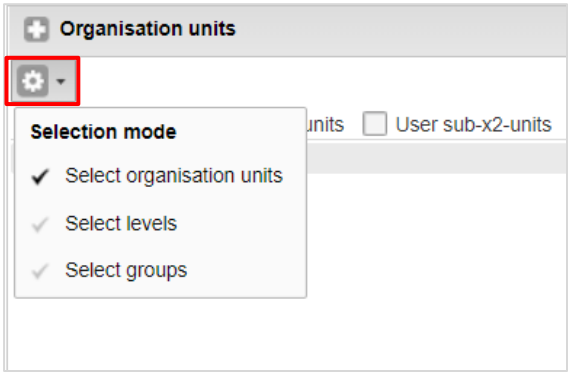


TIP: When an organisation unit such as **Herat Province** is selected in analysis, all the data for the org units below Herat Province in that org unit hierarchy (i.e. districts and

Selection of Organization Units for Analysis

The selection of an org unit in data analysis is controlled by the organization unit selection mode.

- The org unit selection mode can be accessed in the '**Organization units**' panel, using the '**Gear**' icon dropdown menu.
- It specifies criteria for selection of the org units during analysis using three (3) modes which include:
  - Select by organisation units (**Default**)
  - Select by level
  - Select by groups



Using the 'select organisation units' mode implies that only the selected organisation units and their children will be included in the analysis.

Chapter : Dashboard

Chapter 7 Overview

In this section you will learn about the DHIS2 Dashboard app in the National eHMIS Data Repository.

The DHIS2 allows you to capture and report specific data points from each department within the organization, thus providing a "snapshot" of performance using graphical tools. The dashboard in the National eHMIS Data Repository will support program managers and the senior leadership in the MoH to monitor the progress of the health service delivery system, through the data that is captured, analyzed and presented.

The DHIS2 dashboard app is the default page for any user that logs into the system. It comprises of analyzed data presented in tabular, graphical and map formats. The dashboard also supports links to websites and resources like documents to be added to the dashboard. Furthermore, messages, and text items can also be included on the dashboard.

Dashboards in the National eHMIS Data Repository

There are a number of dashboards that have been created in the National eHMIS Data Repository. Some of these are program dashboard, displaying information related to the program, while others simply display analyzed data from specific data collection forms.

Managing the Dashboard

Dashboards are intended to provide quick access to different analytical objects (maps, charts, reports, tables, etc.) to an individual user or group of users. Dashboards have a title, description, and any number of dashboard items.

Features of the Dashboard

- Above the dashboard is the **control bar**, which shows all your available dashboards, including a dashboard search field, and the button for creating a new dashboard.
- You can set a specific height for the dashboards control bar by down-clicking and dragging the bottom edge of the control bar. Clicking on SHOW MORE will expand the control bar to its maximum height (10 “rows”). Clicking on SHOW LESS will reset the height to your customized height.
- The Dashboard have two modes which include View and Edit/ Create.
- When you first log in to DHIS2, your most recently used dashboard will be displayed in the **View mode**, if you are on the same computer as you were previously.
- If you are using a different computer, then the first **starred dashboard** will be displayed. if there are no starred dashboards, then the first dashboard will be displayed. Starred dashboards always show first in the dashboard list.
- The screenshot above shows a dashboard called ‘Child Health’, which has been populated with charts and maps.
- You can search for a specific dashboard using the **search** field in the upper left of the control bar entitled ‘**Search for a dashboard**’. The search is case insensitive, and as you type, the list of dashboards will filter down to those that match your search text.

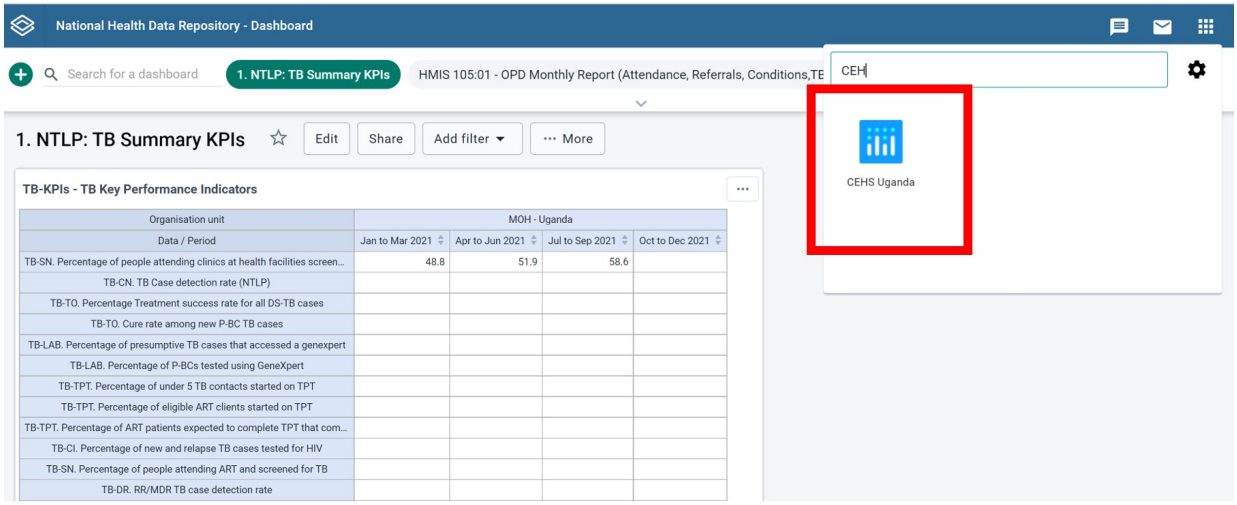
Chapter 8: CEHS Uganda App

Description

The Continuity of Essential Health Services Uganda application (CEHS Uganda app) supports data analytics and strengthening community health information systems with visualizations that are developed after rigorous analysis of data. The CEHS Uganda app consists of a data layer, a logic layer, and a visualization layer. It includes statistical analysis of the distribution of the data at the health facility level to enable users to visualize the data excluding outliers.

Accessing the Bottleneck Analysis application

1. While logged into the eHMIS repository, navigate to the DHIS2 applications menu
2. Search for the Bottleneck Analysis application
3. Click on it to open



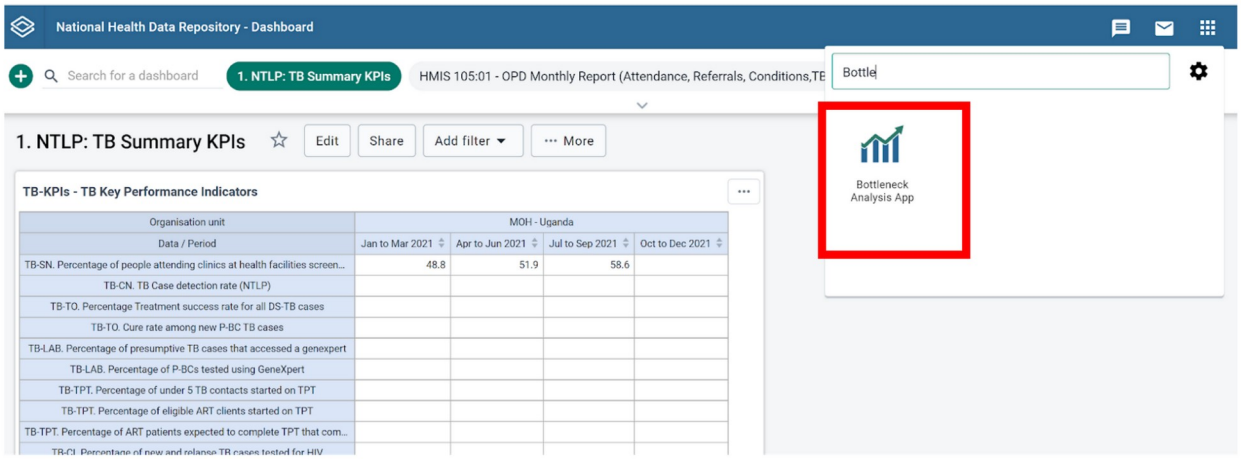
Chapter 9: Bottleneck Analysis App(BNA)

Description

Bottleneck analysis (BNA) is a structured analysis of the determinants of coverage for a wide range of interventions delivered through the health sector, useful to supporting targeted operational planning. It is a systematic, outcome-based approach to equitable health programming and real-time monitoring that strengthens the health system, complementing and building on what exists.

Accessing the Bottleneck Analysis application

4. While logged into the eHMIS repository, navigate to the DHIS2 applications menu
5. Search for the Bottleneck Analysis application
6. Click on it to open



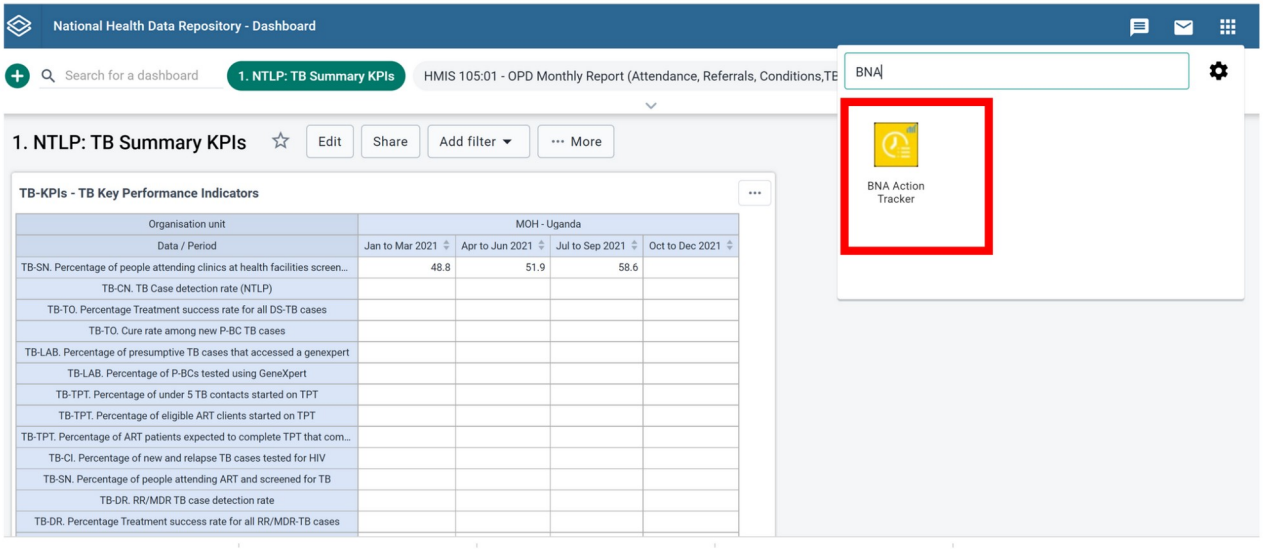
For more information on the Bottleneck Analysis Application, please visit;
https://docs.dhis2.org/en/use/optional-apps/bottleneck-analysis-app/app-version-122/introduction-and-usage/dashboard-and-demo.html

Chapter 10: BNA Action Tracker App

Description

Accessing the BNA tracker application

1. While logged into the eHMIS repository, navigate to the DHIS2 applications menu
2. Search for the BNA application tracker
3. Click on it to open



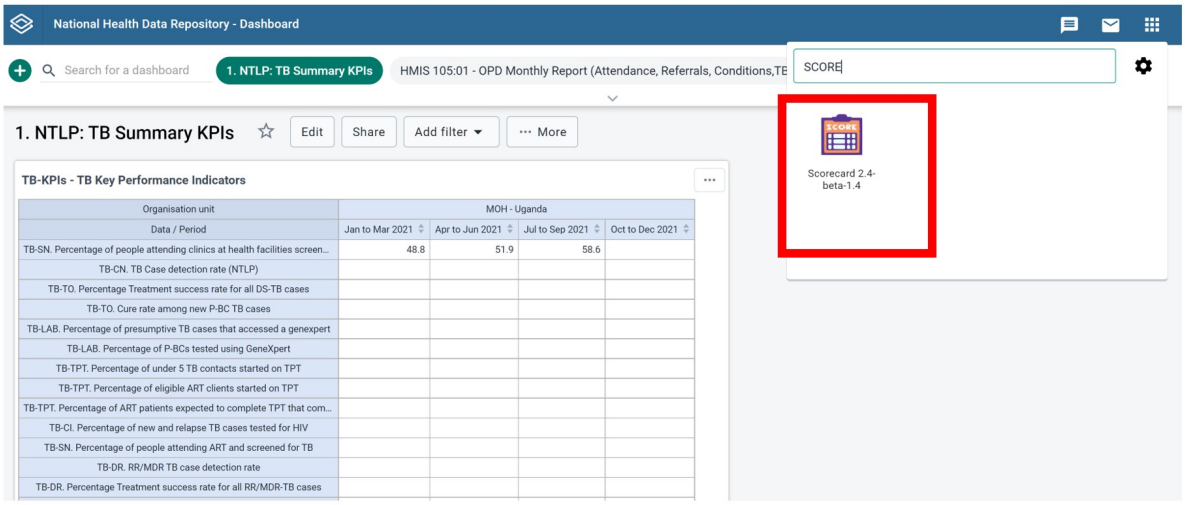
Interactive Scorecard Application

Description

A scorecard provides an overall view of the performance of a health program within the Ministry of Health highlighting successes, weaknesses, and areas for improvement. The interactive scorecard application gives an opportunity to cascade analysis by including bottleneck indicators in the scorecard dashboard as well as analyzing the data with a broad spectrum of visualization tools, such as pivot table, charts and maps.

Accessing the Interactive Scorecard application

1. While logged into the eHMIS repository, navigate to the DHIS2 applications menu
2. Search for the Interactive Scorecard application
3. Click on it to open



For more information on the Interactive Scorecard application, visit;
https://docs.dhis2.org/en/full/use/optional-apps/interactive-scorecard-ap-manual.html

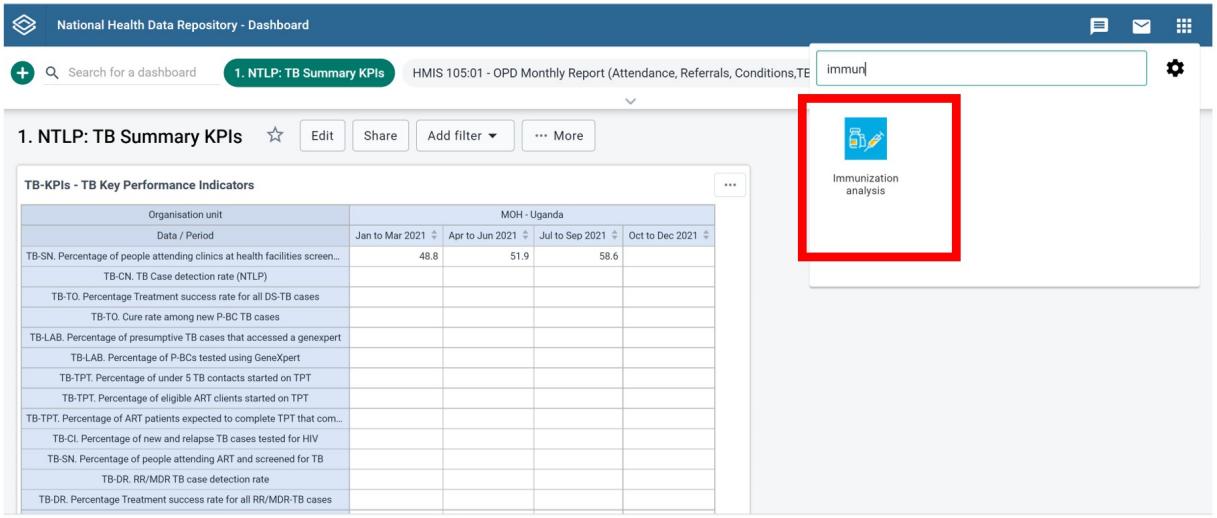
Immunization Analysis App

Description

This application provides enhanced data visualizations to support the analysis and use of WHO-EPI programme data.

Accessing the Immunization Analysis application

1. While logged into the eHMIS repository, navigate to the DHIS2 applications menu
2. Search for the Immunization Analysis application
3. Click on it to open



For more information on the working of the Immunization Analysis application, visit; https://dhis2.org/immunization/

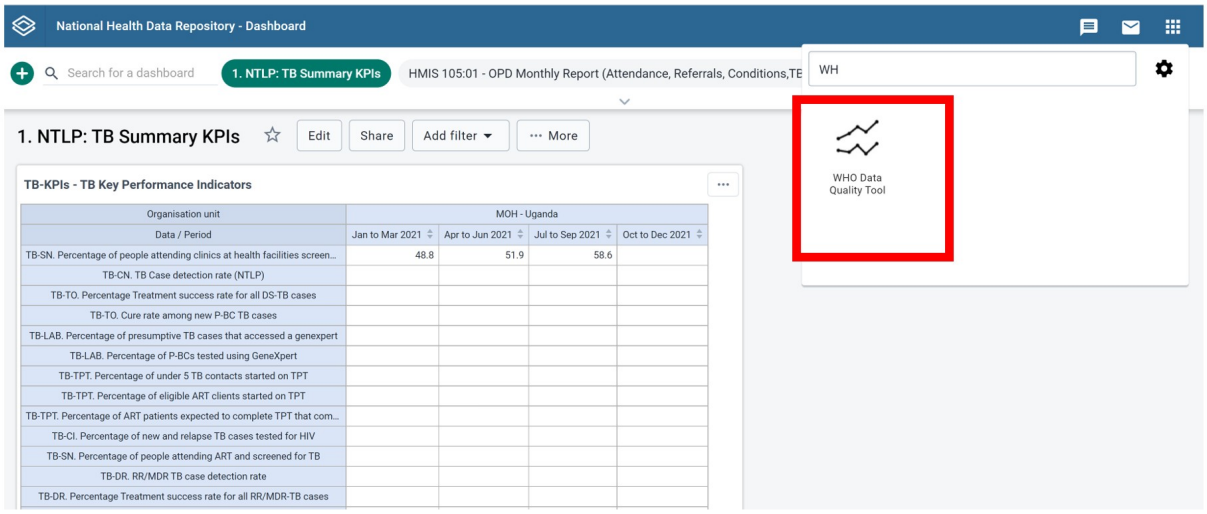
Data Quality Application

Description

The Data Quality Tool is a contribution to a practical approach for improvement of HMIS data quality. By using the Data Quality Tool, potential errors in the data are identified. This knowledge can then be used to take appropriate action for improving data quality. In many cases, this will be to either edit the data or to improve the data collection system. The implementation of modern statistical methods and technology–such as the Data Quality Tool for DHIS2–is an important factor in achieving good quality in data and statistics.

Accessing the Immunization Analysis application

1. While logged into the eHMIS repository, navigate to the DHIS2 applications menu
2. Search for the Data Quality application
3. Click on it to open



For more information on use of the Data Quality application, follow;

https://github.com/pamod-dev/dhis2-doc-support/blob/master/docs/en/dq-use.md