

webDHIS v2.38

User Manual



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Health Information Systems Program (HISP) has been accredited as an Education and Training provider with the Health and Welfare SETA (HWSETA). The accreditation number is:

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The HISP Team has designed this manual. Suggestions and contributions are welcome.

For further information about HISP Courses, please get in touch with us at elarning@hisp.org or go to www.hisp.org.

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This product is acknowledged by NDoH as part of the training material for webDHIS courses.

It is important to note that the data does not represent the current state of affairs and cannot be used for reporting. Data is included for illustration purposes only.

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About This Manual

Welcome to the webDHIS v2.38 User Manual. DHIS stands for District Health Information Software.

Objectives

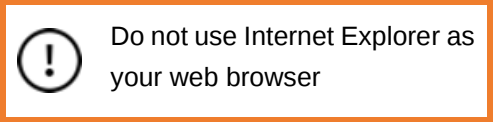
We've written this manual to help you learn the basics of webDHIS, one of the most popular Health Information Software packages across Africa. You may have used previous versions, such as the DHIS1.4, which will help with your learning. However, don't worry if this is your first time, as this manual will cover all the basics you need. The objectives of the manual are to:

- Describe the key features of webDHIS, key terms and the information cycle.
- Explain the difference between aggregated and patient-based data.
- Explain how to login to webDHIS database and manage your user profile.
- Introduce the metadata and data model used in a webDHIS database.
- Demonstrate how to capture aggregate data using the Data Entry app.
- Explain the importance of data quality and methods to improve it.
- Demonstrate how to use the data quality functionality to run analyses on your data.
- Demonstrate how to use the reporting functionality to generate reports and create analytical objects that can be added to your own dashboard.
- Explain how to manage messages in webDHIS.

Each chapter has key objectives listed at the beginning and is broken into sections and subsections. The key objectives will help you check if you understand all the areas covered in the chapter.

Conventions

The conventions used throughout this document are explained in the table below:

Convention	Explanation
	This type of box indicates a comment.
	This type of box indicates caution or things to pay special attention to.
	Numbers on images are either: • steps that must be followed or • labels

Convention	Explanation
Note: Lastname is your Surname.	Notes give additional information.
TIP: Your password is CaSeSensitive.	Tips are in orange font. They are hints to help the user.
Save	Terms in black bold type indicate a button/option that can be clicked.
Series	Words in bold orange font indicate terminology.
"Measles 2 nd dose"	Terms in "quotation marks" indicate the name of something e.g. a window, a data entry field.
<i>"This value is too low"</i>	Text in <i>italics</i> indicates what the user must type.

Chapter 1. What is webDHIS?

After reading this chapter you will be able to:

- Describe the key features of webDHIS
- Explain the Information Cycle, its stages and the tools used at each stage
- Understand the difference between aggregate and patient data

1.1 Background

webDHIS is the name used in South Africa for DHIS2.

DHIS2 is an open source, web-based software platform for data collection, management, and analysis. DHIS2 is developed and maintained by the HISP Centre at the University of Oslo (UiO), Department of Informatics. Academic research has played a key role in the HISP movement since the original DHIS software was created as a research project on health information system strengthening in South Africa in the 1990s.

Today, DHIS2 is the world's largest Health Information Management System (HIMS) platform, in use by ministries of health in 76 low and middle-income countries.

3.2 billion people (40% of the world's population) live in countries where DHIS2 is used. With the inclusion of NGO-based programs, DHIS2 is in use in more than 100 countries.

For more about DHIS2, please go to <https://dhis2.org/in-action/>

Countries that have adopted DHIS2 as their nation-wide HIS software include Kenya, Tanzania, Uganda, Rwanda, Ghana, Liberia, and Bangladesh. A rapidly increasing number of countries and organisations are starting up new deployments, not only in the field of health, but other areas as well, like education and agriculture.

FOSS (free open-source software) makes the source code as well as the object code available. This means that users have the freedom to run the program for any purpose, redistribute, probe, adapt, learn from, customise the software to suit their needs, and release improvements to the public for the good of the community. FOSS applications like DHIS2 typically are supported by a global network of developers, and thus have access to cutting edge research and development knowledge.

1.2 Key Features

Some of the key features of webDHIS that you will cover on this course include:

- Can be easily customised and adapted to meet your needs.
- Can be used to capture both aggregate and patient data.
- Supports the idea of an integrated system, linking all levels of the health structure (facility, districts, national).
- Can produce summary reports using the design of the data collection tools.
- Provides data entry tools which can either be in the form of standard lists or tables or can be customised to replicate paper forms.
- Provides different kinds of tools for data validation and improvement of data quality.

- Allows flexible and dynamic (on-the-fly) data analysis in the analytics modules (i.e. Data Visualizer, Maps etc.)
- Contains a dashboard where you can set your favourite indicators, charts, tables, and maps.
- Has a user management module for passwords, security, and fine-grained access control (user roles).
- Enables messages to be sent to system users for feedback and notifications. Messages can also be delivered to email and SMS.
- Allows users can share and discuss their data in charts and reports using Interpretations, enabling an active information-driven user community.
- Provides for further modules to be developed and integrated as per user needs.

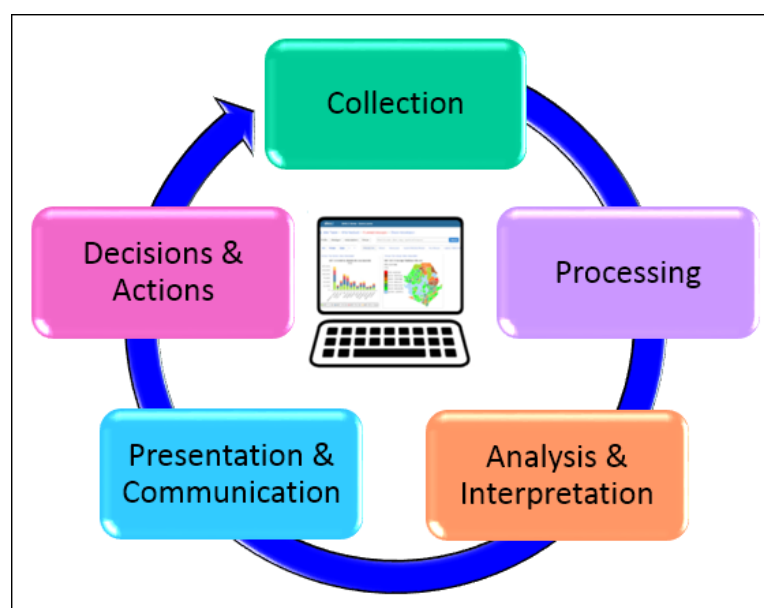
1.3 The Information Cycle

The wider context of a Health Information System (HIS) can be comprehensively described through the Health Information Cycle (see diagram).

The cycle describes the different components, stages and processes through which data is collected, checked for quality, processed, analysed, and used.

webDHIS supports the different facets of the information cycle including:

- Collecting data.
- Running quality checks.
- Accessing data at multiple levels.
- Producing reports.
- Making graphs and tables and other forms of analysis.
- Enabling comparison across time (for example, previous months).
- Enabling comparison across locations (for example, across facilities and districts).
- Seeing trends.



1.3.1 Collecting Data

webDHIS serves as a data collection, recording and compilation tool.

All types of data can be entered into it, be it in numbers or text.

Data entry can be done in lists of data elements, or in customised user-defined forms. Such forms can be developed to mimic paper-based forms to make the process of data entry easier.

1.3.2 Running Data Quality Checks

webDHIS can be used to increase data quality.

First, at the point of data entry, a check can be made to see if data falls within an acceptable range of minimum and maximum values for any particular data element. Such checks can, for example, help to identify typing errors at the time of data entry.

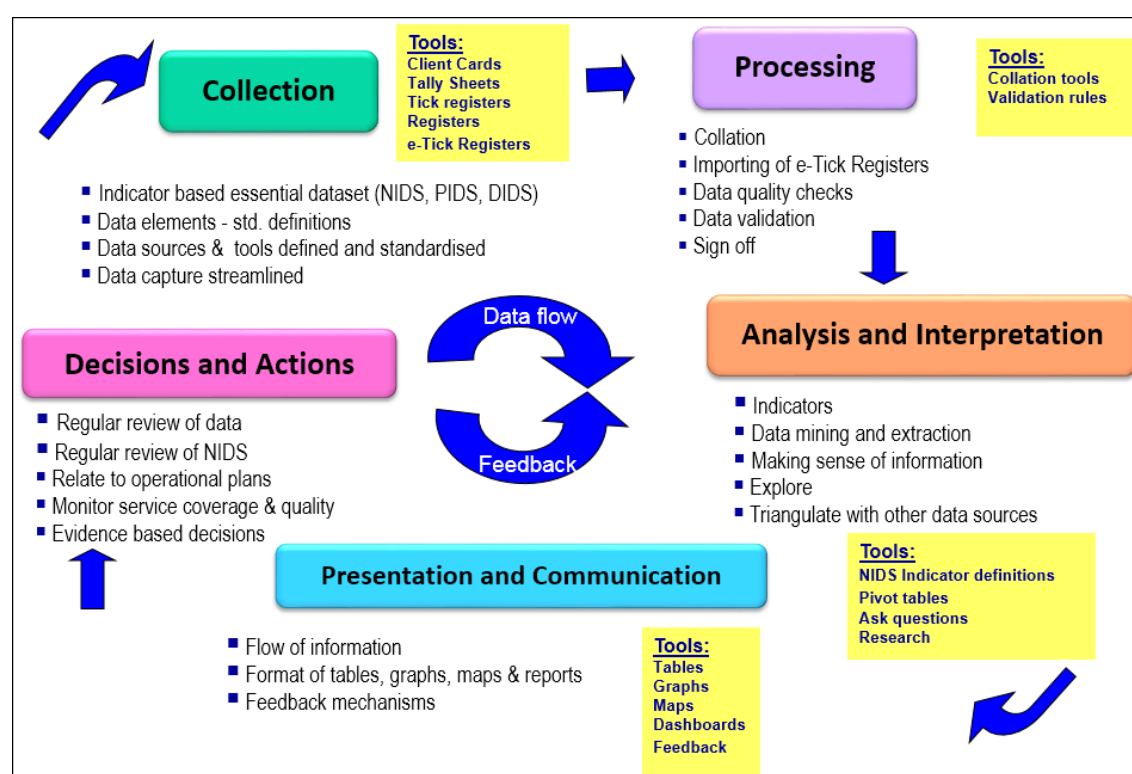
Further, the user can define various validation rules, and webDHIS can run the data through the validation rules to identify violations. These types of checks help to ensure that data entered into the system is of good quality from the start and can be improved by the people who are most familiar with it.

1.3.3 Analysis, Reports and Presentation

When data has been entered and verified, webDHIS can help to make different kinds of reports.

Graphs, maps, reports, and health profiles are among the outputs that webDHIS can produce, and these should routinely be created, analysed, and acted upon by health managers.

1.3.4 The Information Cycle



DATA COLLECTION

Data collection involves the source – where the data begins – and is the root of the whole process. Examples of data sources include training registers, patient hospital files and registration forms filled out by field workers:

- Indicator-based essential data sets determine what data needs to be collected (NIDS, PIDS, DIDS).
- Standard data element definitions ensure uniformity across the different facilities.
- Data sources and tools are defined and standardised.
- Data capture is streamlined. Electronic data capture forms should match the paper forms as closely as possible.

DATA PROCESSING

Data processing turns large amounts of raw data into usable and understandable information. Data processing includes:

- Collation / summarising i.e. bringing all the data together.
- Validation / data cleaning. This is the process of checking that data conforms to specifications. It is usually the first process undertaken on raw data. In other words, data validation deals with making sure the data is correct / of good quality and useful for evidence-based decision making.
- Aggregation.
- Sorting and classification.

DATA ANALYSIS & INTERPRETATION

Data analysis can be defined as the process of transforming raw data into useful information. Analysed data tells us:

- What impact our service delivery has on the health status of the community.
- Gives direction in decision making.
- Shows patterns and trends.

Interpretation is the action of explaining the meaning of something or demonstrating your own understanding of something or simply to make sense of information. The purpose of interpretation is to analyse performance and guide decision making and monitoring:

- Compare data - using the same data definitions and same indicators you can compare yourself to set standards, program goals and targets or compare your health services to other health services. How can you be more effective or efficient?
- Look for trends - Trends are a form of comparison over time.
- Use at least 6 months of data.
- Use local knowledge – Health data, service data and population data
- Ensure that data is of good quality – 3 Cs – Correct, Complete and Consistent.

PRESENTATION & COMMUNICATION

Presenting data allows for the information to be questioned and strengthened. Feedback is essential, not only at this stage in the cycle, but at all stages. Various tools are used to present and communicate data:

- Graphs, tables, and maps
- Dashboards:

- Everyday data visualisation
- Real-time monitoring
- Enables fast communication
- Tailored to your audience

DECISIONS & ACTIONS

- The information you have gathered, analysed, and reported is only useful if it is relevant and has a purpose.
- Every decision made, every action taken, and every change made should be guided by information.
- Information should be used to assess the community and facility needs and to plan, manage and monitor health services rendered.
- Management uses information to plan and monitor performance.

1.4 Aggregated, Patient & Anonymous Data in a Health Information System

1.4.1 Aggregated Data

Aggregated data is the consolidation of data relating to multiple patients, and therefore cannot be traced back to a specific patient. They are merely counts, such as incidences of Malaria, TB, or other diseases. Typically, the routine data that a health facility deals with is this kind of aggregated statistics and is used for the generation of routine reports and indicators, and most importantly, strategic planning within the health system. Aggregate data cannot provide the type of detailed information which patient level data can but is crucial for planning and guidance of the performance of health systems.

Security concerns for aggregated data are not as crucial as for patient data, as it is usually impossible to identify a particular person to an aggregate statistic. However, data can still be misused and misinterpreted by others, and should not be distributed without adequate data dissemination policies in place.

In webDHIS, aggregated data is collected through data sets using the “Data Entry” app. (This is covered in detail in the chapter on Data Entry).

1.4.2 Patient Data

Patient data refers to a patient whose progress we want to track over time. Although it is the more common usage, webDHIS can also track other things like specimens, doses, surveys, or a safety incident.

In the case of a patient, data relates to a single patient, such as his/her diagnosis, name, age, earlier medical history etc. This data is typically based on a single patient-health care worker interaction. For instance, when a patient visits a health care clinic, a variety of details may be recorded, such as the patient's temperature, their weight, and various blood tests. Should this patient be diagnosed as having

"Vitamin B 12 deficiency anaemia, unspecified" corresponding to ICD-10 code D51.9, this particular interaction might eventually get recorded as an instance of "Anaemia" in an aggregate based system.

Patient data is important when you want to track longitudinally the progress of a patient over time. For example, if we want to track how a patient is adhering to and responding to the process of TB treatment (typically taking place over 6-9 months), we will need patient-based data.

Patient data is highly confidential and therefore must be protected so that no one other than clinicians have access to it. In paper form, patient details must be properly stored in a secure place. Electronic patient data requires secure systems with passwords, restricted access, and audit logs.

In webDHIS, patient data is collected through programs of the type "with registration" using the "Tracker Capture" app. This allows you to capture several different events (also known as program stages) under one program e.g. the different visits made by a TB patient during his/her treatment.

1.4.3 Anonymous (case-based) Data

In between aggregate and patient data you have case-based data, or anonymous patient data. A lot of details can be collected about a specific health event without necessarily having to identify the patient it involved. Inpatient or outpatient visits, a new case of cholera, a maternal death etc. are common use-cases where one would like to collect a lot more detail than just adding to the total count of cases, or visits. This data is often collected in line-listing type of forms, or in more detailed audit forms.

It is different from aggregated data in the sense that it contains many details about a specific event, whereas the aggregate data would count how many events of a certain type, e.g. how many outpatient visits with principal diagnosis "Malaria", or how many maternal deaths where the deceased did not attend ANC, or how many cholera outbreaks for children under 5 years.

In webDHIS this data is collected through programs of the type "without registration" using the "Capture" app.

The following pictures may help you decide when to use Event Capture and when to use Tracker Capture:

Event Capture Single event without registration	Tracker Capture Multiple event with registration
	

This concludes Chapter 1 on the introduction. Chapter 2 covers getting started with webDHIS.

Chapter 2. Getting Started with webDHIS

After reading this chapter you will be able to:

- Access a webDHIS database.
- Register as a user on a webDHIS database.
- Navigate in webDHIS.
- Log in, update your user details, change your password, log out.
- Clear the browser cache.
- Explain the metadata/key concepts used in webDHIS.
- List and explain the 3 main data dimensions.

2.1 Access webDHIS

webDHIS is a web-based application and is accessed through a web browser such as Google Chrome or Mozilla Firefox when you have an Internet connection.



Do not use Internet Explorer as your web browser.

We recommend Google Chrome
Download the Google Chrome installer here:
[https:// www.google.com/chrome](https://www.google.com/chrome)

2.2 Register as a webDHIS User

2.2.1 Background

The purpose of this section is to describe the user registration process to ensure that webDHIS users are granted the correct and necessary permissions for the tasks which they are required to perform in the webDHIS. The webDHIS as an online system is vulnerable to actions performed by users. Therefore, until users are trained to perform certain tasks, access on production systems will be limited to the minimum permissions required for the user to perform the tasks required in his/her regular day-to-day job.

In webDHIS, access to functionality is controlled by creating an individual as a user in the system and then allocating specific user roles to the individual which controls:

- Access to log into the system with a confidential Username and Password.
- Access to functionality dependent on the permissions which are allocated to the user role/s which the user has access to.
- Access to data sets and/programs which are allocated to the user.
- Access to a certain level in the orgunit hierarchy for capturing and reporting.

(Note): Even if a user is not intended to capture data, a data entry orgunit must be allocated to the user as other functions such as data approval are also controlled by this allocation. If the

user is not required to capture any data, the lack of allocated data sets and capturing roles will prohibit the user from actually capturing any data).

2.2.2 Registration of Users in webDHIS systems

A webDHIS user with permissions to add other users can manually complete the user creation form and add a user to webDHIS. The rights of a user to certain permissions needs to be justified and approved. Therefore a “webDHIS Access – User Registration Form” was developed to be completed by each user to request access to each webDHIS system so that access can be approved before creation of usernames.

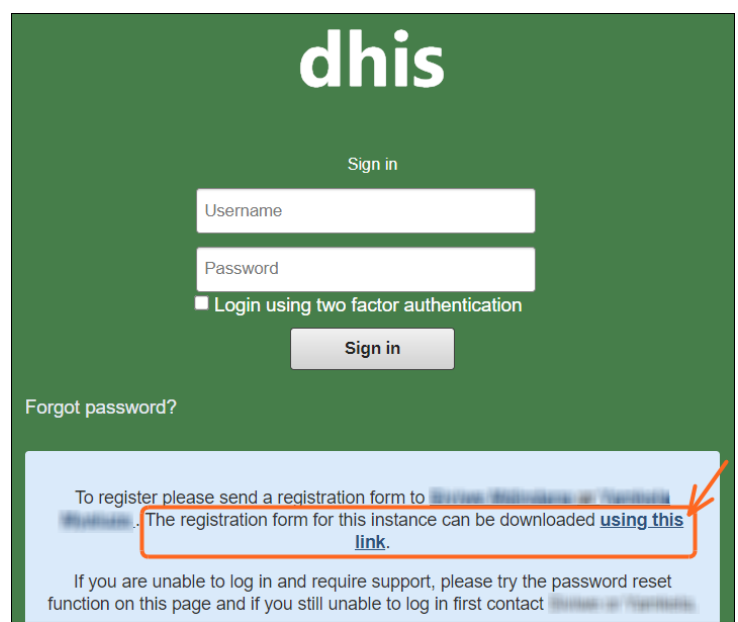
The process for accessing, completing, and submitting this form is covered in the next section.

2.2.3 Registration Process

The section describes in detail the steps to follow to register as a user on a webDHIS database.

GET THE USER REGISTRATION FORM

 Google Chrome	Open Google Chrome.
	In your web browser, type the URL that is specific to your province or other database you want to access e.g. • ec.dhis.dhmis.org • lp.dhis.dhmis.org • nw.dhis.dhmis.org • ripda.dhis.dhmis.org • warehouse.dhis.dhmis.org



The login screen for dhis2. It features a green background with the 'dhis' logo at the top. Below the logo is a 'Sign in' section with fields for 'Username' and 'Password', a checkbox for 'Login using two factor authentication', and a 'Sign in' button. A 'Forgot password?' link is located below the sign in section. At the bottom, there is a light blue box containing registration information. An orange rectangle highlights the text 'The registration form for this instance can be downloaded using this link.' with an arrow pointing to the 'using this link' text.

Sign in

Username

Password

☐ Login using two factor authentication

Sign in

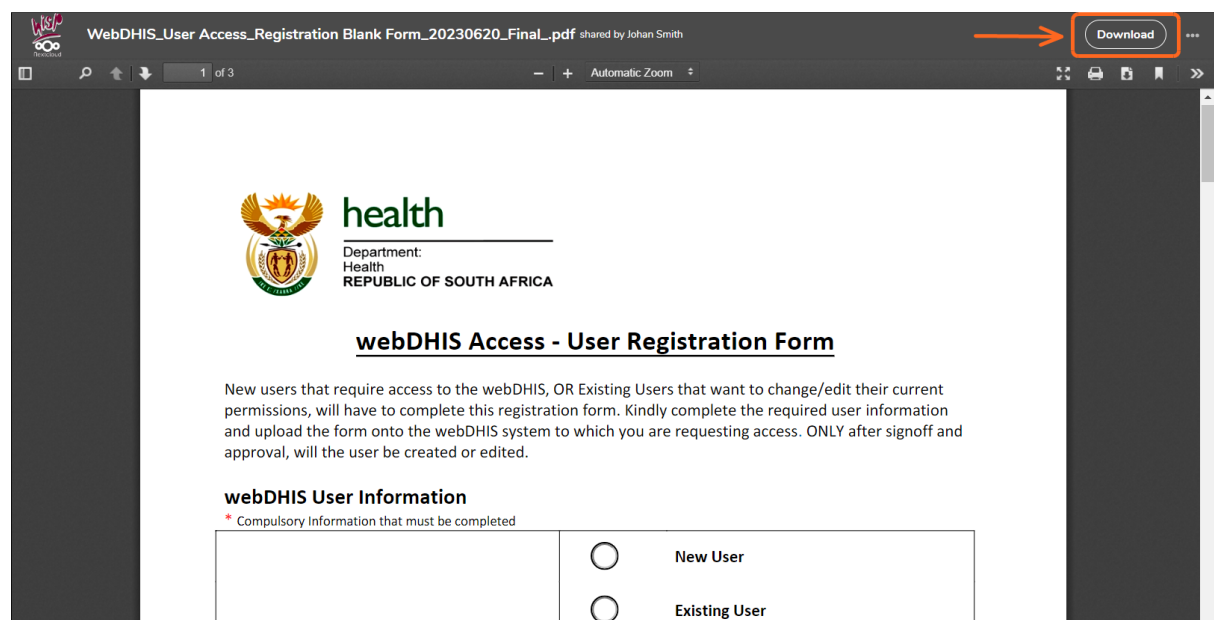
Forgot password?

To register please send a registration form to [\[Link\]](#). The registration form for this instance can be downloaded using this link.

If you are unable to log in and require support, please try the password reset function on this page and if you still unable to log in first contact [\[Link\]](#).

The Login screen displays.

To download the required form, click on the link using this link.



The screenshot shows a PDF document titled 'WebDHIS_User Access_Registrat..._20230620_Final_.pdf' shared by Johan Smith. The document header includes the South African Department of Health logo and the text 'Department: Health REPUBLIC OF SOUTH AFRICA'. The main title is 'webDHIS Access - User Registration Form'. The text explains that new or existing users need to complete this form to request access. Below this is a section titled 'webDHIS User Information' with a note that the following information is compulsory. There are two radio button options: 'New User' and 'Existing User'. An orange arrow points to the 'Download' button in the top right corner of the PDF viewer interface.

WebDHIS_User Access_Registrat..._20230620_Final_.pdf shared by Johan Smith

1 of 3

Automatic Zoom

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webDHIS Access - User Registration Form

New users that require access to the webDHIS, OR Existing Users that want to change/edit their current permissions, will have to complete this registration form. Kindly complete the required user information and upload the form onto the webDHIS system to which you are requesting access. ONLY after signoff and approval, will the user be created or edited.

webDHIS User Information

* Compulsory Information that must be completed

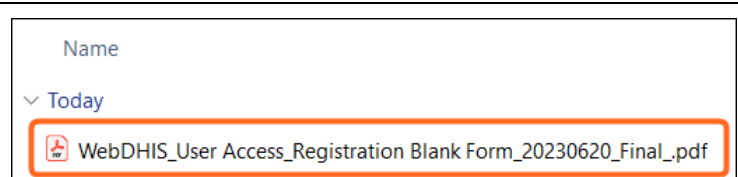
☐ New User

☐ Existing User

The form opens in nextCloud – a file storage location.

Click on **Download**. The form will start downloading.

Note: Depending on your browser settings, it may download to the “Downloads” folder, or you may be asked to specify a location on your computer.



The screenshot shows a file storage interface. Under the 'Name' section, there is a dropdown menu set to 'Today'. Below this, a file named 'WebDHIS_User Access_Registrat..._20230620_Final_.pdf' is listed with a PDF icon. An orange rectangle highlights this file entry.

Name

Today

WebDHIS_User Access_Registrat..._20230620_Final_.pdf

Open the form from wherever it is saved so that it opens in Adobe Reader.

FILL IN THE USER REGISTRATION FORM

The User Registration Form consist of several sections over a number of pages:

1. **webDHIS User Information** – This section specifies if this is a new access request or updates/changes to existing access. Here is where you must enter your personal details and specify the required organisation units.
2. **User roles** – In this section, you must mark which user roles are required.
Note: The list of user roles is dependent on the database that you are requesting access to.
3. **Consent** – You must read this section regarding consent.

Sign off – Both you and your supervisor/manager must digitally sign this form.



ALL sections of the “webDHIS Access – User Registration Form” must be completed. Each form is specific to the database a user is requesting access to. A different registration form must be accessed and completed for each database to which a user requires access.



health

Department:
Health
REPUBLIC OF SOUTH AFRICA

webDHIS Access - User Registration Form

New users that require access to the webDHIS, OR Existing Users that want to change/edit their current permissions, will have to complete this registration form. Kindly complete the required user information and upload the form onto the webDHIS system to which you are requesting access. ONLY after signoff and approval, will the user be created or edited.

webDHIS User Information

* Compulsory information that must be completed

1 For existing users, only specify/tick the changes/additional e.g. Orgunit, user role, data set. If Termination box is ticked, provide the termination date.	☐ New User
	☐ Existing User
	☐ Change Password
	☐ Change/Addition of Data Set Access
	☐ Change of Organisational Units Access
	☐ Change/addition of user role
Termination Date:	
2	
3	
First name (in full)*	
Surname (in full)*	
Email Address*	
Position (eg. Data Capturer, Information Officer etc)*	
Place of employment*	
ID Number*	
PERSAL/Employee Number*	
Cell phone Number (eg. 082 123 1234)*	
Please specify the Orgunit Parent for Capturing (the user will have access to this org unit and all its children)*	
Please specify the Orgunit Parent for Reporting (User will have access to report on this org unit and all its children)	
4	
5	

1

webDHIS User Information:

1. Select either **New User** or **Existing User**.
2. If you are a new user continue to 4. If you are an existing user, choose options in 2, then continue.
3. If you are terminating your account, give the **last date you will be using webDHIS**.
4. Complete your personal details.
5. Specify the **Orgunit parent** to which you belong.

1

☐

Data User – Aggregated Data

(Users will have access to all the reporting aspects, tables, and GIS functionality at all levels)

2

☒

Data Capturer

(Users will have access to the data entry app and be able to capture data on applicable datasets)

☐

Create User

(Users will have access to create/edit users)

☐

SQL Views

(User will have access to view and run SQL views eg. AG user management reports, Data elements in datasets etc)

☐

Dataset allocation

(Users will have access to assign datasets to orgunits)

☐

Import TB data.

(User will have access to import TB quarterly data)

☐

Other specify:

3

Comment:

4

***Note for Create Users Only

It is crucial that when creating users on webDHIS instances, they are allocated to the correct user groups. Below are the two mandatory user groups for regular users on Routine instances.

User Groups	Purpose
All Metadata	This user group should be allocated to all users. It enables users to have view access to metadata.
Primary Healthcare Hospitals	These two user groups are compulsory for users who will capture data.

Note: This form is specific to this database. A different registration form must be accessed and completed for each database to which you require access.

2

User Roles:

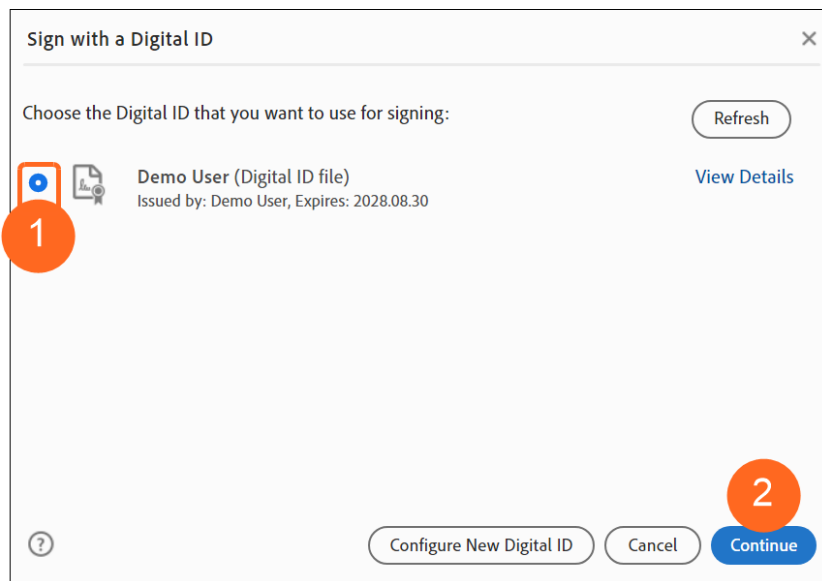
- Click in the checkbox next to the user role/roles you require.
- The checkbox is filled with a tick when you click in it, indicating that you have chosen that option.

Note: Please make sure your supervisor checks to see if the user roles you have selected are correct.

- If you selected “Other: Specify”, please specify here.
- If you have any additional comments, type them here.

1 Consent By signing this form, the user agrees to the personal identifiable information provided in the form to be stored within the user tables within the database and any actions performed on the database will be linked to the users record ad infinitum. The information will be used within the parameters of the webDHIS user management SOP to manage and review user access as described within the said policy. The user also consents to DHIS messaging as determined by the Department of Health to be sent to the user to facilitate proper management of data or enhance patient care. Such messages will be formally approved by the Department of Health authorised manager. <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; padding: 2px;">Date:</td> <td style="width: 50%; padding: 2px;">User's Signature:</td> </tr> <tr> <td style="height: 40px; vertical-align: middle; text-align: center;"> 2 </td> <td style="height: 40px; vertical-align: middle; text-align: center;"> 3 </td> </tr> <tr> <td style="padding: 2px;">Manager's Name</td> <td style="padding: 2px;">Manager's Surname</td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 2px;">Manager's Position:</td> <td style="padding: 2px;">Manager's Contact No</td> </tr> <tr> <td style="height: 20px;"></td> <td style="height: 20px;"></td> </tr> <tr> <td style="padding: 2px;">Date:</td> <td style="padding: 2px;">Manager's Signature:</td> </tr> <tr> <td style="height: 40px;"></td> <td style="height: 40px;"></td> </tr> </table>	Date:	User's Signature:	2	3	Manager's Name	Manager's Surname			Manager's Position:	Manager's Contact No			Date:	Manager's Signature:			Consent: 1. Read the Consent section. Signoff: 2. Enter the Date. 3. Attach your User's Signature (digital). These are described below.																																	
Date:	User's Signature:																																																	
2	3																																																	
Manager's Name	Manager's Surname																																																	
Manager's Position:	Manager's Contact No																																																	
Date:	Manager's Signature:																																																	
Date 1 Manager / August 2023 <table border="1" style="width: 100%; border-collapse: collapse; font-size: 0.8em;"> <tr> <th>Sun</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th><th>Sat</th></tr> <tr> <td>30</td><td>31</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr> <td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td></tr> <tr> <td>13</td><td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td></tr> <tr> <td>20</td><td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td></tr> <tr> <td>27</td><td>28</td><td style="border: 2px solid blue;">29</td><td>30</td><td>31</td><td>1</td><td>2</td></tr> <tr> <td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td><td>9</td></tr> </table> Today: 29/08/2023 2	Sun	Mon	Tue	Wed	Thu	Fri	Sat	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	1. Click in the Date field. 2. Click on the dropdown arrow that appears on the side of the Date field. 3. A calendar box will appear. Click on the required date. Note: Today's date is the default setting.
Sun	Mon	Tue	Wed	Thu	Fri	Sat																																												
30	31	1	2	3	4	5																																												
6	7	8	9	10	11	12																																												
13	14	15	16	17	18	19																																												
20	21	22	23	24	25	26																																												
27	28	29	30	31	1	2																																												
3	4	5	6	7	8	9																																												
User's Signature:	! It is very important that this is the last field that you complete. Click in the User's Signature field to insert your digital signature.																																																	

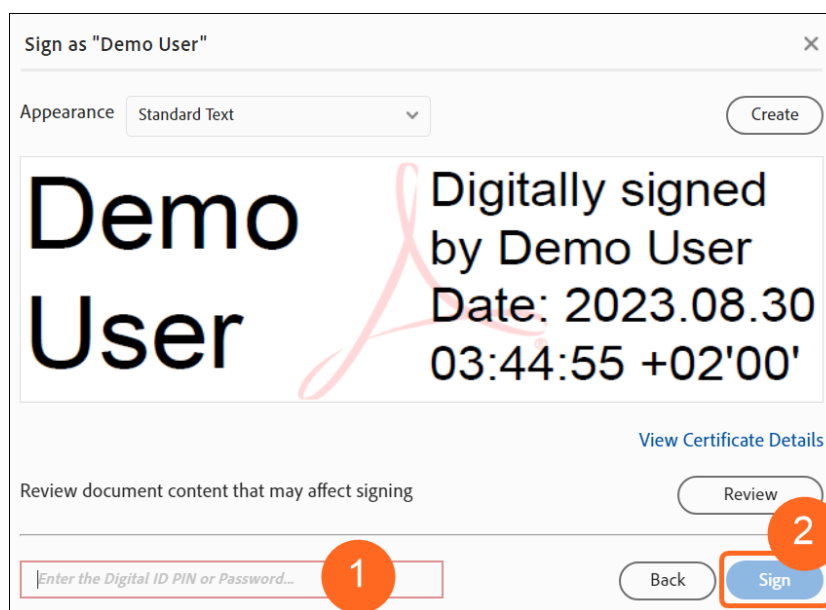
Note: Please note that the instructions below for creating/inserting a digital signature may vary slightly according to the version of Adobe Reader that you have installed on your computer. These instructions are for Adobe Reader DC.



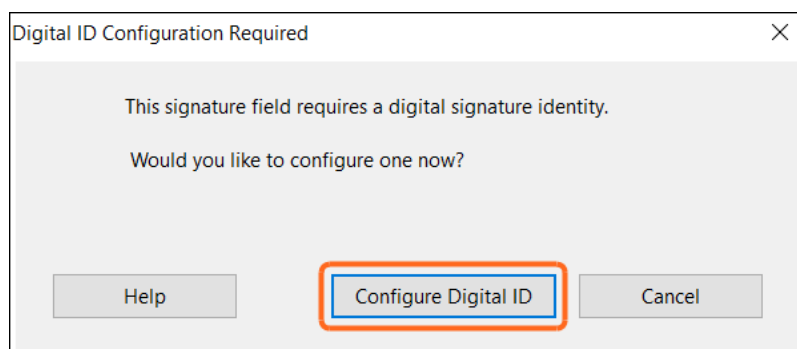
If you have a digital signature:

Select your signature (if there is only one signature, it will be selected by default).

Click on **Continue**.



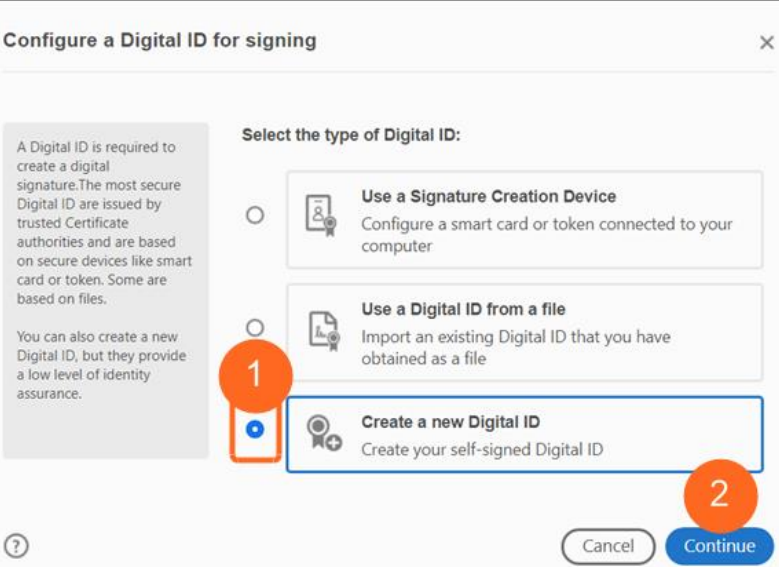
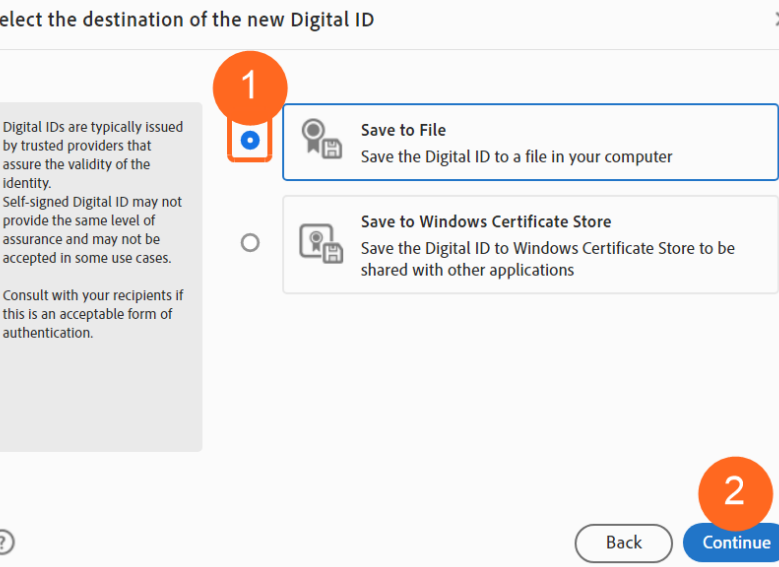
1. Enter the password for your digital signature.
2. Click on **Sign**.

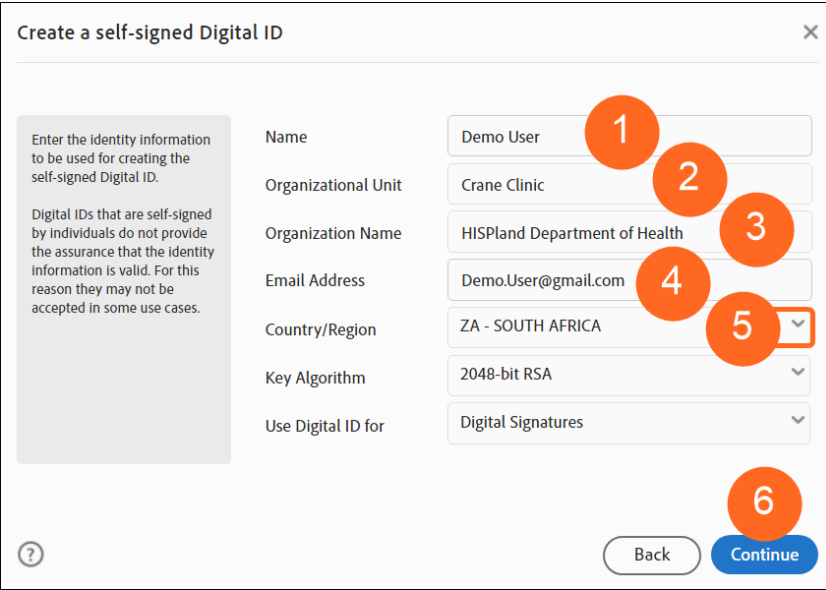
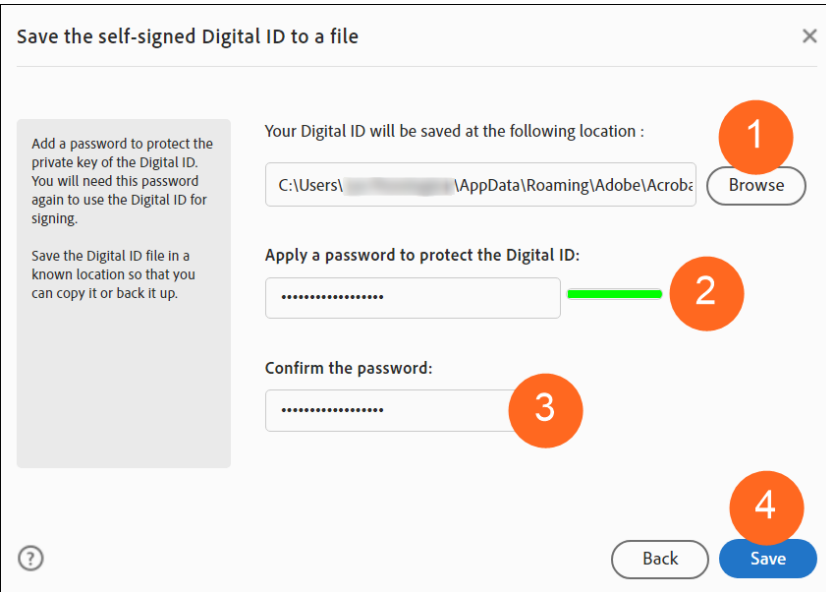


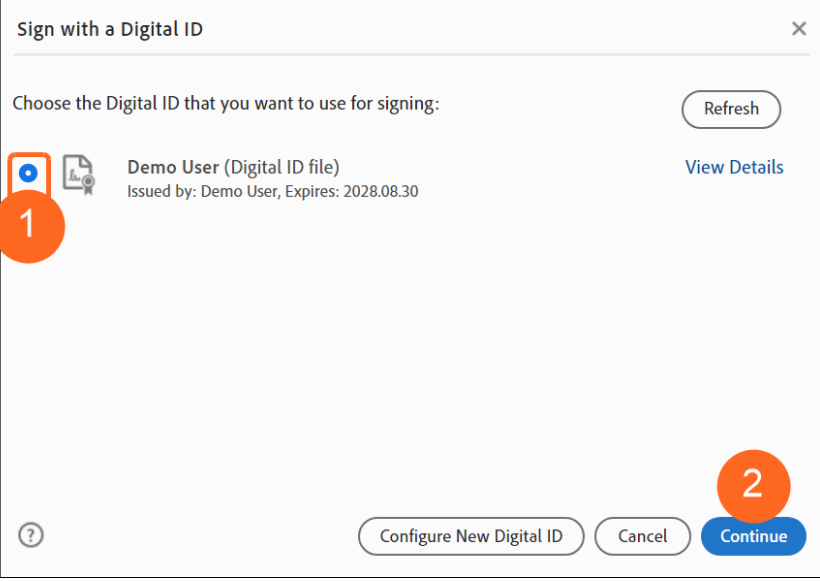
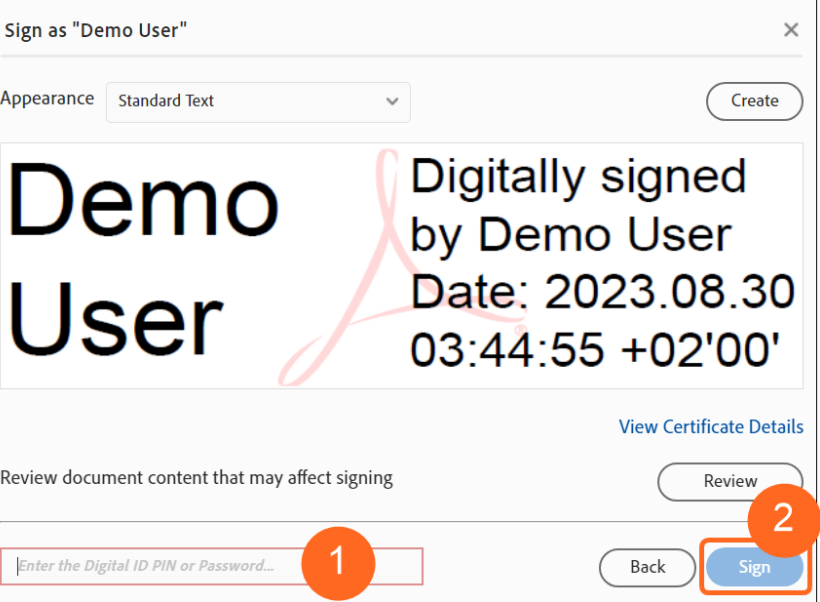
If you don't have a digital signature:

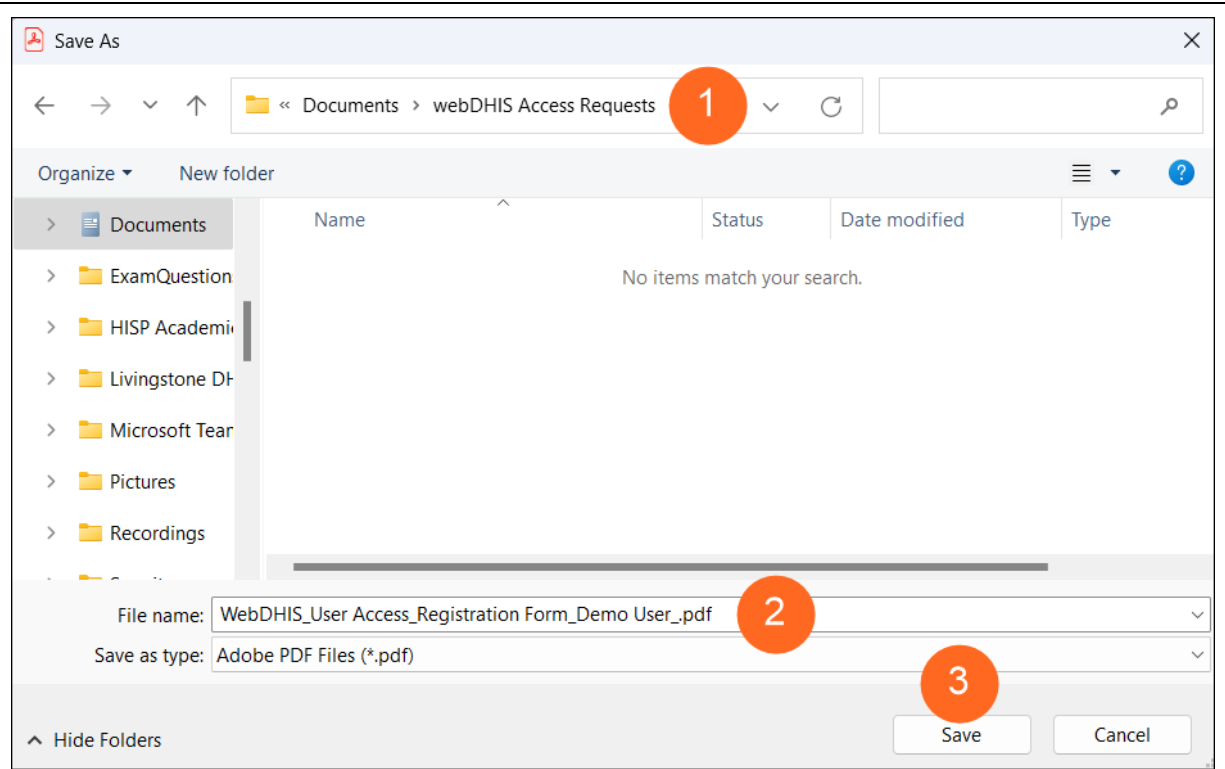
You will be prompted to create one.

Click on **Configure Digital ID**.

 Configure a Digital ID for signing A Digital ID is required to create a digital signature. The most secure Digital IDs are issued by trusted Certificate authorities and are based on secure devices like smart card or token. Some are based on files. You can also create a new Digital ID, but they provide a low level of identity assurance. Select the type of Digital ID: ☐ Use a Signature Creation Device Configure a smart card or token connected to your computer ☐ Use a Digital ID from a file Import an existing Digital ID that you have obtained as a file ☒ Create a new Digital ID Create your self-signed Digital ID Cancel Continue	1. Click the button next to Create a new Digital ID. 2. Click on Continue.
 Select the destination of the new Digital ID Digital IDs are typically issued by trusted providers that assure the validity of the identity. Self-signed Digital ID may not provide the same level of assurance and may not be accepted in some use cases. Consult with your recipients if this is an acceptable form of authentication. ☒ Save to File Save the Digital ID to a file in your computer ☐ Save to Windows Certificate Store Save the Digital ID to Windows Certificate Store to be shared with other applications Back Continue	1. The option Save to File is selected by default. 2. Click on Continue.

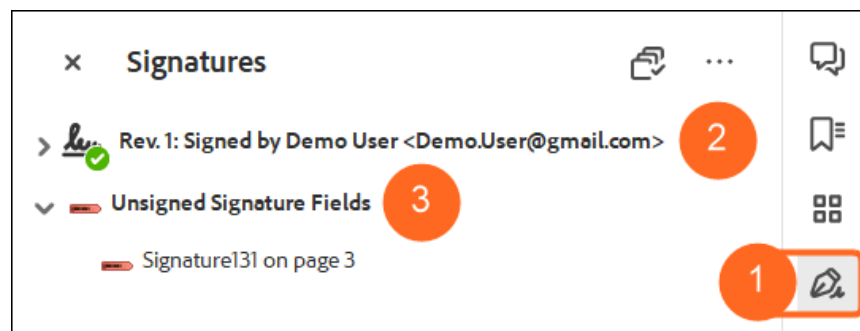
	Enter your details as shown in the picture: 1. Enter your Name (first name and surname). 2. Enter the name of the Organisational Unit you are responsible for. 3. Enter the province you are operating in. 4. Enter your Email Address. 5. Click on the Country/Region dropdown arrow and select ZA - South Africa. 6. Click on Continue.
	1. The file location for your digital ID will be displayed; you may change it or use the default location. 2. Enter a password for your digital ID. TIP: The colour next to your password changes to show how strong your password is. 3. Enter the same password again. 4. Click on Save. Every time you use your digital ID you will be required to enter the password, so please remember it!

 Sign with a Digital ID Choose the Digital ID that you want to use for signing: Refresh 1 Demo User (Digital ID file) Issued by: Demo User, Expires: 2028.08.30 View Details ? Configure New Digital ID Cancel 2 Continue	1. Select your signature (if there is only one signature, it will be selected by default). 2. Click on Continue.
 Sign as "Demo User" Appearance: Standard Text Create Demo User Digitally signed by Demo User Date: 2023.08.30 03:44:55 +02'00' View Certificate Details Review document content that may affect signing Review 1 Back 2 Sign	1. Enter the password for your digital signature. 2. Click on Sign.



You will be prompted to save your signed form.

1. Choose a suitable folder on your computer.
2. Edit the filename to add your first name and surname (last name)
e.g. *WebDHIS_User Access_Registration_Form_Demo User*
3. Click on **Save**.

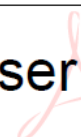


1. Click on the **Signature Panel** icon.
2. Those who have signed the document are listed with a green tick to indicate the signature is valid.
3. Any unsigned fields are also shown.



The document will not be valid until all signature fields are completed – in this case the supervisor must still sign.

	Close the form and email it or send it on a memory stick to your supervisor. Your supervisor or manager will then check the form and approve it by also signing it.
---	---

Date: 29-Aug-23	User's Signature:  Digitally signed by Demo User Date: 2023.08.30 05:15:06 +02'00'
Manager's Name	Manager's Surname
Demo 1	Manager 2
Manager's Position:	Manager's Contact No
Facility Manager 3	0845646895 4
Date:	Manager's Signature:
30-Aug-23 5	Demo Manager 6  Digitally signed by Demo Manager Date: 2023.08.30 05:16:18 +02'00'

The supervisor/manager will complete the form by entering their:

1. Name
2. Surname
3. Position
4. Contact Number
5. Date
6. And by signing the form using the same instructions as above.

Note: The document may only be signed after checking that all the necessary fields are completed. The supervisor/manager will return the form to the user for uploading to the database or may upload the form for the user.

SEND THE SIGNED REGISTRATION FORM

 WebDHIS_User Access_Registration Form_Demo User_Signed_20230830.pdf	Rename the form that you have received back from your
---	---

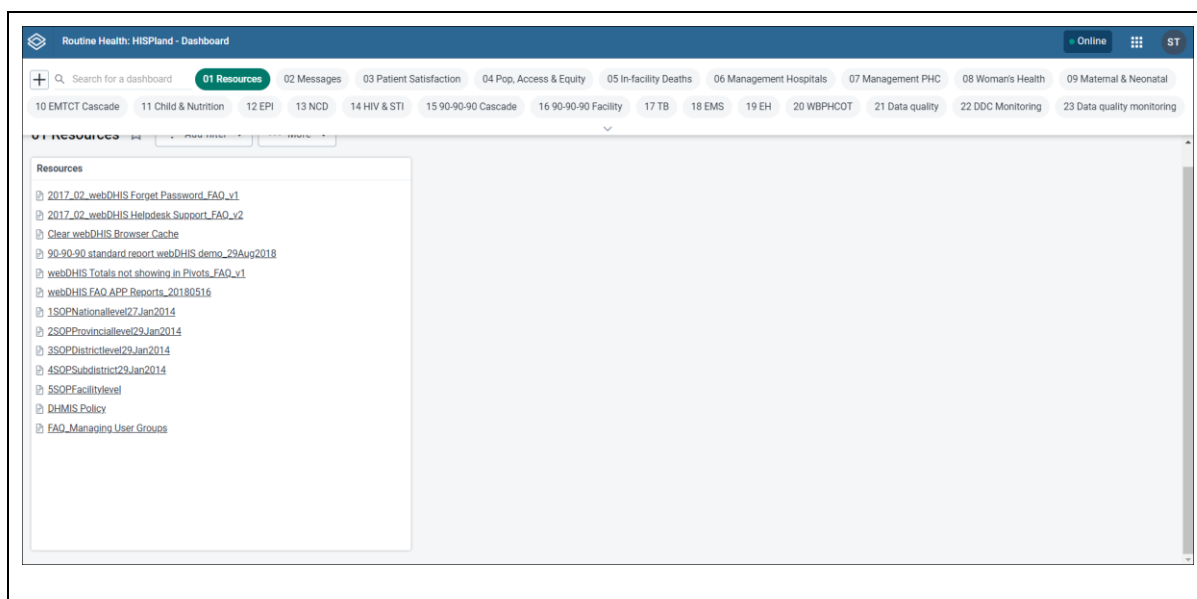
	supervisor to append the date that you are sending it.
	On the Login screen click on the link to the person who will process your form. If your form is in order, you will be created as a user on the database.
You will be notified of your username and password. These will be sent via different medias (e.g. username by email, and password by WhatsApp) to ensure security. You will also be advised to change your password the first time that you log in – it is very important that you do this. Please note that your password must meet certain requirement as shown below: Your password must: • be 8-40 characters in length • contain at least 1 uppercase character, 1 digit and 1 special character (e.g. *, !) in addition to lowercase characters • not use generic words like system, manager, admin, password • not contain any information from your account details e.g. your name, username, email address etc. • not be one of the 24 passwords you have used previously You will get an error message if any one of these password rules are violated and you will need to re-enter a valid password. It is important each user on the system is allocated their OWN departmental email account, and not an account that is shared by all users at a health facility.	

2.3 Log in to webDHIS

Once you can see the login screen of webDHIS you must enter your username and password to log in to the application. This is sometimes also known as your **profile** or **account**.

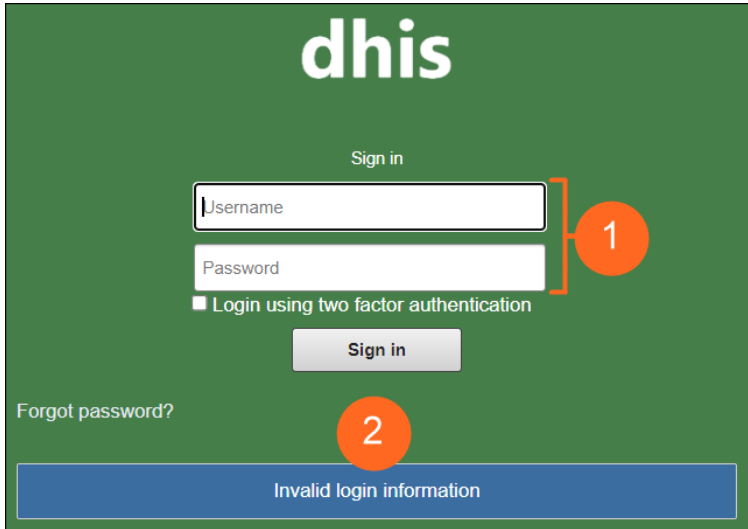
Note: The colour and design of login screens may vary.

	1. Enter your username. 2. Enter your password. TIP: Your username and password are CaSeSensitIVe. 3. You can login using two-factor authentication (2FA) by ticking in the checkbox. This means that you need to provide a code sent to another device in addition to your username and password to be able to log in to a webDHIS database. Note: This feature needs to be set up, but it is not used at present. 4. Click on Sign in. Note: If the login is not successful you will be notified that the login information is incorrect, and you will need to re-enter these credentials.
 Users should not share their passwords with any other users, including administrators. Users should reset their own passwords or use the “Forgot password?” feature to set their own passwords with a user account. Sharing of passwords can result in other users using your credentials to perform actions which you will be held accountable for, as all actions in the system are recorded and auditable.	
Once you have successfully logged in you will see the webDHIS Dashboard:	



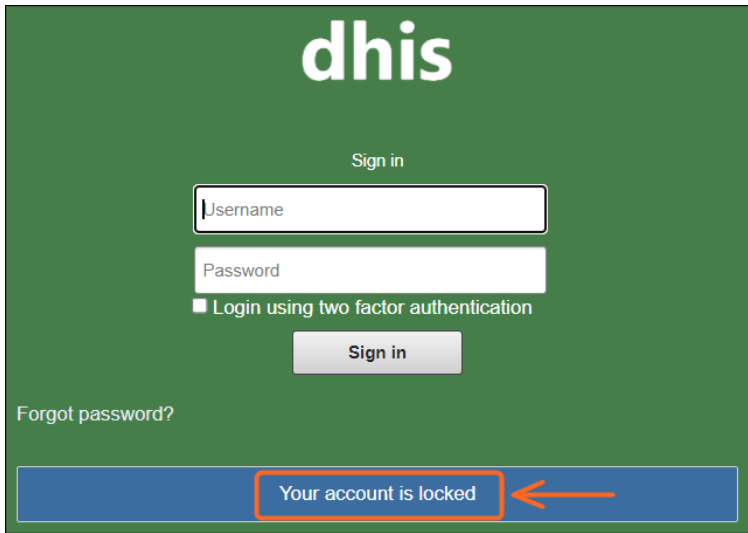
2.3.1 Login screen locked

On your 4th unsuccessful attempt to log in to a database using a valid username but an incorrect password, you will be locked out of the database for a period of 15 minutes. To remove the locked message you must clear your Google Chrome browser cache and refresh (Go to [Clear Browser Cache](#)). After 15 minutes has passed, you will be able to try to log in again.



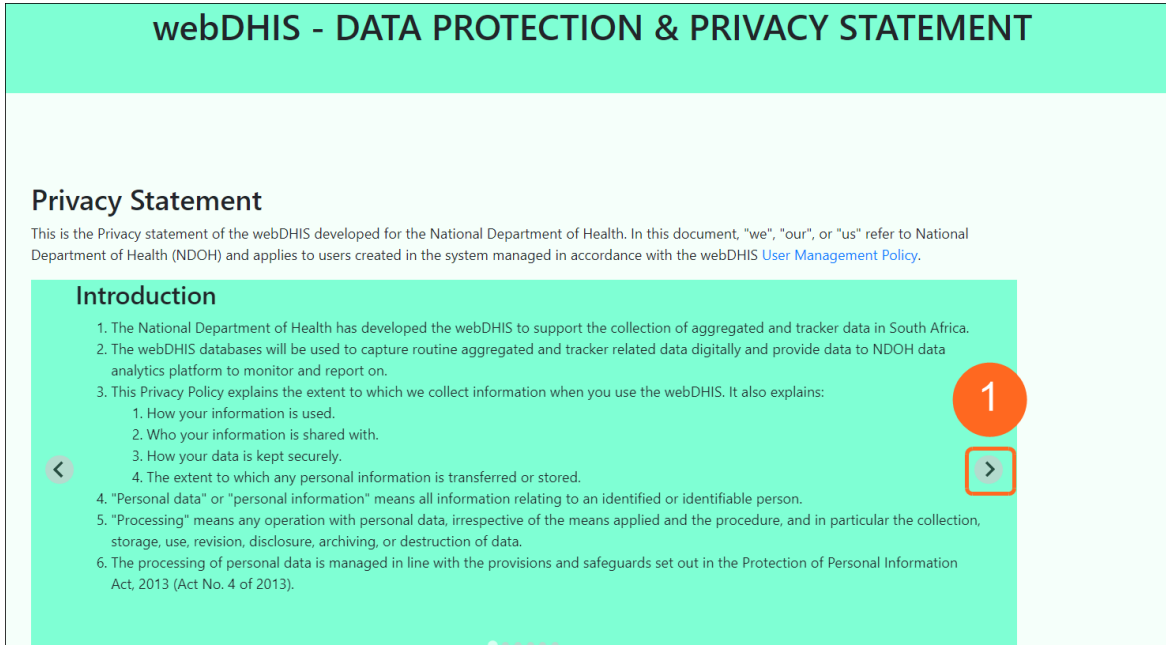
If you enter an incorrect username or password:

1. Your username and password will be removed.
2. The message “Incorrect username or password” is displayed.

	On your 4th unsuccessful attempt, you will see the message “Your account is locked” and you will not be able to try to log in again. Note: Do NOT be tempted to try and login again before the 15 minutes has passed. The system will lock you out for 15 minutes after your <i>last failed login attempt</i>, so each time you keep trying before the 15 minutes is up, you will add another 15 minutes to your waiting time!
---	--

2.4 Accept the webDHIS Data Protection & Privacy Statement

The POPI Act requires that you obtain consent when you collect a person's personal information. In line with this, webDHIS users are required to read and accept the webDHIS Data Protection and Privacy Statement when they **first** access a webDHIS database. This is a once-off consent per version of the privacy statement; thereafter, you will be able to access the database in the normal way.

	1. Page 1 of the webDHIS Data Protection and Privacy Statement displays. Read the Introduction. Then click on the right arrow to proceed to the next page.
--	---

Responsible Party

1. The controller responsible for the data processing described herein is the:
 - Dr AB Xuma Building, 1112 Voortrekker Rd, Pretoria Townlands 351-JR, PRETORIA, 0187
 - Postal address: Private Bag X828, PRETORIA, 0001
2. The webDHIS is available to pre-approved system users registered on the system. The system can be accessed via web browsers or the DHIS android app using suitable and compatible devices.
3. Where the NDOH engages third parties to assist with developing and supporting the webDHIS platform, they have signed commercial and confidentiality agreements, undertaking contractually to comply with all requirements of the Protection of Personal Information Act, 2013 (Act No. 4 of 2013).



2

2. Page 2 of the webDHIS Data Protection and Privacy Statement displays. Read about the **Responsible Party**. Then click on the **right arrow** to proceed to the next page.

Collection and processing of personal data and special personal information

1. The webDHIS does not collect any "special personal information" about you as a user. For this purpose, "Special personal information" relates to:
 1. the data about your race or ethnicity.
 2. religious or philosophical beliefs.
 3. sex life.
 4. political opinions or trade union membership.
 5. information about your health and biometric data; and
 6. information about criminal convictions and offences.
2. The following information of users will be collected and processed by the webDHIS:
 1. name and surname
 2. ID number
 3. persal number
 4. e-mail address
 5. mobile phone number
 6. job function
 7. place of employment



3

3. Page 3 of the webDHIS Data Protection and Privacy Statement displays. Read about the **Collection and processing of personal data and special personal information**. Then click on the **right arrow** to proceed to the next page.

Information we process with your consent

By agreeing to this agreement your user information will be stored, processed and managed with your consent in accordance with the webDHIS User Management SOP. You also consent to receive webDHIS instant messaging or emails in the course of daily work within the system in order to facilitate Health Information Management, Data Quality and Data Use.

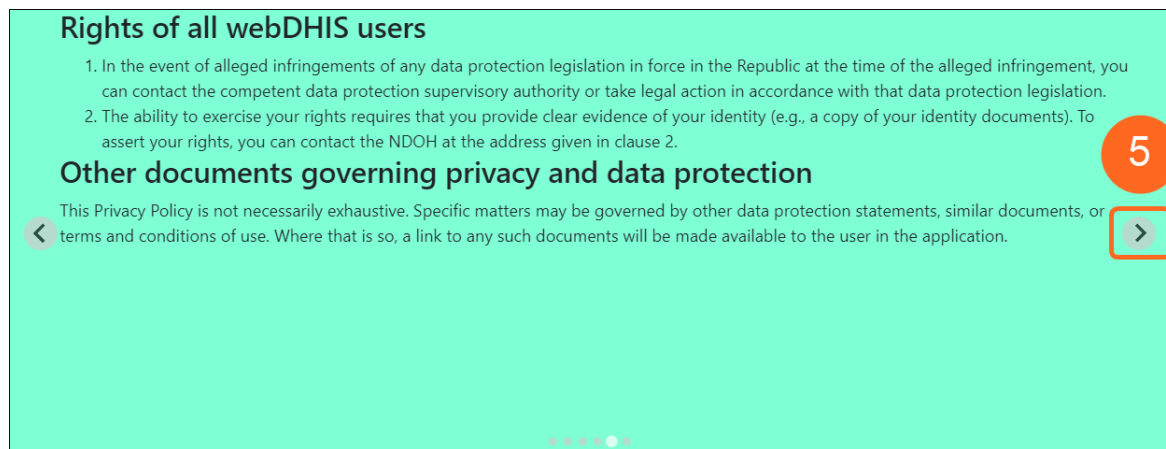
What security measures are in place to protect my data?

1. The Administrators and users who have access to the webDHIS have secure user login details that have a full audit trail on all the activities that they perform on their accounts according to their assigned user role permissions.
2. NDOH is the owner and Responsible Party of Information and data processed by the webDHIS and has employed stringent technical and best practice procedures in place to ensure the integrity of Personal Information is safeguarded against the risk of loss or damage and against unauthorised or unlawful access.
3. All systems are Protection of Personal Information (POPI) Act compliant and allow for capturing of user and client consent in the case of capturing personal information.
4. Security is based on at least 99% Availability Service Levels and ISO 27001:2013 framework, which is the international standard that describes best practices and controls.
5. All systems are built with open architecture for interoperability and alignment with local standards.

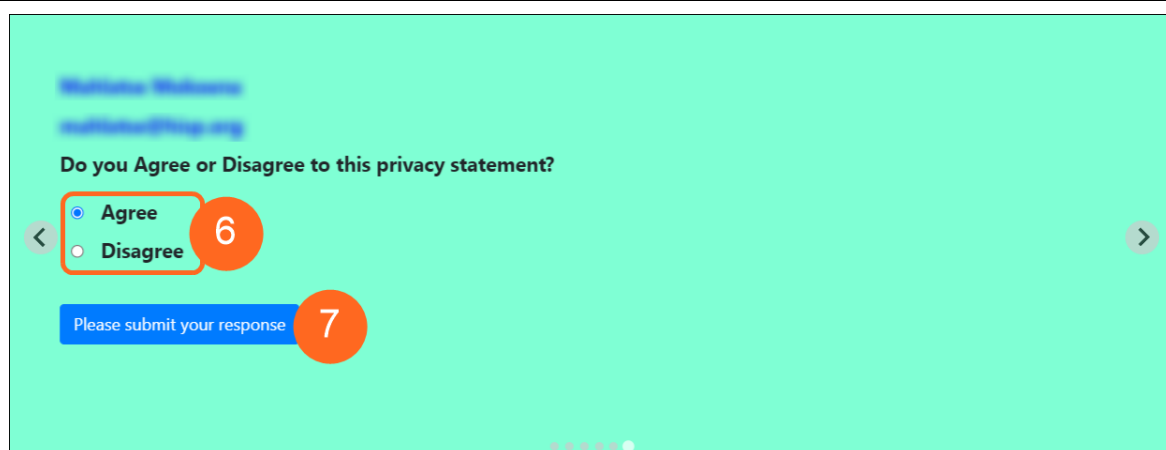


4

4. Page 4 of the webDHIS Data Protection and Privacy Statement displays. Read about the **Information we process with your consent** and **What security measures are in place to protect my data?** Then click on the **right arrow** to proceed to the next page.



5. Page 5 of the webDHIS Data Protection and Privacy Statement displays. Read about the **Rights of all webDHIS users** and **Other documents governing privacy and data protection**. Then click on the **right arrow** to proceed to the next page.

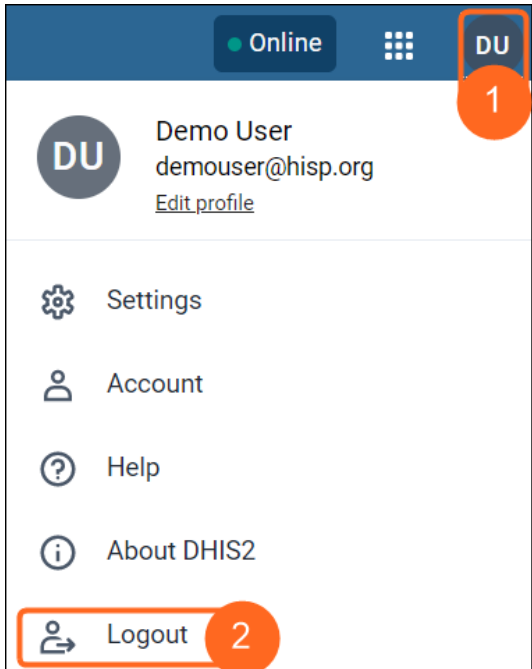


6. Click on **Agree** or **Disagree**.
7. Click on **Please submit your response**.

Note: If you selected **Agree**, you will be logged in to the database. If you selected **Disagree**, you will not be given access to the database.

2.5 Log out of webDHIS

When you have finished your webDHIS session we recommend that you log out before closing the browser.

	1. Click on your Profile button (the circle with your initials inside). 2. Click on Logout. You will be returned to the Login screen. Note: webDHIS will log you out automatically if you are not active on the system for more than 15 minutes. This is to protect your user account from unauthorised access when you may not be at your computer.
---	---

2.6 Navigating the webDHIS

The webDHIS has two menu systems; the top menu, which houses areas for apps and the user profile, and the left side menu inside most apps to navigate between features inside each app.

The webDHIS symbol in the top left corner is a fast link to the user-defined start page, the home page. Often this is set to the Dashboard app.

2.6.1 Top Menu

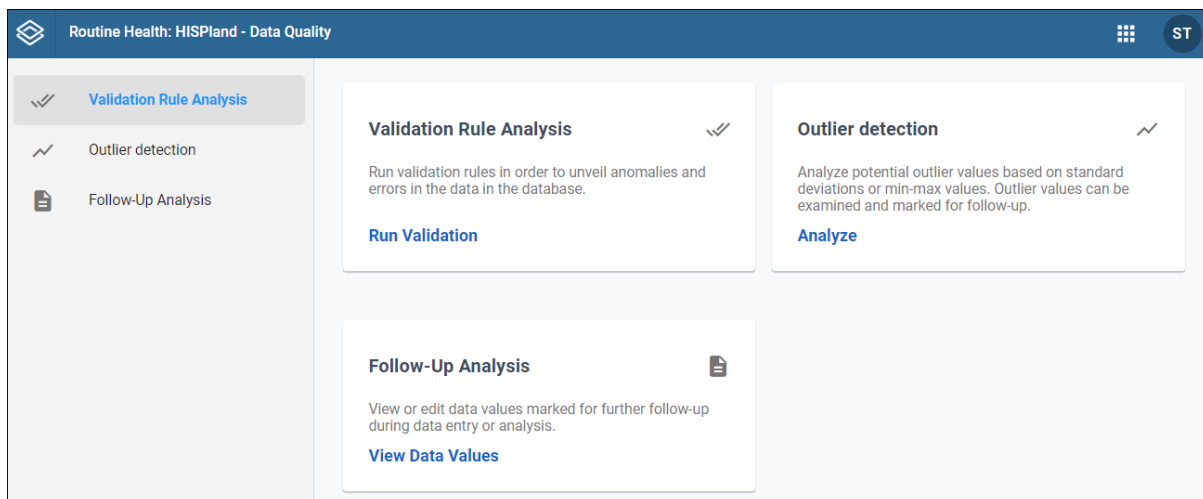
The top menu consists of 2 menu items:

4. **Apps:** webDHIS consists of various **apps** (major components), such as Data Entry, Reports, Dashboard, which each have specific features.
5. **Profile:** This contains details relating to your user account, general user settings and information about webDHIS.

2.6.2 Menu inside apps/modules

When you open most of the apps you will see the app main page which shows a separate tile for each feature together with a short description of that feature. Simply click on the feature you would like to open.

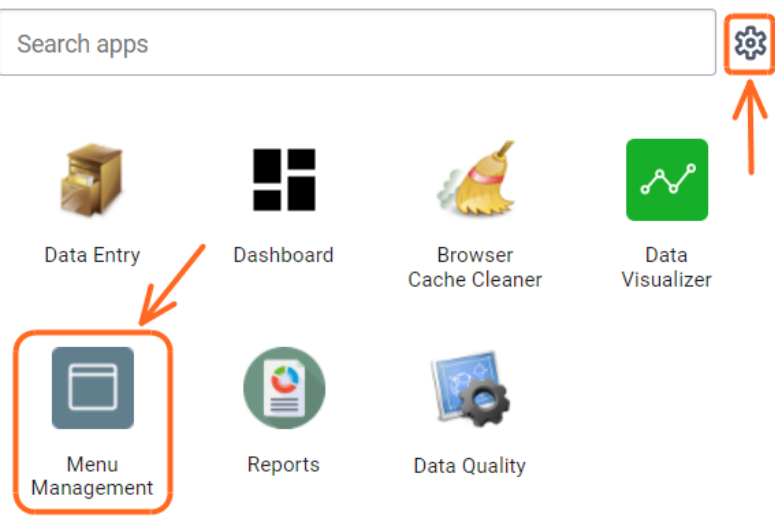
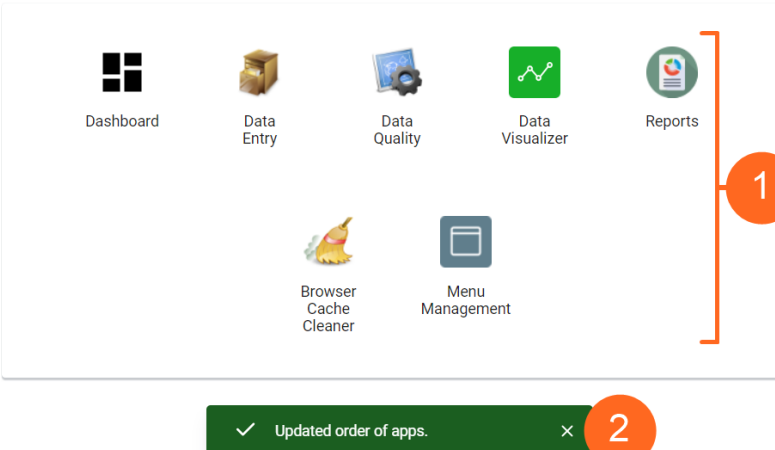
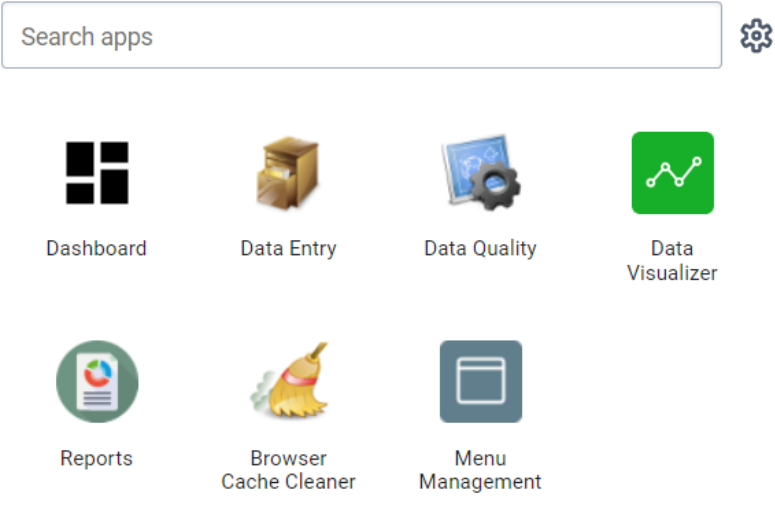
When inside an app you will always see the left side menu with links to its features. Use this menu to jump between features. This is particularly useful for navigation within the app. (The screenshot below shows the Data Quality App).



Apps like Data Entry, Data Visualizer and Dashboard do not have a menu system as they only contain one feature, so there is no need for a menu.

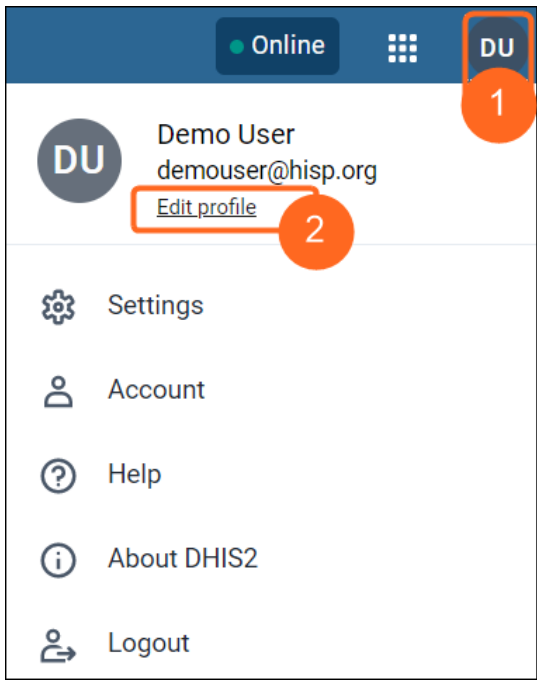
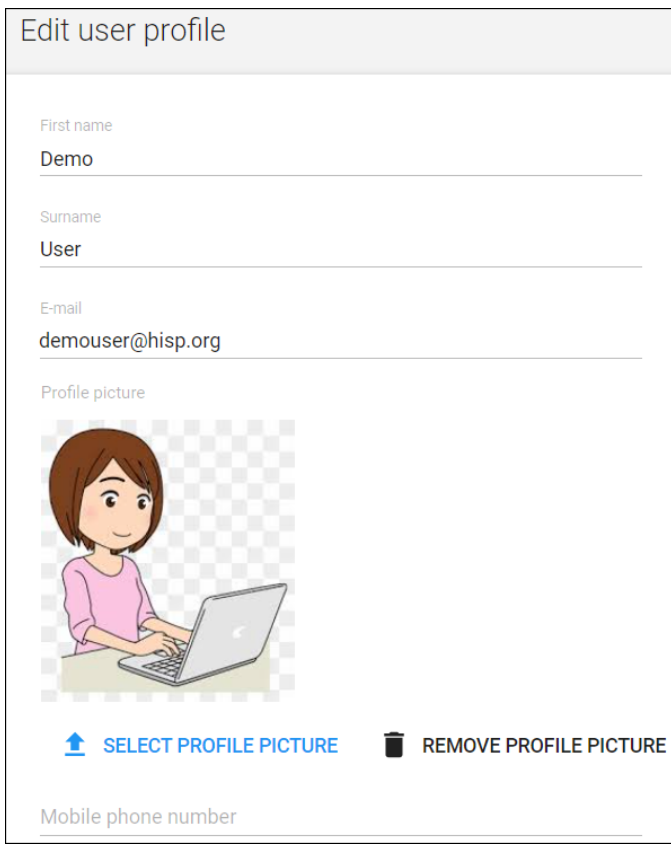
2.7 Access Apps

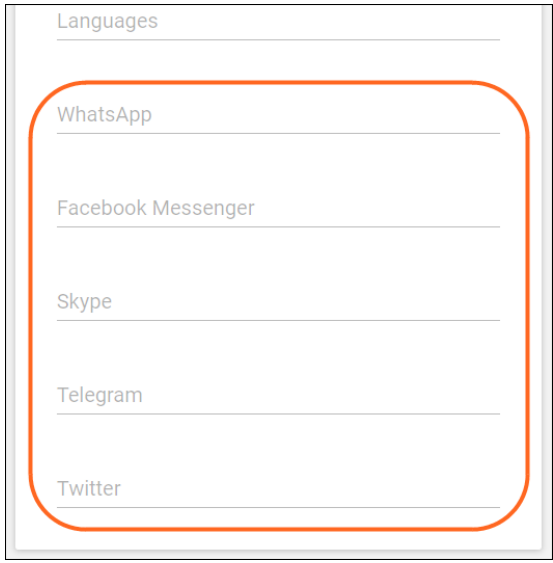
1. Click on the **Apps** button.
2. The “Apps” window displays showing only those apps that have been allocated to you as a specific user.
3. **TIP:** If you can't see the app that you want, you can click on **Search apps** and start typing its name. It will pop up so that you can click on it.
4. Click on an app to access it e.g. **Data Entry**.

	You can change the order of the apps displayed so that the ones you use most are at the top of the Apps list. Click on the Gear icon to the right of the “Search apps” box OR Click on the Menu Management app..
Your apps Drag and drop the menu items to re-order them. 	1. Drag and drop the apps where you want them. webDHIS detects that you have made changes and saves the order for you. 2. Click on the X if you do not want to save your changes, otherwise this box will disappear after a few seconds with your changes saved.
	The next time you access the “Apps” menu, your new order will display.

2.8 Maintain your User Profile

2.8.1 Update your profile details

	1. Click on your Profile button (the circle with your initials inside). 2. Click on Edit Profile.
	Add or edit your details. You can press Tab to go from one field to the next, or you can simply click into the desired field. You can add a profile picture by clicking on SELECT PROFILE PICTURE and uploading a picture from your computer. Your picture will replace the circle with your initials.

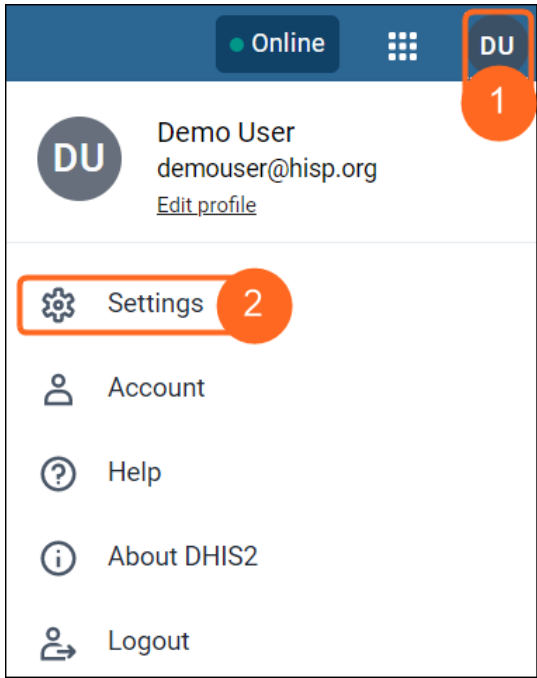
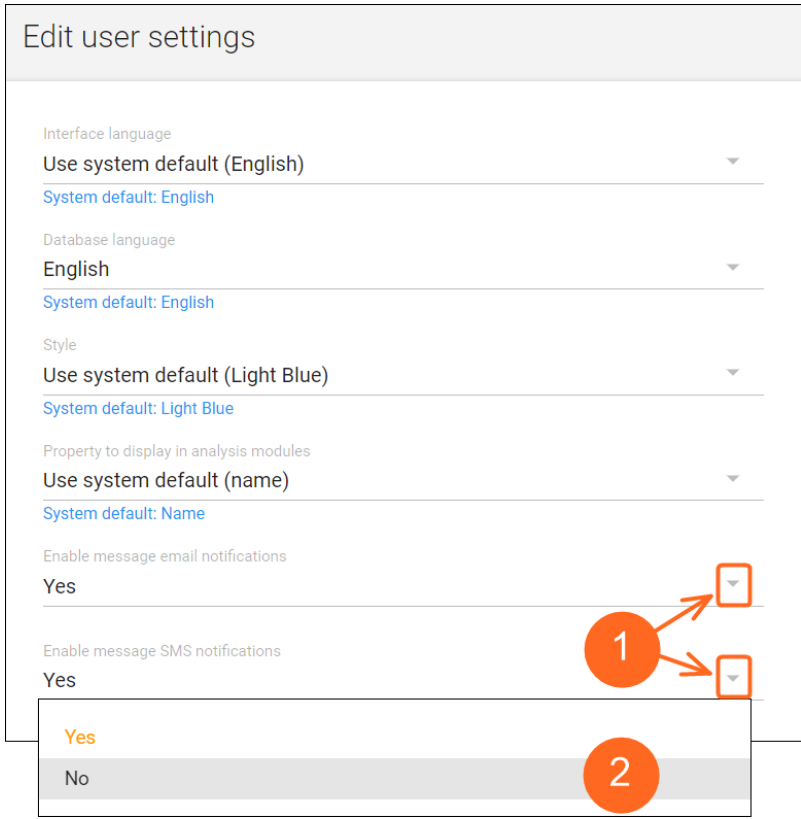
	You can also add WhatsApp, Facebook Messenger, Skype, Telegram and Twitter identifiers to your user profile. Note: International dial code is validated for phone numbers. Phone numbers are unique per user.
	Data is saved as you enter it – you will see a message pop up from the bottom of the screen confirming that your profile was updated. TIP: You need to look quickly as this message does not stay on screen for long!!

2.8.2 Change your user settings

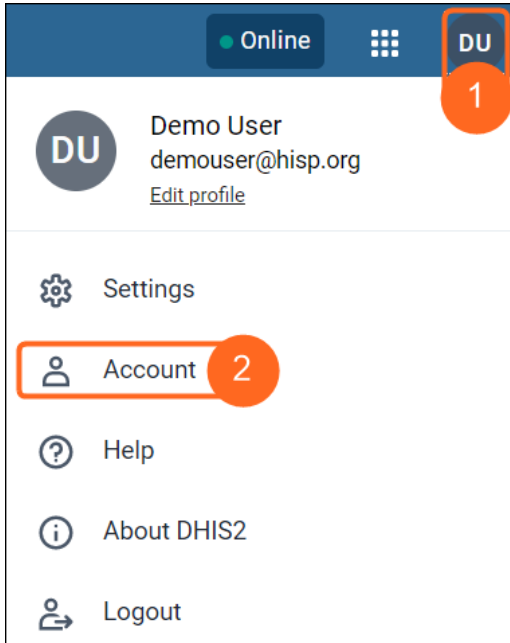
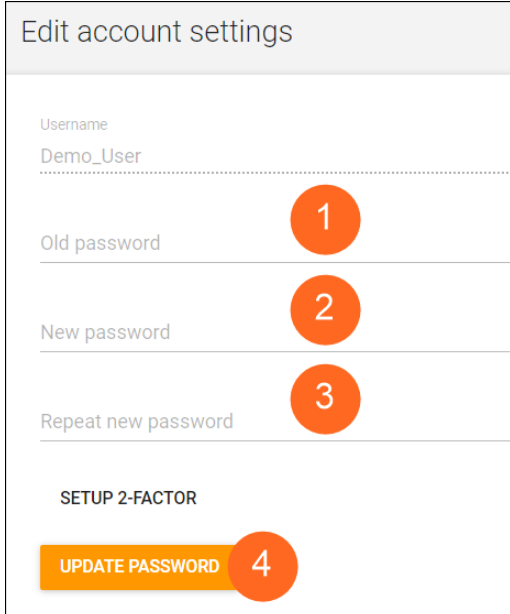
You can change any of your user settings, but the two most important to note are your email and SMS notifications, which are set to **Yes** by default. .



You can deactivate these settings, but then you will not receive any system notifications.

	1. Click on your Profile button (the circle with your initials inside). 2. Click on Settings.
	1. To disable message email notifications or message SMS notifications, click on the dropdown arrow at the end of the required field. 2. Click on No.
	A message that your settings have been updated will flash briefly at the bottom of the screen.

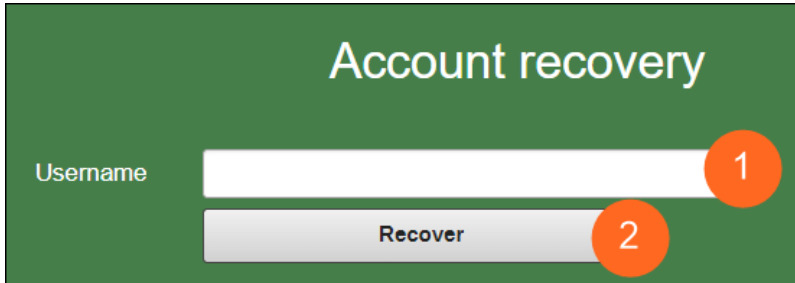
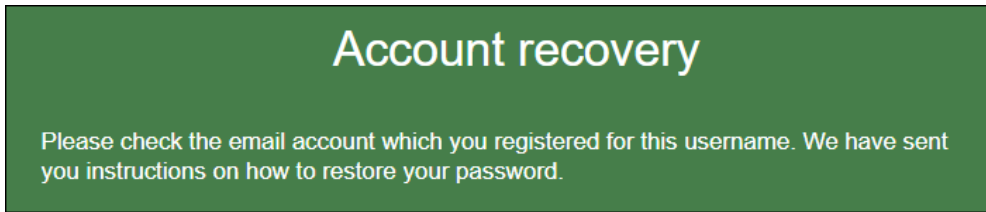
2.8.3 Change your password

	1. Click on your Profile button (the circle with your initials inside). 2. Click on Account.
	1. Enter your old password. 2. Type your new password. 3. Type your new password again. 4. Click on UPDATE PASSWORD.
Password changed successfully You need to login again to continue using the application.  Click on LOGIN. You will then need to login to webDHIS again, using your new password.	

2.8.4 You've forgotten your password, now what?

Don't panic if you've forgotten your password. If you can remember your username, webDHIS can recover your password for you.

Note: This is why it's important to specify a correct personal email address during registration.

 The screenshot shows the webDHIS login interface. At the top is the 'dhis' logo. Below it is the 'Sign in' heading. There are two input fields: 'Username' and 'Password'. Below the password field is a checkbox labeled 'Login using two factor authentication'. A 'Sign in' button is positioned below the checkbox. At the bottom left, there is a link labeled 'Forgot password?' which is highlighted with an orange rectangle and an orange arrow pointing to it from the right.	On the webDHIS Login screen, click on Forgot password?
 The screenshot shows the 'Account recovery' screen. It has a green header with the title 'Account recovery'. Below the header, there is a 'Username' label followed by a text input field. A red circle with the number '1' is placed over the input field. Below the input field is a 'Recover' button. A red circle with the number '2' is placed over the 'Recover' button.	1. Type your username in the Username box. 2. Click on Recover.
 The screenshot shows a green box with the title 'Account recovery'. Inside the box, the text reads: 'Please check the email account which you registered for this username. We have sent you instructions on how to restore your password.' The Account recovery message displays. Check the email account that you used when you created your profile on webDHIS.  As stated previously, it is important each user on the system is allocated their OWN departmental email account, and not an account that is shared by all users at a health facility.	

You will receive an email that looks like this:

Someone, probably you, has asked us to restore your Routine Health Data: HISPland user account.

Please follow the link below to restore your account.

https://training.dhis.dhmis.org/hispland/dhis-web-commons/security/restore.action?username=Student_Test&token=RVh9golhAGntVaSXeidFpTgT3ld753sgOwRnS2QKJ3IS1GBCxZt

You must complete the restore process within 1 hour. If you take no action, your account will not be restored. If you did not request this restore, please disregard this message.

Click on the link.

Restore account

New password

Confirm password

Restore

1. Type in your new password.
2. Type your password in again to confirm it is correct.
3. Click on **Restore**.

Restore account

Your account was successfully restored. Use your new password to [log in at the login page](#).

A message will display that you were successful. Click on the link to go to the Login page.



If your account has been disabled, you will not be successful in resetting your password. You will need to contact the relevant data manager (link on the Login screen) to assist you.

2.8.5 Password Expiry

webDHIS passwords are set to expire 90 days after your last password reset. webDHIS will send you an email 14 days before your password expires, and thereafter every day until you have changed your password, or the 14 days is up. This is an example of the email message you will receive:

Routine Health Data: Free State Message [No reply]

[Routine Health Data: Free State] Password Expiry Alert

2018/01/26

Dear Lyn_Pennington, Please change your password. It will expire in 10 days.

You need to log in to your instance using your existing password and change your password. If you cannot remember your password, you need to use the "Forgot password" feature.

Once your password expires, your user account is automatically deactivated with a script. In accordance with the User Management SOP, you will need to submit a revised user access form to be reactivated.

Note: It is important that your correct email address is specified in your user profile on the instance, otherwise you will not receive these notifications.

2.9 Clear Browser Cache

The browser cache is a temporary storage location on your computer for files downloaded by your browser to display websites/webpages. If, during the same browsing session, you want to go back to those pages, the browser displays the stored pages instead of downloading them again.

This is great as it speeds up the display of webpages, and in webDHIS it also allows us to store data that has been captured offline. However, changes may have been made to webDHIS components e.g. data sets or orgunits, which you may not then see.

Clearing the browser cache cleans out this temporary “memory” which means that webpages that were stored there previously must be reloaded from the source. This may take a little longer than loading from the browser cache, but any changes that were made to the webDHIS database will now be visible.



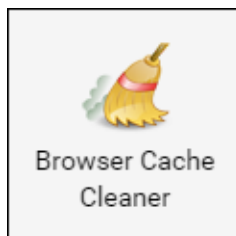
It is advisable to clear the cache once a week, but you should also clear it when you expect your system to perform in one way and it does not or if you encounter unexpected errors!

Ensure that offline data is uploaded BEFORE clearing your cache – clearing your cache will remove ALL data stored offline.

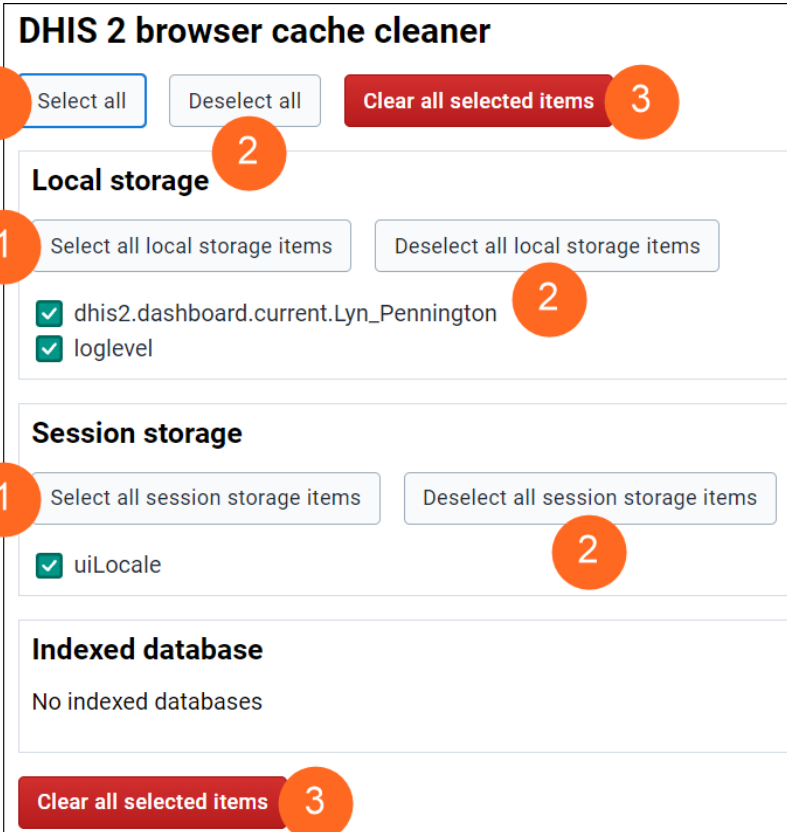
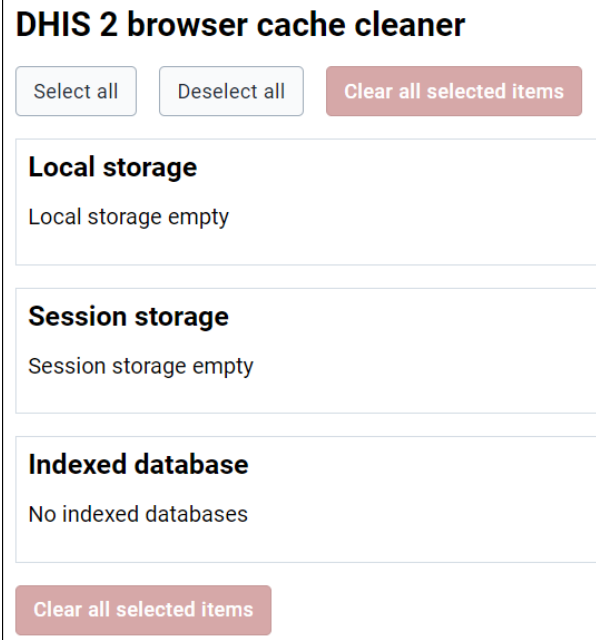
To be sure that the cache is completely cleared there are two steps to follow:

1. Clear the cache from within the webDHIS database using the Browser Cache Cleaner app.
2. Clear your Google Chrome cache using the Chrome Clear Cache app.

2.9.1 Use the Browser Cache Cleaner App



In the Apps menu, click on **Browser Cache Cleaner**.

 DHIS 2 browser cache cleaner 1 Select all Deselect all Clear all selected items 3 Local storage 2 1 Select all local storage items Deselect all local storage items ☒ dhis2.dashboard.current.Lyn_Pennington 2 ☒ loglevel Session storage 1 Select all session storage items Deselect all session storage items 2 ☒ uiLocale Indexed database No indexed databases Clear all selected items 3	Any number of items may display. 1. Click on Select all to select all the items in all the sections OR Click on the Select all... button in chosen sections. 2. Click on Deselect all to deselect all the items in all the sections OR Click on the Deselect all... button in chosen sections. 3. Click on Clear all selected items either at the top or the bottom of the window.
 DHIS 2 browser cache cleaner Select all Deselect all Clear all selected items Local storage Local storage empty Session storage Session storage empty Indexed database No indexed databases Clear all selected items	The window shows that no items are cached.

2.9.2 Use the Chrome Clear Cache App

Click on the **Clear Cache** icon to the right of the Google Chrome address bar.

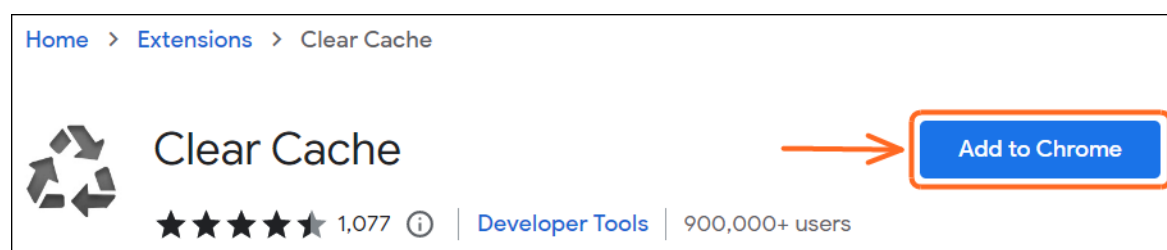


If you don't have the app installed, then follow the instructions below.

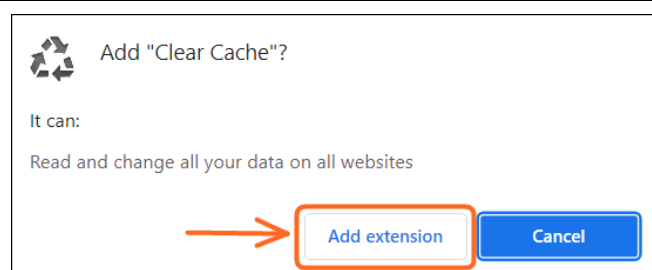
Copy this URL into your browser address bar or click on the link here:

<https://chrome.google.com/webstore/detail/clear-cache/cppjkneekbjaeellbfkmgnhonkkjfpdn>

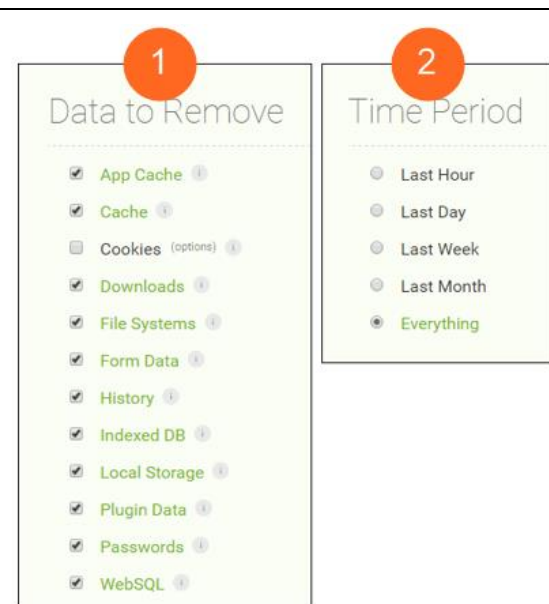
This window will display:



Click on **Add to Chrome**.

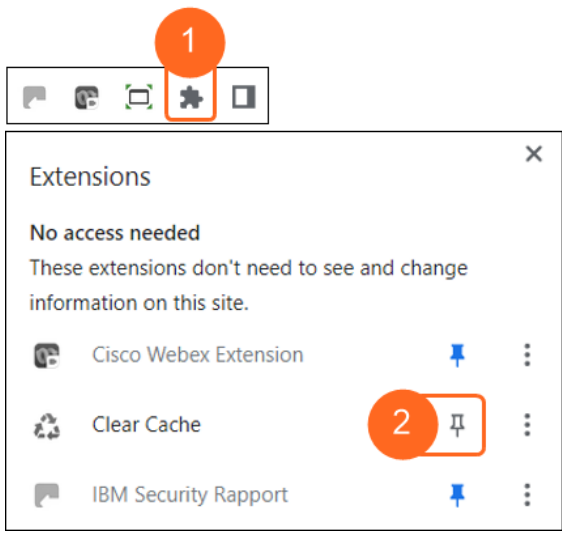


Click on **Add extension**.

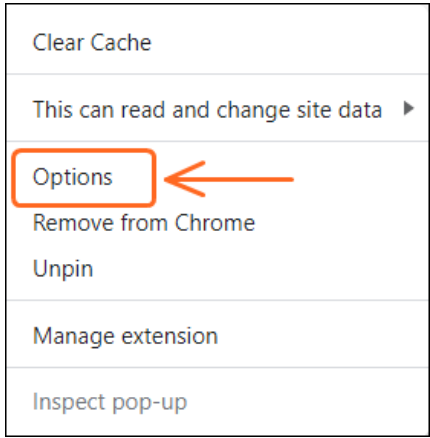


1. Under **Data to Remove**, select everything except cookies.
2. Under **Time Period**, select **Everything**.

When you've done this, you can close the browser tab.

	To pin the extension to the browser: 1. Click on the Extensions icon. 2. Click the Pin icon next to Clear Cache.
---	--

You might have the app installed but need to change the settings.

	Right-click on the Clear Cache icon and click Options. Then select under Data to Remove and Time Period as shown above. Close the browser tab.
--	---

2.10 Metadata / Key Concepts

Metadata is data which describes and gives information about other data.

This section describes the webDHIS metadata and other key concepts that you need to be familiar with.

Note: webDHIS now allows the tracking of metadata changes. NDOH and Provinces are now able to track administrators' actions in changing metadata and will be provided with an extract quarterly which they can review. This has been an audit requirement since last year which can now be implemented.

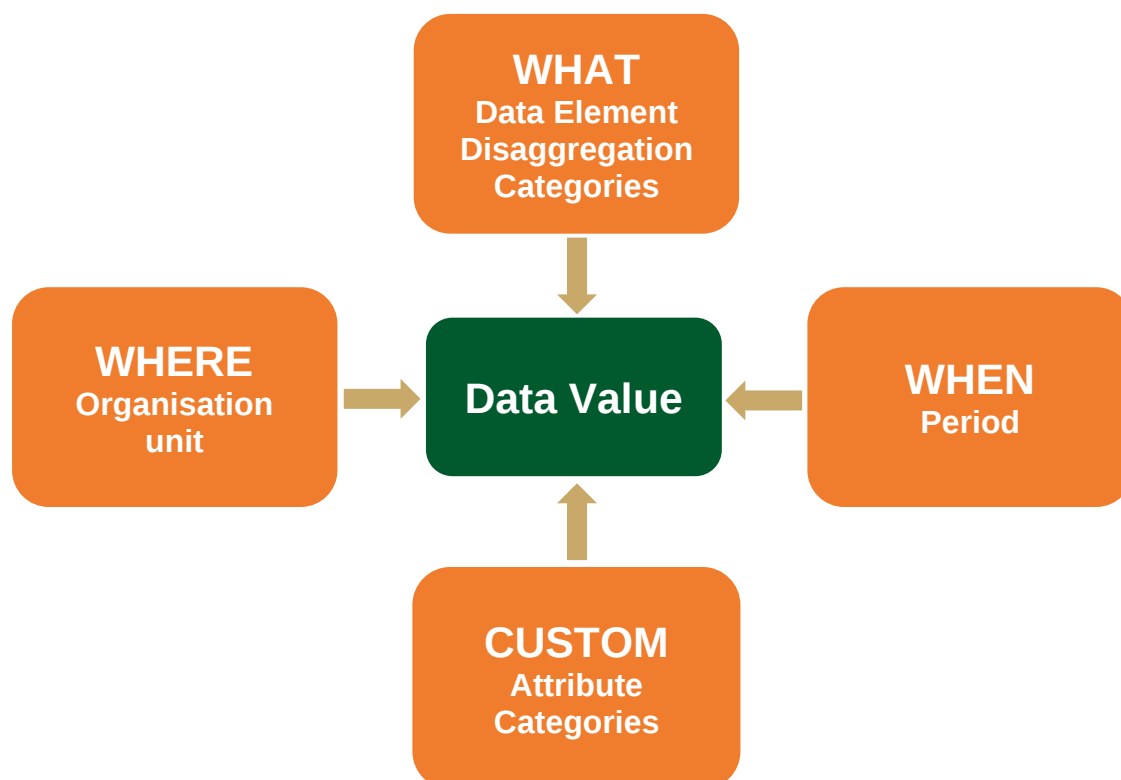
2.10.1 Data Dimensions

A data value in webDHIS is described by at least three data dimensions:

1. Data Dimension (known as the **What** dimension). This represents the specific data being captured, such as the number of activities undertaken at a resource or research station.

2. Organisation Unit Dimension (known as the **Where** dimension). This represents the organisational structure, such as resource centers, districts, or regions.
3. Period Dimension (known as the **When** dimension). This represents the time frame or the reporting period of the data, such as months or years.

These three dimensions form the core building blocks of the webDHIS data model, and no report can be generated accurately if one of these data dimensions is missing.



As an example, if you want to know how many pregnant women in Beet Clinic were given an influenza dose in Week 40 of 2022 as part of the Influenza Campaign, the three dimensions which describe that value are the organisation unit "Beet Clinic", the data element "Influenza doses to pregnant women (campaign)", and the period "Week 40 – 2020-09-28 – 2020-10-04".

Organisation Unit	Data Element	Period	Values
an_Beetle Clinic	Influenza doses to pregnant women (campaign)	Week 34: 2023-08-21 – 2023-08-27	18

So, when you are capturing data, or you are reporting on or analysing data, you will need to specify these three dimensions. A screenshot of data entry in webDHIS is shown below:

Data Entry

Organisation Unit

an_Beetle Clinic

Data Set

Influenza Campaign

Period

Week 34 - 2023-08-21 - 2023-08-27

Prev year

Next year

Campaign H1N1

Filter in section

	Value
Influenza doses to pregnant women (campaign)	18
Influenza dose to all people over 65 years of age and residents of old age homes (campaign)	
Influenza dose to chronic medical conditions including rehabilitation centers (campaign)	
Influenza dose to HIV and AIDS patients (campaign)	

1. Organisation Unit = Beetle Clinic
2. Data element = Influenza doses to pregnant women (campaign) - a data element in the "Influenza Campaign" Data Set
3. Period = Week 34 – 2023-08-21 – 2023-08-27

Note: In addition to the organisation unit, period and data dimensions, data values may also be associated with a custom dimension consisting of attribute categories. These are outside the scope of this manual.

2.10.2 Data Elements – the “What” Dimension

The data element is perhaps the most important building block of a webDHIS database. It explains what is being collected or analysed. In some contexts, this is referred to an indicator, but in webDHIS we call this unit of collection and analysis a data element.

The data element often represents a count of something, and its name describes what is being counted, e.g. "BCG doses" or "Malaria cases". When data is collected, validated, analysed, reported, or presented it is the data elements or expressions built upon data elements that describes the WHAT of the data. As such the data elements become important for all aspects of the system and they decide not only how data is collected, but more importantly how the data values are represented in the database, which again decides how data can be analysed and presented.

Each data element lives on its own in the database, completely detached from the collection form, and reports and other outputs are based on data elements and expressions/formulas composed of data elements and not the data collection forms. A simple rule of thumb is that the name of the data element

must be able to stand on its own and describe the data value also outside the context of its collection form. Sound naming conventions are therefore extremely important.

DOMAIN TYPE

This defines whether a data element is an aggregate or tracker type of data element.

VALUE TYPE

This defines the type of data this data element will be used to record. Some of the possible values for this are:

Value Type	Description
Coordinate	A point coordinate specified as longitude/latitude in decimal degrees.
Date	Dates rendered as calendar widget in data entry.
Integer	Any whole number (positive and negative), including zero.
Long text	Textual value. Renders as text area with no length constraint in forms.
Negative integer	Any whole number less than (but not including) zero.
Number	Any real numeric value with a single decimal point. Thousands separators and scientific notation is not supported.
Percentage	Whole numbers inclusive between 0 and 100.
Positive integer	Any whole number greater than (but not including) zero.
Positive or zero integer	Any positive whole number, including zero.
Text	Textual value. The maximum number of allowed characters per value is 50,000.
Yes/No	Boolean values, will render as drop-down lists in data entry.
Yes only	True values, will render as checkboxes in data entry.

AGGREGATION TYPE

This defines the default aggregation operation that will be used on this data element. Most data elements should have the "SUM" option set. This includes all data elements which should be added together. Other data elements, such as staffing levels, should be set to use the "AVERAGE" operator, when values along the time dimension should not be added together, but rather averaged. Some of the aggregation operators are:

Aggregation Operator	Description
Average	Average the values in both the period and the organisation unit dimensions.
Average (sum in organisation unit hierarchy)	AVERAGE of data values in the period dimension but SUM of values in the organisation unit dimension (used for Population). Also used for indicators you want to annualise.
Count	Count of data values.
Min	Minimum of data values.
Max	Maximum of data values.
None	No aggregation is performed in any dimension.
Sum	Sum of data values in the period and organisation unit dimension

DISAGGREGATION

It is possible to see more detail for a data element by using one of the defined disaggregation categories or category combinations. An example of a disaggregation category is “Gender”. The category options defined for the category “Gender” are “Male” and “Female”. So, for example, if you have added the data element “Malaria cases” to your pivot table or graph, you can also choose “Gender” under the Additional Dimensions to look at the breakdown of that data element into values for “Male” and “Female”.

2.10.3 Data Element Groups

A data element group is a collection of data elements with a common theme. For example, the two data elements “Measles 1st dose under 1 year” and “OPV 1st dose under 1 year” might be grouped together into a data element group called “EPI”.

Groups are useful both for browsing and presenting related data but can also be used to aggregate data elements together.

2.10.4 Data sets

All data entry in webDHIS is organised using data sets. A data set is a collection of data elements grouped together for data collection.

A data set has a data collection frequency which can be set through the period type property. This frequency can be one of several period frequencies depending on the need such as daily, weekly, monthly, quarterly, six-monthly, or yearly.

Data sets also are assigned to specific organisation units which will be allowed to enter data for all data elements in that data set.

Data sets are not linked directly to the data values, only through their data elements and frequencies, and as such a dataset can be modified, deleted, or added at any point in time without affecting the raw data already captured in the system, but such changes will of course affect how new data will be collected.

2.10.5 Organisational Hierarchy

The organisational hierarchy defines the organisation structure of the webDHIS instance, such as how the health facilities, administrative areas and other geographical areas are arranged with respect to each other. The webDHIS is structured so that the organisational hierarchy is a geographical hierarchy, and the Maps app depends on this.

The design of this hierarchy will determine the geographical units of analysis available to the users as data is collected and aggregated in this structure. There can only be one organisational hierarchy.

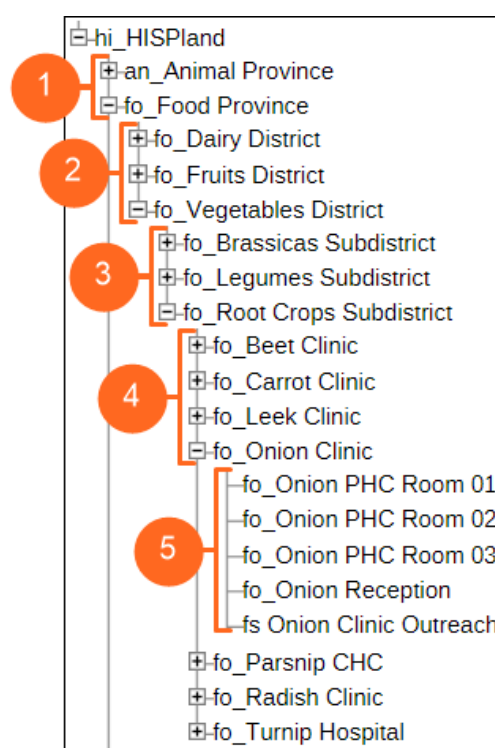
Normally data is collected at the lowest level, e.g. the health facility, but can be collected at any level within the hierarchy. The organisation unit level capturing the data always represents the lowest level of detail that is possible to use in data analysis, and the organisational levels define the available levels of aggregation along a geographical dimension.

The hierarchy has one root unit (e.g. Country) and any number of levels and nodes below. Typically, national organisational hierarchies in public health have 4-6 levels, but any number of levels is supported.

The hierarchy is built up of parent-child relations as shown in the diagram.

1. A country (parent) might have several provinces as its children.
2. Each province (now the parent) might have several districts as its children.
3. Each district (now the parent) might have several sub-districts as its children.
4. Each sub-district (now the parent) will have several health facilities as its children.
5. Each facility (now the parent) may have several service points as its children.

Normally the health facilities and their service points (from which data is typically collected) will be located at the lowest levels.



2.10.6 Organisation Units (Orgunit) – the “Where” Dimension

Each level/node in the organisational hierarchy is called an organisational unit.

To locate an orgunit in the hierarchy you can either navigate through the tree by expanding the branches (click on the + symbol), or search for it by typing the orgunit name in the Search field (click the green symbol above the root of the hierarchy).

2.10.7 Organisation Unit Levels (OU Levels)

This refers to a level within an organisational hierarchy. Typically, countries are administered at different levels. In South Africa:

1. OU1 = Country
2. OU2 = Province
3. OU3 = District
4. OU4 = Sub-district
5. OU5 = Facility
6. OU6 = Service point

In the context of webDHIS reporting units are typically at the lowest orgunit level. Data is aggregated upwards from the lowest orgunit level to the highest during the analytics process, so reports are available at all levels.

2.10.8 Organisation Unit Group Sets and Groups

Group sets are a way of adding more categorisation to orgunits. Using these group sets will simplify how reporting is done and facilitate analysis using tools like pivot tables and charts.

Group sets and groups are best explained by way of an example. Let's say all facilities are given an official type like "Clinic", "Community Health Centre" or "District Hospital". It is then possible to create an organisation unit group set called "Type" and add groups with the names of the types mentioned above.

For the group sets to function properly in analysis, each organisation unit must be (compulsory) a member of a single group (exclusive) within a group set. In other words, a facility must belong to a group, but it cannot not be both a "Clinic" and a "Community Health Centre".

2.10.9 Periods – the “When” Dimension

A period is a specific time interval which consists of a start date and end date. For instance, "August 2023" would refer to the time interval of August 1st, 2023 – August 31st, 2023.

FIXED PERIODS

In webDHIS, periods are organised according to a set of fixed period types described below.

- Daily
- Weekly: Begins on Monday and ends on Sunday
- Weekly (Start Wednesday): Begins on Wednesday and ends on Tuesday
- Weekly (Start Thursday): Begins on Thursday and ends on Wednesday

- Weekly (Start Saturday): Begins on Saturday and ends on Friday
- Weekly (Start Sunday): Begins on Sunday and ends on Saturday
- Monthly: Refers to standard calendar months
- Bi-monthly: Two-month periods beginning on January 1st
- Quarterly: Standard ISO quarters, beginning on January 1st
- Six-monthly: Six-month periods beginning on January 1st
- Six-monthly April: Six-month periods beginning on April 1st
- Yearly: This refers to a calendar year
- Financial year (Start October): Financial year period beginning on October 1st and ending on September 30th of the calendar next year
- Financial year (Start July): Financial year period beginning on July 1st and ending on June 31st of the calendar next year
- Financial year (Start April): Financial year period beginning on April 1st and ending on March 30st of the calendar next year

A data entry form therefore is associated with a single period type to make sure data is always collected according to the correct and same periodicity across the country.

RELATIVE PERIODS

In addition to the fixed period types described in the previous section, webDHIS also supports relative periods for use in the analysis modules. (See Chapter 5: Using Reporting Functionality)

Relative periods are grouped into:

- Days e.g. Today, Last 7 days
- Weeks e.g. Last 12 weeks
- Months: e.g. Last 6 months
- Bi-months e.g. Last bi-month
- Quarters e.g. Last 4 quarters
- Six-months e.g. Last six-month
- Financial years e.g. This financial year
- Years e.g. Last 5 years

A simple scenario is when you want to design a monthly report that can be reused every month without having to make changes to the report template to accommodate for the changes in period by using the relative period called "Last month".

A slightly more advanced use case is when you want to make a monthly summary report for immunisation and want to look at the data from the current (reporting) month together with a cumulative value for the year so far. The relative period called "This year" provides such a cumulative value relative to the reporting month selected when running the report. Other relative periods are the last 3-, 6-, or 12-months periods which are cumulative values calculated back from the selected reporting month. If you want to create a report with data aggregated by quarters (the ones that have passed so far in the year) you can select "Last four quarters".

AGGREGATION OF PERIODS

While data needs to be collected on a given frequency to standardise data collection and management, this does not put limitations on the period types that can be used in data analysis and reports. Just like data gets aggregated up the organisational hierarchy, data is also aggregated according to a period hierarchy, so you can create quarterly and annual reports based on data that is being collected monthly. The defined period type for a data entry form (data set) defines the lowest level of period detail possible in a report.

2.10.10 Validation rules

Validation rules are data quality checks that help to improve the quality of the data being collected. Rules are composed of left and right-side expressions that again are composed of data elements, with an operator between the two sides. Typical rules are comparing subtotals to totals of something. For example, if you have two data elements "HIV tests taken" and "HIV test result positive" then you know that in the same form (for the same period and organisational unit) the total number of tests must always be equal or higher than the number of positive tests. These rules should be absolute rules meaning that they are mathematically correct and not just assumptions or "most of the time correct".

The rules can be run in data entry, after filling each form, or as a more batch like process on multiple forms at the same time, e.g. for all facilities for the previous reporting month. The results of the tests will list all violations and the detailed values for each side of the expression where the violation occurred to make it easy to go back to data entry and correct the values.

In South Africa, we have created a scenario where services which are part of validation rules are not always captured in the same organisation unit. We need to accept that validation rules cannot cater for this scenario.



Validation rules are valid for the same organisation unit, for the same period, for the data elements which are part of the validation rule. But a validation rule cannot check a data element specified on the left side of the rule which is captured in one consulting room against a data element specified on the right side of the rule which is captured in another consulting room.

2.10.11 Indicators

Indicators represent perhaps the most powerful data analysis feature of webDHIS. While data elements represent the raw data (counts) being collected, indicators represent formulas providing coverage rates, incidence rates, ratios, and other formula-based units of analysis.

Indicators are composed of multiple data elements, and typically consist of a numerator and denominator. Calculated totals do not have a denominator. Indicators are never entered directly in webDHIS through data entry but are derived from combinations of data elements and factors. Indicators are used to calculate coverage rates, incidence and other values using data element values that have been entered into the system.

Most report modules in webDHIS support both data elements and indicators, but the important difference and strength of indicators versus raw data (data element's data values) is the ability to compare data across different geographical areas (e.g. highly populated vs rural areas) as the target population can be used in the denominator.

An indicator is made up of a factor (e.g. 1, 100, 100, 100 000), a numerator and a denominator; the two latter are both expressions based on one or more data elements. For example, the indicator "BCG dose coverage (annualised)" is defined a formula with a factor 100 and annualisation factor, a numerator ("BCG dose") and a denominator ("Population under 1 year"). The indicator "DPT1 to DPT3 drop-out rate" is a formula of $100 \% \times ("DPT1 \text{ doses given}" - "DPT3 \text{ doses given}") / ("DPT1 \text{ doses given}")$.

"Calculated data elements" are created using indicators in webDHIS. You create an indicator type with a factor of 1 and set the Number option to Yes, which means that the indicator will effectively not have a denominator.

Legends can be assigned to indicators. When you then select the indicator in a Pivot Table or Map, the system automatically selects the assigned legend. An example of a legend for vaccination coverage could look like this:

Legend item	Start value	End value
Low bad	0	50
Medium	50	80
High good	80	100
Too high	100	1000

Note: In South Africa, we have used the National Average for indicators that do not have APP targets.

INDICATOR TYPE

This field will determine a factor that will automatically be applied during the calculation of the indicator. Possible choices are determined by the Indicator Types (described below). For instance, a "Percent" indicator will automatically be multiplied by a factor of 100 so that it will display as a percentage.

Name	Factor
%	100
Days	1
No	1
Number Only	1
per1mill	1 000 000

Name	Factor
per100K	100 000
per10K	10 000
per1K	1 000

2.10.12 Indicator Groups

Indicator groups function essentially the same as data element groups. Multiple indicators can be assigned to a group for easy filtering and analysis.

2.10.13 Users

A user in the webDHIS context is a human who is using the software. Each user in webDHIS has a user account which is identified by a username. A user account allows the user to authenticate to system services and be granted authorisation to access them. To log in (authenticate) the user is required to enter a valid combination of username and password. If that combination matches a username and password registered in the database, the user can enter.

It is important that the details entered for a user are correct, for example the email address, as certain functions in webDHIS rely on sending emails to users. It is also useful to be able to communicate to users directly over email and telephone to discuss data management issues or to sort out potential problems with the system.

Users are assigned to at least one data capture and maintenance organisation unit, even if they are not going to capture data. Users will have access to all children of the organisation units which have been assigned to them. This controls which organisation units the user can enter data for in data entry (if they have the authority to do so).

Users can be assigned to any number of data view organisation units. This controls which organisation units the user can view aggregated data for in analysis modules.

2.10.14 User Roles

A user role in webDHIS is a group of authorities. An authority in this regard means the permission to perform one or more specific tasks. These permissions can be finely tuned so that certain users can only enter data, while others may generate reports. Multiple user roles can be created, each with their own set of permissions, and then assigned to users which grant them certain privileges within the system.

In addition, a user role is associated with specific data sets and programs further defining where a user may perform their specific tasks.

2.10.15 User Groups

A user group is a group of users. You use user groups when you set up sharing of objects or notifications, for example sharing a form that you have uploaded as a resource or a pivot table favourite that you have created.

Note: In addition to the organisation unit, period and data element dimensions, data values may also be associated with a custom dimension consisting of attributes. A common use of this dimension is to describe data values which are reported by multiple partners in the same location for the same data element and time period. In principle, it can be used as a "freeform" dimension, to describe multiple observations of the same phenomena at the same place and time.

This concludes Chapter 2 on getting started with webDHIS. Chapter 3 focuses on capturing data.

Chapter 3. Capture Aggregate Data

After reading this chapter you will be able to:

- Explain how you can improve data quality when entering data.
- Use the Data Entry app to capture aggregate data.
- Describe webDHIS data entry checks (input validation).
- Explain the use of the Data Information Window.
- Understand offline data entry.
- Print or save a data entry form.
- Submit data for reporting.

3.1 Data Quality in Data Capture

You can do a lot to minimise mistakes and improve data quality when capturing data.

Here are the 10 top things we see going wrong, that could be detected and corrected by simply eyeballing the data:

1. **Calculation errors** - Mistakes happen when transferring from paper forms or totaling data before data entry.
2. **Missing data (gaps)** - The Data Set is missing for the period (e.g. for a month) or specific data elements are unexpectedly missing.
3. **Duplicate data** - The same values have been captured for 2 months in a row.
4. **Thumb-suck** - Staff fill in a likely looking number, instead of using the paper data collection tools.
5. **Unlikely values** - For a Data Element, e.g. there were 10 live births and all 10 live births weighed less than 2500 grams.
6. **Contradictions** - Between data elements without explanation, e.g. if you have 10 deliveries you expect around 10 births.
7. **Abnormally high or low numbers** - Data is outside the min-max range without an explanation.
8. **Typing error** - The paper copy is incorrectly typed.
9. **Capture in wrong field** - Accidental data entry in the wrong field.
10. **Preferential end digits** - Look out for numbers such as 1000, 750, 100, 85, 55. If you see a lot of these numbers, it looks a little suspicious.

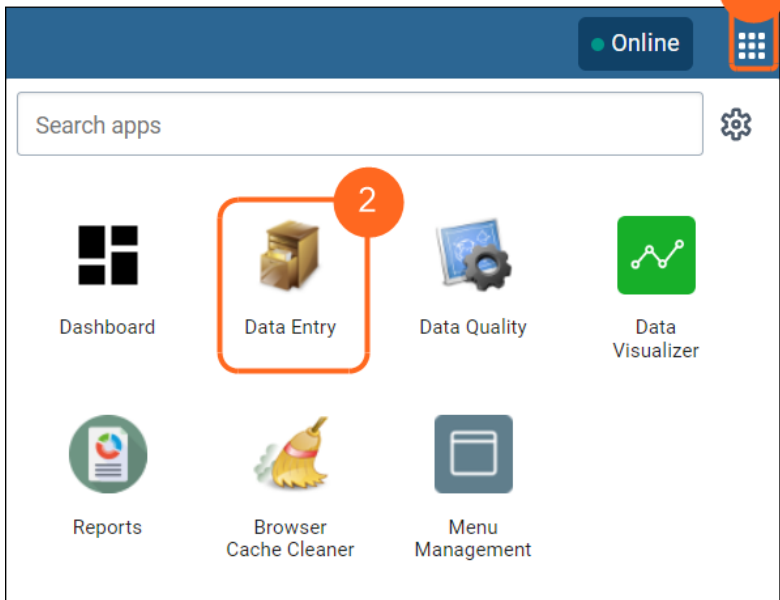
3.2 About the Data Entry App

The “Data Entry” app is where you manually enter aggregated data in webDHIS. You register data for an organisation unit, a period, and a set of data elements (contained in a data set) at a time. A data set often corresponds with a paper-based data collection tool.

Note: When an organisation unit is closed, you cannot register or edit data for this organisation unit in the “Data Entry” app.

3.3 Access a Data Entry Form

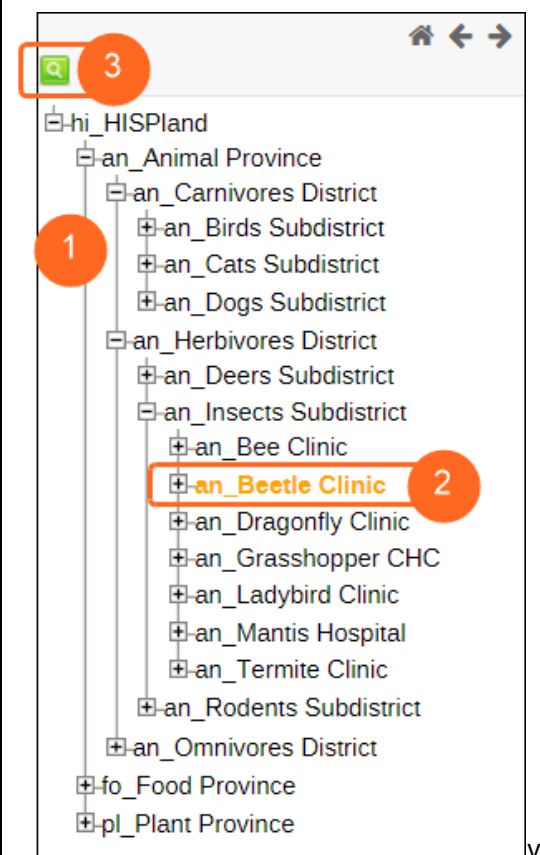
3.3.1 Access the Data Entry App



1. Click on **Apps** in the top menu.
2. Click on **Data Entry**.

The “Apps” window shows only those apps that have been allocated to you as a specific user

3.3.2 Select an Organisation Unit (the “Where” dimension)



1. Click on the + next to an organisation unit to expand it to see it. Keep doing this until you have found the organisation unit where you want to capture data.

Note: You usually enter data at facility or service point level.

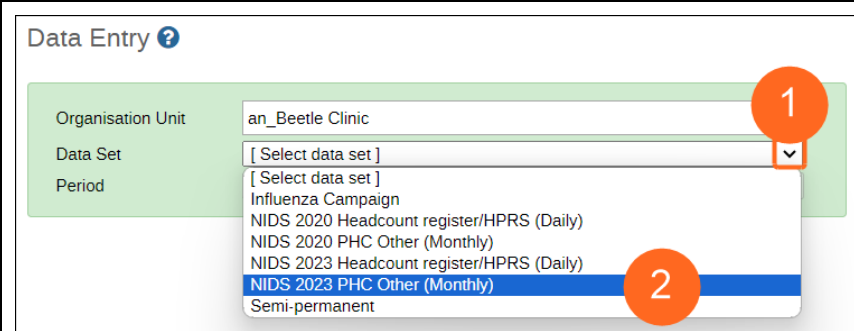
2. Click on the organisation unit.

3. **TIP:** If you're having trouble finding the orgunit that you want, click on the green **Search** button, and start typing the name of the orgunit. It should appear in the dropdown box for you to select.

You will only see the orgunits assigned to you, so you may not see the whole organisational hierarchy

3.3.3 Select a Data Set (the “What” dimension)

Note: During the NIDS review process, provinces customised the names of their data sets. The data sets shown here are for the HISPland database and may differ from the ones that you see for your province.



1. Click on the **Data Set** dropdown arrow.

2. Click on the required **Data Set** in the dropdown list.

Note: You will only see the data sets assigned to the orgunit you are using.

3.3.4 Select a Period (the “When” dimension)

The available periods are controlled by the period type (reporting frequency) of the data set that has been selected which could be e.g. Daily, Weekly, Monthly, Quarterly or Yearly.

You usually choose the period in which the data was collected. This period is usually not the same as the current period e.g. if you want to enter data for a monthly data set for July 2023, the period will only become available in the dropdown list after the month has ended, on 1st August 2023.

Data Entry ?

Organisation Unit

an_Beetle Clinic

Data Set

NIDS 2023 PHC Other (Monthly)

Period

[Select period]

Prev year

Next year

[Select period]

August 2023

July 2023

June 2023

May 2023

April 2023

March 2023

February 2023

January 2023

1. Click on the **Period** dropdown arrow.
2. Click on **Prev year** or **Next year** to see a list of periods for years other than the current year.
3. Click on the required **Period** in the dropdown list.

TIP: You cannot select a period before you have selected a data set.

3.3.5 Enter Data

TB Monthly

Filter in section	MonthTotal
Child under 5 years eligible for TB test	
Client 5 years and older eligible for TB test	
DS-TB bacteriologically confirmed 5 years and older	
DS-TB Bacteriologically confirmed under 5 years	

The data entry form displays.

1. Click in a field to enter a value. When you have entered your value, press **Enter** to move to the next field.

TIP: To move to the next field, press the “Tab” key or the “Down Arrow” key. To move back to the previous field, press “Shift” + “Tab” or the “Up Arrow” key.

- To filter the list of data elements shown, click in **Filter in section** and type in your search criteria e.g. “screen” or “contact”. This is useful for sections with many data elements, and where there may not be values for every data element.

3.4 Data Entry Forms

The “Data Entry” app uses data entry forms to display the data sets. There are three types of data entry form:

3.4.1 Default/Standard Form

Campaign H1N1 1 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 70%;">Filter in section</th> <th style="width: 30%;">Value</th> </tr> </thead> <tbody> <tr> <td>Influenza doses to pregnant women (campaign)</td> <td> </td> </tr> <tr> <td>Influenza dose to all people over 65 years of age and residents of old age homes (campaign)</td> <td> </td> </tr> <tr> <td>Influenza dose to chronic medical conditions including rehabilitation centers (campaign)</td> <td> </td> </tr> <tr> <td>Influenza dose to HIV and AIDS patients (campaign)</td> <td> </td> </tr> </tbody> </table>	Filter in section	Value	Influenza doses to pregnant women (campaign)		Influenza dose to all people over 65 years of age and residents of old age homes (campaign)		Influenza dose to chronic medical conditions including rehabilitation centers (campaign)		Influenza dose to HIV and AIDS patients (campaign)		1. A default form can be a list of data elements arranged in a single column.					
Filter in section	Value															
Influenza doses to pregnant women (campaign)																
Influenza dose to all people over 65 years of age and residents of old age homes (campaign)																
Influenza dose to chronic medical conditions including rehabilitation centers (campaign)																
Influenza dose to HIV and AIDS patients (campaign)																
Under 5/5 and above 2 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="width: 25%;">Filter in section</th> <th style="width: 37.5%;">Under 5 years</th> <th style="width: 37.5%;">5 years and above</th> </tr> </thead> <tbody> <tr> <td>Inpatient cases</td> <td> </td> <td> </td> </tr> <tr> <td>Inpatient deaths</td> <td> </td> <td> </td> </tr> <tr> <td>Inpatient malaria cases</td> <td> </td> <td> </td> </tr> <tr> <td>Inpatient malaria deaths</td> <td> </td> <td> </td> </tr> </tbody> </table>	Filter in section	Under 5 years	5 years and above	Inpatient cases			Inpatient deaths			Inpatient malaria cases			Inpatient malaria deaths			2. It can also be a table with multiple columns (e.g. to show data disaggregation categories so that a value is entered for each), or it can be a combination of the two.
Filter in section	Under 5 years	5 years and above														
Inpatient cases																
Inpatient deaths																
Inpatient malaria cases																
Inpatient malaria deaths																

3.4.2 Section Form

A section form can be set up in the same way as the default/standard form described above.

ART Monthly	
Filter in section	MonthTotal
ART adult naive start ART in month	
ART adult remain on ART end of period	
ART child under 15 years naive start ART in month	
ART child under 15 years remain on ART end of period	

HIV	
Filter in section	MonthTotal
Antenatal client started on PrEP	
HIV positive known but NOT on ART	
Male circumcision performed by medical professional in the traditional sector (10-14 years)	
Male circumcision performed by medical professional in the traditional sector (15 years and older)	
Medical male circumcision 10-14 years	
Medical male circumcision 15 years and older	
Person exposed to HIV who tested HIV negative and was issued with Post Exposure Prophylaxis	
Start PrEP	
Total remaining on PrEP	

However, the Section Form is split into multiple sections, to mirror the paper tool more closely and to make data capturing easier and more accurate.

In this case, where the sections appear on a single form, you can leave the default, which is to **Show all sections**. In this case the data entry form will present the sections in the order in which they were created OR

You can choose a specific section (which is very useful for long forms!):

Organisation Unit	an_Beetle Clinic		
Data Set	NIDS 2023 PHC Other (Monthly) ▼		
Period	July 2023 ▼	Prev year	Next year
Filter on section	Show all sections ▼ Show all sections ART Monthly HIV Management PHC Maternal and neonatal Quality TB Monthly Women's Health		

1. Click on the **Filter on section** dropdown arrow.
2. Click on the required **section** in the dropdown list.

STI syndromes - new episodes STI headcount - new episodes Referral to doctor <table border="1"> <thead> <tr> <th>Filter in section</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Male Urethritis Syndrome treated - new episodes (Sentinel)</td> <td></td> </tr> <tr> <td>Genital ulcer syndrome male - new episodes</td> <td></td> </tr> <tr> <td>Genital warts male - new episodes</td> <td></td> </tr> <tr> <td>Other STI male - new episodes</td> <td></td> </tr> </tbody> </table>	Filter in section	Value	Male Urethritis Syndrome treated - new episodes (Sentinel)		Genital ulcer syndrome male - new episodes		Genital warts male - new episodes		Other STI male - new episodes		Sections can also be displayed as tabs where each tab represents one section. To move between sections, click on the tab name.
Filter in section	Value										
Male Urethritis Syndrome treated - new episodes (Sentinel)											
Genital ulcer syndrome male - new episodes											
Genital warts male - new episodes											
Other STI male - new episodes											

3.4.3 Custom Form

If the form you want to design is too complicated for default or section forms, you can create a custom form. This makes data capturing easier and should reduce the number incorrectly entered data elements.

Note: Custom forms:

- Take more time and effort to setup than default/standard or section forms.
- Should only be used if the form's design is not likely to change soon after implementation or frequently thereafter.

Data Entry ?

Organisation Unit

an_Beetle Clinic

Data Set

Measles Campaign

Period

2022-04-04

Prev year

Next year

Measles dose 6-11 months	Measles dose 12-59 months	Measles dose 5-14 years

Complete

Incomplete

Run validation

Unlike default/standard or section forms, custom forms can also display **calculated** fields or indicators where all the data elements are captured in the same form.

This example shows a custom form for an EPI Stock data set:

Commodity	Start Balance	Quantity Received	Quantity Dispensed	Discarded (Expired)	Discarded (Damages)	Discarded (VMM change)	End Balance	Total Discarded
BCG Doses	120	40	50	1	1	0	108	2
OPV Doses							0	0
Measles Doses							0	0

1. Fields “Start Balance”, “Quantity Received”, “Quantity Dispensed”, “Discarded (Expired)”, “Discarded (Damages)” and “Discarded (VMM change)” are all entered values.
2. The fields “End Balance” and “Total Discarded” are calculated from these values.

3.5 Enter Data

3.5.1 Data Entry Fields

Various types of data can be captured on webDHIS forms. The data that you enter in a field is determined by the data type of the data element that you are capturing. Data types can be as follows:

Immunization Immunization dose administration <table border="1"> <tr> <th>Filter in section</th><th colspan="2">Fixed</th><th colspan="2">Outreach</th></tr> <tr> <th></th><th><1y</th><th>>1y</th><th><1y</th><th>>1y</th></tr> <tr> <td>BCG doses given</td><td>4</td><td>2</td><td>2</td><td>34</td></tr> <tr> <td>Fully Immunized child</td><td>23</td><td>23</td><td>23</td><td>34</td></tr> <tr> <td>LLITN given at Penta3</td><td>23</td><td>32</td><td>23</td><td>23</td></tr> <tr> <td>OPV0 doses given</td><td>23</td><td>23</td><td>23</td><td>34</td></tr> <tr> <td>OPV1 doses given</td><td></td><td>12</td><td>10</td><td>34</td></tr> </table>	Filter in section	Fixed		Outreach			<1y	>1y	<1y	>1y	BCG doses given	4	2	2	34	Fully Immunized child	23	23	23	34	LLITN given at Penta3	23	32	23	23	OPV0 doses given	23	23	23	34	OPV1 doses given		12	10	34	1. Positive or Zero Integer For example, “OPV1 doses given”.
Filter in section	Fixed		Outreach																																	
	<1y	>1y	<1y	>1y																																
BCG doses given	4	2	2	34																																
Fully Immunized child	23	23	23	34																																
LLITN given at Penta3	23	32	23	23																																
OPV0 doses given	23	23	23	34																																
OPV1 doses given		12	10	34																																
Facility Notes <table border="1"> <tr> <th>Filter in section</th><th>Value</th></tr> <tr> <td>General state of facility</td><td>This facility seems to have a few issues here and there.</td></tr> <tr> <td>Additional notes related to facility</td><td>Staff seemed friendly and nice.</td></tr> </table>	Filter in section	Value	General state of facility	This facility seems to have a few issues here and there.	Additional notes related to facility	Staff seemed friendly and nice.	2. Text / Characters For example, “General state of facility”.																													
Filter in section	Value																																			
General state of facility	This facility seems to have a few issues here and there.																																			
Additional notes related to facility	Staff seemed friendly and nice.																																			

Equipment

3

Filter in section

Value

Date of assessment

Time of assessment

Appropriate hand washing facilities are available

Blood pressure monitor, electronic or manual available

Examination table with pad

Glucometer is present

<Prev Today Next>

March 2022

Su	Mo	Tu	We	Th	Fr	Sa
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

Clear Close

3. **Dates, using a date picker**

For example, "Date of assessment".

Facility Infrastructure

4

Filter in section

Value

Facility has access to running water

Facility has access to stable Internet connectivity

Facility has access to stable electrical power

4. **Yes Only**

For example, "Facility has access to running water".

Procedures

5

Filter in section

Value

Debriefing sessions are part of each resuscitation protocol

Foetal heart recorded hourly

Grounds are maintained and are safe and clean

Lighting and ventilation is observed to be adequate

5. **Yes/No**

For example, "Foetal heart recorded hourly".

Patient Details	
Data element	Value
Gender	Female
Pregnant	
Age (years)	Male
Height in cm	162
Weight in kg	75

6. Options from dropdown lists

For example, “Male” and “Female” for “Gender”.

3.5.2 Data Entry Checks

The webDHIS is designed to help you enter data easily. The webDHIS has some data entry checks (input validations) that help validate data as it is entered in a form.

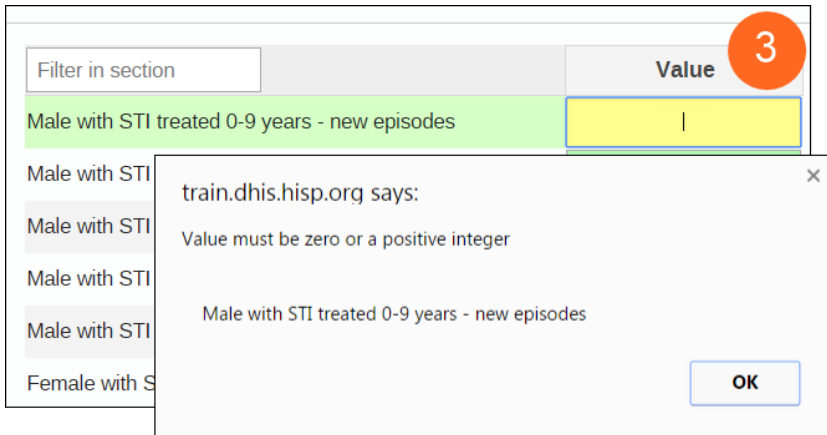
STI syndromes - new episodes		STI headcount - new episodes	
Filter in section			
Male with STI treated 0-9 years - new episodes	0		
Male with STI treated 10-14 years - new episodes	0		
Male with STI treated 15-19 years - new episodes	1		
Male with STI treated 20-24 years - new episodes	19		

Nutrition		
Filter in section	Fixed	
	<1y	>1y
Children getting therapeutic feeding	23	43
Children supplied with food supplements		
Mebendazole/Albendazole (for children 12-59 months)		13
Newborn protected at birth against tetanus (TT2+)	13	
Q_Early breastfeeding (within 1 hr after delivery) at BCG	15	
Q_Exclusive breastfeeding at time of Penta 3	9	

1. **Saved Field** – If the field is coloured **green**, it means that the system has saved the value.

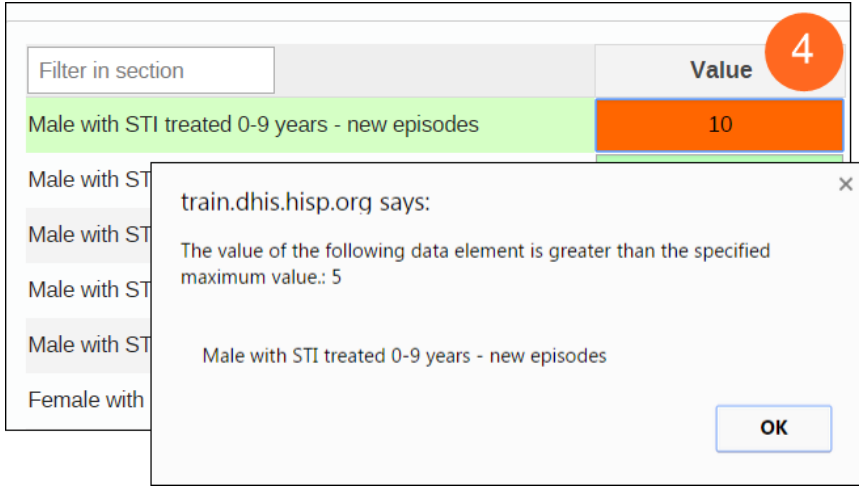
2. **Disabled Field** – If a field is coloured **grey** it means that the field is disabled (locked) and you can't enter a value. The cursor will automatically jump to the next open field.

Note: Fields are usually greyed out if the user needs to see the value but not be able to capture the value themselves. In South Africa, this is used when data is imported from other systems, and we do not want the user to be able to change the imported value.



3. Data Type Validation

– If you type in an invalid value (e.g. write a character in a field that only accepts numeric values), you'll get a pop-up message explaining the problem. The field will be coloured **yellow** (not saved) until you have corrected the value.



4. Min/Max Validation – You can define a range for a specific orgunit and data element. The range has a minimum and maximum limit. If you enter a value that is outside this range (either too low or too high), you'll get a pop-up message that says the value is out of range. The field is saved but will be coloured **orange/red** until you've changed the value, or the range has been changed and the value re-entered.

3.5.3 Using Zeros or Blanks

When entering data, a zero (0) and a blank space () have a different meaning in the webDHIS.

There is no set rule to be followed here. Different countries may have different rules regarding whether or not to leave a field blank or capture a zero.

The thinking in South Africa with DHIS 1.4 has been that a field is left blank if the service is not offered, and a "0" is entered if the service is offered but was not rendered for the period. To support this approach, it was possible in DHIS 1.4 to tailor the data elements seen in a data set, so that you could remove data elements for services that were not offered, thus avoiding a zero being entered when the field should have been left blank.

Currently, it is not possible to customise the data elements shown in a data set in webDHIS – all data elements are displayed whether the service is rendered or not. The ability to customise data elements applicable to a specific organisation unit is on the development agenda and will be available in future versions.

3.6 Data Information Window

The Data Information window contains tools and information that can be useful in improving data quality. To get to this window, double-click anywhere you have entered a number/text/date, or click on the **View comment** callout next to “Yes Only” and “Yes/No” fields. All information displayed in this window is for the specific organisation unit and data element.

3.6.1 Mark a Data Value for Follow Up

If you, for example, enter a suspicious value that you need to investigate further, you can keep it in the system, but mark it for follow up. In the Data Quality app you can then run a Follow-up Analysis to view and correct all marked values.

A suspicious/questionable value is one that is unlikely for the data element you are entering because:

- It might be lower/higher than the normal expected range for that data element.
- It might not correlate with another value as expected.
- It has violated a data validation rule.

	1. Click on the Follow-up Star. If the star becomes coloured, then the value has been marked for follow up. 2. Type an appropriate comment, giving as much information as possible. 3. Click on Save comment. The field is coloured green to indicate that the comment has been saved. Note: If you click the Follow-up Star to mark a data value for follow up, it must always be accompanied by a comment.
---	--

<table border="1"> <tr><td>Medical male circumcision 15 years and older</td><td></td></tr> <tr><td>ART adult naive start ART in month</td><td>20</td></tr> <tr><td>ART child under 15 years naive start ART in month</td><td>0</td></tr> <tr><td>ART adult remain on ART end of period</td><td>1065</td></tr> <tr><td>ART child under 15 years remain on ART end of period</td><td>18</td></tr> <tr><td>Male condoms distributed at facility</td><td>1000</td></tr> <tr><td>Female condoms distributed at facility</td><td>2000</td></tr> <tr><td>Sexual assault case seen - new</td><td></td></tr> <tr><td>TB symptomatic client 5 years and older test positive</td><td>1</td></tr> </table>	Medical male circumcision 15 years and older		ART adult naive start ART in month	20	ART child under 15 years naive start ART in month	0	ART adult remain on ART end of period	1065	ART child under 15 years remain on ART end of period	18	Male condoms distributed at facility	1000	Female condoms distributed at facility	2000	Sexual assault case seen - new		TB symptomatic client 5 years and older test positive	1	If you entered a comment for a “Number”, “Text” or “Date” field, the cell border in the Data Entry form will be coloured green.
Medical male circumcision 15 years and older																			
ART adult naive start ART in month	20																		
ART child under 15 years naive start ART in month	0																		
ART adult remain on ART end of period	1065																		
ART child under 15 years remain on ART end of period	18																		
Male condoms distributed at facility	1000																		
Female condoms distributed at facility	2000																		
Sexual assault case seen - new																			
TB symptomatic client 5 years and older test positive	1																		
Facility Infrastructure <table border="1"> <thead> <tr> <th>Filter in section</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Facility has access to running water</td> <td>☒ </td> </tr> <tr> <td>Facility has access to stable Internet connectivity</td> <td>☐ </td> </tr> <tr> <td>Facility has access to stable electrical power</td> <td>☐ </td> </tr> </tbody> </table>	Filter in section	Value	Facility has access to running water	☒	Facility has access to stable Internet connectivity	☐	Facility has access to stable electrical power	☐	If you entered a comment for a “Yes Only” or “Yes/No” field, the View comment callout in the Data Entry form will be coloured green.										
Filter in section	Value																		
Facility has access to running water	☒																		
Facility has access to stable Internet connectivity	☐																		
Facility has access to stable electrical power	☐																		

3.6.2 Make a Comment about a Data Value

Sometimes a value looks suspicious/questionable, but it does not need investigation or follow up because the reason is known. In this case all you need to do is add a comment, **you do NOT need to mark the value for follow up.**

Comment Value lower than normal in Jul 2023 due to stock out Save comment

3.6.3 Review the Data Element History

The current value plus the last 12 values captured for the specific orgunit and data element are shown in a bar chart. This visual comparison of the data enables you to easily spot values that are higher or lower than normal.

Note: This function is only relevant for numeric data entry fields, not for any other type of data entry field.

Comment ★

This value is very low compared to previous months.

Min-max limits

■ Min limit

■ Max limit

■ Average

Stored by: Demo User

Last updated: 2023-09-03

Data element history Audit trail

Note: The green line represents the defined minimum value, the blue line represents the defined maximum value, and the red line represents the values entered.

If you make changes to the data, you will only see the new values in the data element history graph the next day after analytics

3.6.4 Display a Data Value's Audit Trail

The audit trail allows you to view other data values which have been entered prior to the current value.

Data element history Audit trail

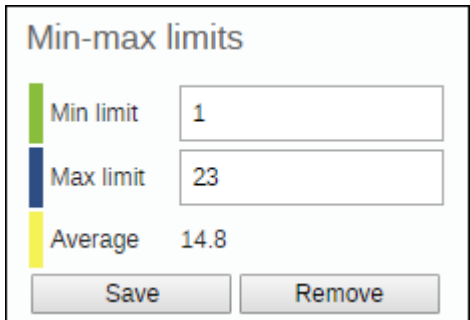
On	Modified by	Value	Modification
2023-09-03 11:08	Demo_User	20	Update

The audit trail also shows when the data value was altered, and which user made the changes.

3.6.5 View the Minimum Maximum Value Range

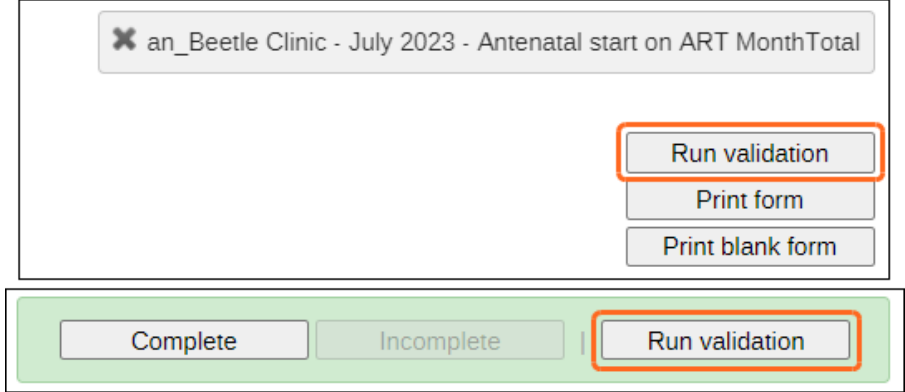
We saw in the section on Data Entry checks that if a value entered is lower than the minimum defined value or higher than the maximum defined value (in other words the value is out of range), then the value is saved, and the cell is coloured orange/red.

Note: This function is only relevant for numeric data entry fields, not for any other type of data entry field.

	The Data Information window shows the minimum and maximum range as well as the average value for the specific orgunit <u>and</u> data element combination. You can also see min/max limits displayed on the bar chart. For most users, these fields will be greyed out (i.e. disabled) as changing the minimum and maximum values is a high-level function.
---	--

3.7 Run Validation

When you've filled in the data entry form, you must validate your data.


--

Click on **Run validation** either at the top right of the data entry form or underneath the data entry form.

All validation rules **which involve data elements in the current data entry form** (data set) are then run against the new data.

Validation

Validation Result

The data entry screen successfully passed validation

If there are no violations of the validation rules, you'll see a message saying that the data entry screen successfully passed validation.

Validation

Validation Result

The data entry screen has the following validation errors, please correct

Validation rule	Left side	Operator	Right side
Antenatal client start on ART must be less than or equal to ART adult naive start ART in month	55.0	<=	4.0
Any tracer item drug stock out must be less than or equal to 1	44.0	<=	1.0

The following values are considered as outliers (min-max or std. dev.), please correct

Data element	Min	Value	Max
Antenatal client start on ART MonthTotal	0	55	6

If there are validation violations and/or outliers, they will be presented in a list. The validation rule will be shown together with the value for the left side of the rule, the operator and the value for the right side of the rule. For outliers, the actual value will be shown, together with the pre-defined minimum and maximum values.



Any violations/outliers must be urgently attended to.

3.7.1 Validation Rules

See the section on Metadata definition for a fuller explanation of validation rules. Here is an example of the definition of the validation rule that was violated in the above screenshot:

← Validation rule ?

1

Name (*)

Antenatal client HIV 1st test VS Antenatal client HIV 1st test positive

Code

2

Description

Antenatal client HIV 1st test must be greater than or equal to antenatal client HIV 1st test positive. There cannot be more positive test results than tests done

3

Instruction

4

Importance (*)

High

Period type (*)

Monthly

Left side

Antenatal client HIV 1st test

5

6

Operator (*)

Greater than or equal to

Right side

Antenatal client HIV 1st test positive

7

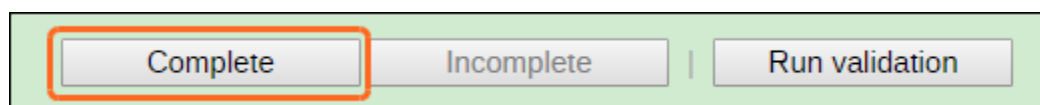
SAVE

CANCEL

1. The name of the rule.
2. A full description of the rule.
3. An optional instruction as to what to do when this rule is violated.
4. The importance of the rule.
5. The data element making up the left side of the rule.
6. The operator.
7. The data element making up the right side of the rule.

Note: Validation rules can now be configured to not be triggered during data entry. This is particularly useful for surveillance-based validation rules, which are often much higher than the norm.

3.8 Complete the Data Entry Form



When you have finished entering, editing, and validating your data, you need to submit it so that it becomes available for reporting. To submit your data, click the **Complete** button at the bottom of the data entry screen.

If you subsequently need to correct your data, do NOT click on the **Incomplete** button as this will skew the reporting rates. Simply change the affected values in the form.



It is very important for users to click on the **Complete** button, otherwise their data will show as missing on completeness and timeliness reports.

3.9 Edit Data

You may need to edit data values sometime after the data was originally captured. You simply need to go back to the data entry form where the data values were captured.

1. Click on the “Apps” button in the top menu.
2. Click on **Data Entry**.
3. Select the organit, data set and period for which you want to edit data.
4. Highlight the existing value, and type in the new value.

Note: If edits to the data are made following investigation, don't forget to remove the Follow-up Star, and change the comment accordingly.

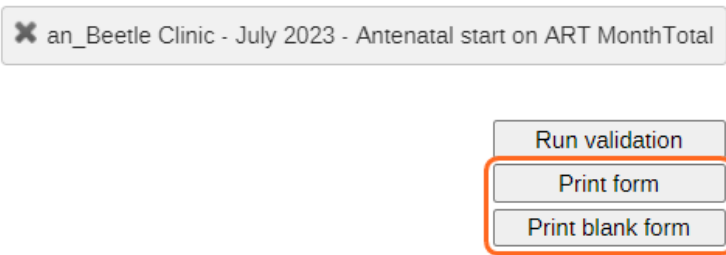
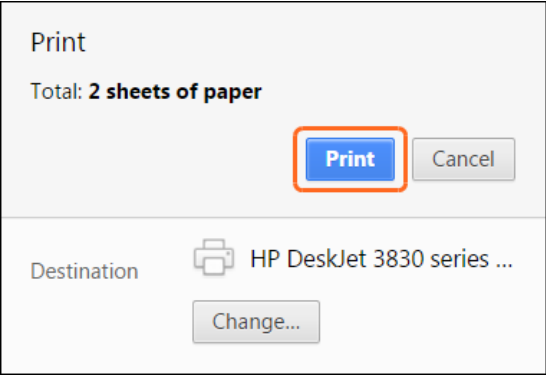
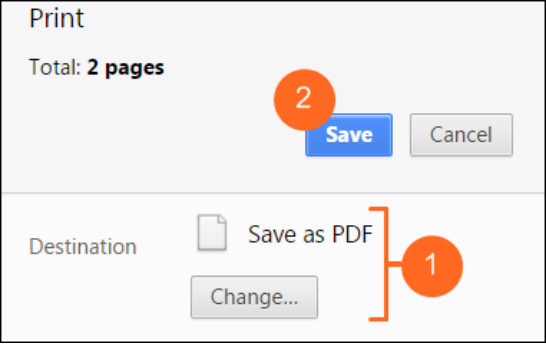


You cannot change data if the data set has been locked, either because there is a maximum period set for changes or because the data set has been signed off and approved at a higher level.

If the fields are grey, it means they have been disabled.

3.10 Print the Data Entry Form

You can print the data entry form that is showing on your screen, or you can print a blank form.

	Click on Print form or Print blank form.
	Click on Print.
	If you want to save your form as a pdf file: 1. Click on Change and select Save as PDF. 2. Click on Save.
 If you want to print a blank or completed form with the facility name on it then you need to create a Data Set Report.	

3.11 Capture Data Offline

It is possible to capture data offline **if you have already previously connected to the Internet and gone into Data Entry and the organisation unit you want to capture data in before** you go offline.

There are several instances when you may want to capture data offline:

- When your power supply is interrupted through no fault of your own.
- When your internet connection is down or erratic.
- When you deliberately choose to go offline.



DO NOT CLEAR THE BROWSER CACHE while you still have data stored offline that you have not yet uploaded. If you do so, it will delete all the offline data captured from the browser cache and you will have to re-capture all that data.



You are online

This message displays when you are capturing data online.



You are offline, data will be stored locally

This message displays when you go offline, either because you lose your connection or choose to do so.

Note: Whatever data you capture is still saved, so the field will be coloured green as normal, but it is being saved to the local browser cache and not to the online server. Because you are offline, you will only be able to view what you have captured offline, as the data on the online server is not accessible.



There is data stored locally, please upload to server

Upload

This message displays when you have captured data offline and are now online again, either because your Internet connection has come back or because you have specifically chosen to do so.

Click on **Upload**.



Upload to server was successful

This message displays when the data upload from your local browser cache to the online server has been successful. You are now able to view all your captured data online.

It's difficult to lose data, even when you have unstable Internet, so an online deployment strategy that uses the Internet is still viable in areas with unstable internet connectivity.

3.12 Running Analytics

Data which is entered into webDHIS must first be processed with the "analytics". This means that data is not immediately available in the analytics resources (such as reports, data visualizer, maps, etc.) after it has been entered. If scheduling is active, the analytics process will run automatically at midnight

each day. This process may take a significant amount of time depending on the amount of data in your database, which is why it is scheduled to run at night. After that, new data which was entered since the last time the analytics process ran, will become visible the next day.

This concludes Chapter 3 on data entry. Chapter 4 focuses on using data quality functionality in webDHIS.

Chapter 4. Use Data Quality Functionality

After reading this chapter you will be able to:

- Explain the characteristics of good quality data.
- Be familiar with methods to improve data quality.
- Generate data quality analyses using the Data Quality app.

4.1 Describing Data Quality

- Poor quality data leads to poor decisions!
- The better the quality of data, the more realistic a picture you have of the health status of your community.
- There is always the possibility of human error when recording any data, hence we implement systems to reduce, check or rectify errors.
- Good data quality should start with reliable and appropriate collection tools and methods.
- If the data collection process is made easy, the chances of getting good quality data are increased.
- Building quality into the process of data collection right from the source will assist data quality control.

4.1.1 Good Quality Data is A.C.C.U.R.A.T.E

Available - at all levels of the Organisational Hierarchy

Comprehensive - collected from all the possible data sources

Consistent - data is usually steady within a range unless there is a change in the situation or an explanation (see E)

Usable - if you don't use the data for action, question why it is collected

Reliable and accurate - enough to support decisions

Appropriate - using the same tools (e.g. reports or registers) and the same indicator calculations

Timely - old data is of historical value only and decisions must be made based on current data

Explained - Strange numbers or inconsistencies need to be explained

The 4 C's
Good quality data is:
Correct
Complete
Consistent
Current

4.2 Methods of Improving Data Quality

4.2.1 Eyeballing Data

Check the data yourself by visually scanning for common sources of errors is one of the easiest methods of improving data quality. Look out for:

- Gaps
- Typing errors
- Duplicate data
- Capture in the wrong field



4.2.2 Establishing Systems

Set up systems to make sure that the data you collect is of good quality right from the start.

Tips for improving the system include:

- **Training** - Train staff in data collection, data quality checks and the use of information for action.
- **Definitions** - Ensure that standardised definitions of data elements and indicators are made available and understood at data collection points - keep a list posted in your facility.
- **Avoiding double counting/gaps** - Look for possible weaknesses in the system which may result in double counting or missing entries.
- **Make it easy** - Make data collection as easy as possible: user friendly tools, limited numbers of data sets, limited number of forms and registers, reduce duplication of entries.
- **Pre-testing** - Pilot any new data collection tools before introducing them.
- **Responsibilities** - Have clearly defined responsibilities at every step in the information cycle.
- **Procedures** - Have formal data quality procedures in place.
- **Feedback** - Provide feedback to staff on the quality of the data they submit.
- **So what?** - Help staff to understand why they collect data.
- Provide feedback on how the data is used by managers and how they can use data themselves either to take local decisions or to lobby for specific management decisions or actions.
- **Find and solve** - If errors are identified, look for the source of the error and correct where possible.
- **Human Resources** - Identify gaps in staffing and motivate strongly for vacant posts to be filled.
- **Timeliness** - Have a calendar for when data is due at each level in the data management process.

4.3 About the Data Quality App

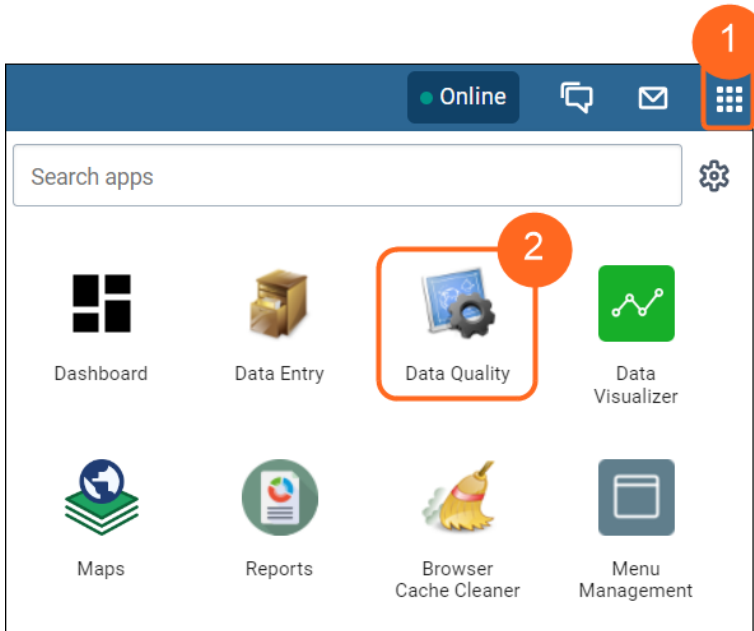
The Data Quality app contains tools to validate the accuracy and reliability of the data in the system. You can assess different dimensions of data quality as outlined in the table below:

Dimension	Description
Correctness	Data should be within the normal range for data collected at that facility. There should be no gross discrepancies when compared with data from related data elements.
Completeness	Data for all data elements for all reporting organisation units should have been submitted.
Consistency	Data should be consistent with data entered during earlier months and years while allowing for changes with reorganisation, increased workload, etc. and consistent with other similar facilities.
Timeliness	All data from all reporting organisation units should be submitted at the appointed time.

In webDHIS, you can verify data quality in different ways, for example:

- At point of data entry, webDHIS can check the data entered to see if it falls within the minimum maximum value ranges of that data element (based on all previous data registered).
- By defining validation rules, which can be run once the user has finished data entry. The user can also check the entered data for a particular period and organisation unit(s) against the validation rules and display the violations for these validation rules.
- By analysing data sets, that is, examine gaps in the data.
- By data triangulation, that is, comparing the same data or indicator from different sources.

4.4 Access the Data Quality App



1. Click on **Apps** in the top menu.

The “Apps” window displays showing only those apps that have been allocated to you as a specific user.
2. Click on **Data Quality**.

4.5 Validation Rule Analysis

A validation rule is based on an expression which defines a relationship between a number of data elements. The expression forms a condition which should assert that certain logical criteria are met.

The expression consists of:

- a left side
- a right side
- an operator

A validation rule could assert that the “ANC HIV re-test” is greater than or equal to “ANC HIV re-test pos”.

The validation rule analysis function tests validation rules against the data registered in the system. Validation violations are reported when the condition defined in the validation rule expression is not met, i.e. when the condition is false.

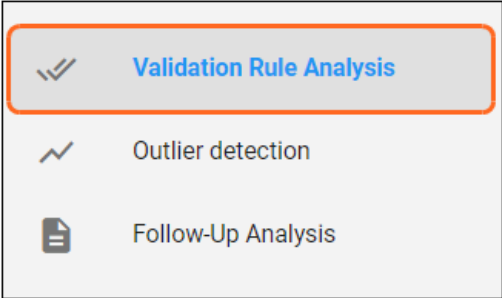
A validation rule analysis can be configured to automatically send out information about validation violations to selected user groups. These messages are called **validation notifications** and they are created in the “Maintenance” app (which is outside the scope of this course). Validation notifications are sent via the internal webDHIS messaging system.

Validation rules have recently been revised so that a validation violation will not be reported if both sides of the rule are equal to “0” or one side of the rule is blank, and that is not significant.



The system is unable to validate data captured against different orgunits / data sets e.g. between consulting rooms and the health facility e.g. “Pneumonic new in child under 5 years” with “PHC headcount under 5 years”, because there is no way to define that logic in the system. Those types of errors must be picked up in reports.

4.5.1 Generate Analysis

	Click on Validation Rule Analysis either in the left menu or in the middle of the screen. The left menu option is shown in the screenshot. The “Validation Rule Analysis” window will open.
---	--

Validation Rule Analysis ?

The screenshot shows the 'Validation Rule Analysis' form. It includes a tree view for 'Parent organisation unit' with 'an_Carnivores District' selected (1). Fields for 'Start Date' (2023-01-01) (2) and 'End Date' (2023-06-30) (3) are present. A 'Validation Rule Group' dropdown is set to 'TB Monthly' (4). Two checkboxes, 'Send Notifications' (5) and 'Persist new results' (6), are visible. A blue 'Validate' button (7) is at the bottom left.

1. Select the **Parent organisation unit** in the organisational hierarchy.
2. Enter a **Start Date** for the analysis or select a date using the calendar picker.
3. Enter an **End Date** for the analysis or select a date using the calendar picker.

TIP: It is wise to use the calendar widget as it is easy to make mistakes when manually entering dates.

4. Choose between including all validation rules or all validation rules from a single group.
5. Click in the **Send notifications** checkbox to trigger validation notifications.

Note: These must have already been set up in the system.

6. Click in the **Persist new results** checkbox to persist any non-persisted results found during the analysis.
7. Click on **Validate**.

4.5.2 Review Results

The analysis process duration depends on the amount of data that is being analysed.

	If there are no violations of the validation rules, a message saying that validation passed successfully will be displayed at the bottom of the screen.
If validation violations were found, they will be presented in a list.	

← Validation Rule Analysis ?

1							3
							Download as PDF Download as XLS Download as CSV
Organisation Unit	Period	Importance	Validation Rule	Value	Operator	Value	Details
an_Bloodhound Clinic	January 2023	HIGH		7.00	<=	0.00	i
an_Woodpecker CHC	January 2023	HIGH		18.00	<=	15.00	i
an_Border Collie Clinic	February 2023	HIGH		11.00	<=	8.00	i
an_Woodpecker CHC	March 2023	HIGH		19.00	<=	17.00	i
an_Bloodhound Clinic	April 2023	MEDIUM		0.00	[Compulsory pair]	0.00	i

1. Details are shown regarding the violation i.e. organisation unit, period, level of importance, validation rule, value for the left and right side of the rule and the operator.

Note: The validation rule is currently not displaying in this list; however, it does display when these results are downloaded.

Validation Details

VALIDATIONS RESULT DETAILS

VALIDATION RULE

Name TB symptomatic client 5 years and older with sputum sent VS TB symptomatic client 5 years and older

Description

LEFT SIDE

DATA ELEMENT	VALUE
TB investigation done 5 years and older	18.00

RIGHT SIDE

DATA ELEMENT	VALUE
TB symptomatic 5 years and older	15.00

CLOSE

2. Click on any **i** icon in the “Details” column to get more information about a validation violation. This will open a popup screen that provides information about the data elements included in the validation rules and their corresponding data values. This information can be used to assist in amending incorrect data.

Note: Values are currently not displaying in this window. This will be fixed in a future upgrade.

[Download as PDF](#)[Download as XLS](#)[Download as CSV](#)

- The validation violations can be exported to a PDF document by clicking on the **Download as PDF** button, to a Microsoft Excel workbook by clicking on the **Download as XLS** button and to a CSV file by clicking on the **Download as CSV** button.

[← Validation Rule Analysis ?](#)

Click on the **left arrow** to return to the window where you entered the parameters for the analysis. You can make changes as required without having to start from scratch each time.

4.6 Follow-Up Analysis

The Follow-Up Analysis function creates a list of all data values which are marked for follow-up. You can mark a data value for follow-up in the “Data Entry” app.



Validation Rule Analysis



Outlier detection

**Follow-Up Analysis**

Click on **Follow-Up Analysis** either in the left menu or in the middle of the screen. The left menu option is shown in the screenshot.

The “Follow-Up Analysis” window will open.

Follow-Up Analysis ?

Data Set

NIDS 2023 PHC Other (... x)

1

Parent organisation unit

hi_HISPlan

- an_Animal Province
 - an_Carnivores District
 - an_Birds Subdistrict**
 - an_Cats Subdistrict
 - an_Dogs Subdistrict
 - an_Herbivores District
 - an_Omnivores District
- fo_Food Province
- pl_Plant Province

2

Start Date

2023-05-01

3

End Date

2023-06-01

4

Follow up

5

- Click on the **Data Set** dropdown arrow and select the required data set.
- Click on the **Parent Organisation unit** in the organisational hierarchy.

3. Enter a **Start Date** for the analysis or select a date using the calendar picker.
4. Enter an **End Date** for the analysis or select a date using the calendar picker.

TIP: It is wise to use the calendar widget as it is easy to make mistakes when manually entering dates.

5. Click on **Follow up**.



A message displays at the bottom of the screen if no values marked for follow-up were found.

If follow-ups were found, they will be presented in a list.

Follow-Up Analysis ?

Download as PDF Download as XLS Download as CSV

Data Element	Organisation Unit	Period	Min	Value	Max	Unfollow	Comment
ART adult re...	an_Crane Clin...	May 2023	0.00	188.00	221.00	☐	

UNFOLLOW

Download as PDF Download as XLS Download as CSV

1. For each value marked for follow-up you can see the data element, organisation unit, period, and value. If minimum and maximum values have been defined in the system, then they are also displayed.

Comment

This value is very high and needs investigation.

CLOSE

2. Click on the **Comment** callout to view the comment added in Data Entry. This will open a popup screen that shows the comment that was entered in Data Entry.



Remember it is good practice to ALWAYS write a comment if you click the **Follow-up Star**.

Download as PDF Download as XLS Download as CSV

3. The results can be exported to a PDF document by clicking on the **Download as PDF** button, to a Microsoft Excel workbook by clicking on the **Download as XLS** button and to a CSV file by clicking on the **Download as CSV** button.

Chapter 5. Use Reporting Functionality

After reading this chapter you will be able to:

- Explain the different reporting tools in webDHIS.
- Produce a Data Set Report.

webDHIS provides a range of reporting tools to view and analyse data.

From the “Reports” app, you can create and access the following reports:

- **Standard report:** Standard reports are built on pivot tables but are more advanced in its design allowing for more cosmetics and styles. These reports can also combine multiple tables and charts in the same report and be made available as one-click reports that are very easy to use. These reports can be downloaded as PDF files which makes them ideal for printing as well as sharing offline.
- **Data set report:** Data set reports are simply a printer friendly way to look at the data entry forms with either raw or aggregated data (over time or place). For data sets with custom data entry forms, the design used in data entry is also used in the data set reports.
- **Reporting rate summary:** These reports provide a nice overview of how many facilities have submitted their data for a given dataset and period. Here you can get both the counts and the percentages showing the reporting rate for all or single data sets.
- **Resource:** The resource tool allows you to upload both files from your local computer to the webDHIS server and to add links to other resources on the Internet through URLs.
- **Org unit distribution report:** These reports are generated from the orgunit group set information and can show what types (and how many of each type) of health facilities are located in a given area (any level in the hierarchy). These reports are automatically generated and display the information in both tables and charts, and downloads in PDF, Excel, and CSV are available.

There are other reporting tools in webDHIS:

- **Data Visualizer:** You can do flexible visualisations of your data as charts and data tables. Any number of indicators and data elements can be included. Several chart types are available, such as column, stacked column, line, area and pie charts. Charts can be downloaded as image and PDF files to your local computer.

Pivot tables are a visualisation type within the Data Visualizer. You can display data element and indicator data by orgunit and period in a typical pivot table view. Large amounts of data can be downloaded offline for analysis as well. Pivot tables can be downloaded as Excel, CSV and HTML files to your local computer.

Charts and pivot tables can be saved so that they can be easily retrieved later and can also be displayed on your personal dashboard.

- **Maps:** You can present and analyse your data using thematic maps. You can view both data elements and indicators and given that you have coordinates for all your orgunits you can drill

down the hierarchy and view maps for all levels from country polygons to facility points. All the map information is built into webDHIS and all you need to do is to register coordinates for your organisation units and the maps will be available.

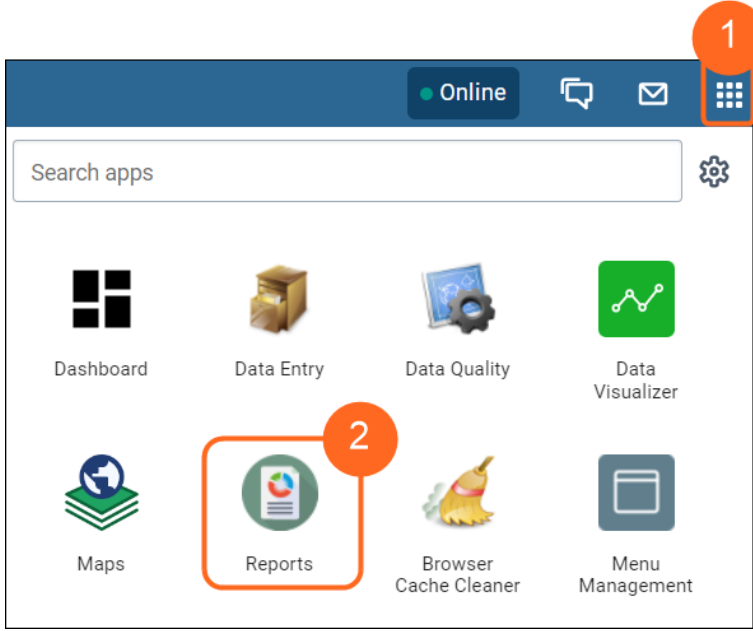
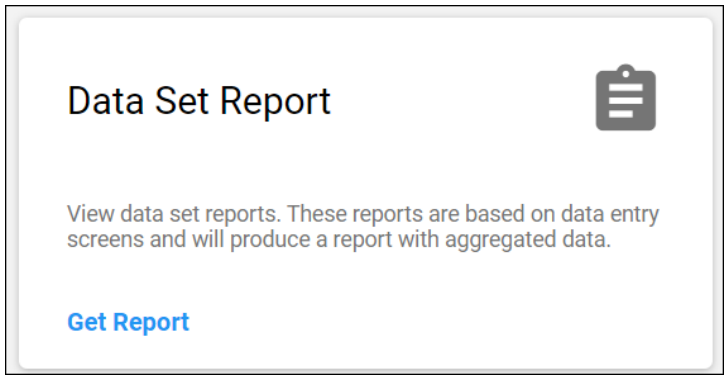
- **Dashboard:** This is the fastest way to view your data. The dashboard can display charts and pivot tables as well as shortcuts to your favourite reports, report tables, and map views. Each user can configure a personal dashboard.

We will look at Data Set Report in this chapter. The Pivot Tables, Data Visualizer and the Dashboard, will be covered in separate chapters.

5.1 Data Set Report

If you want to produce a report for a health facility, municipality or province to show the data that has been captured for a period e.g. a month, you can generate a Data Set Report. A separate report is required for each data set.

Facilities produce Data Set Reports as a means of verifying the captured data.

	1. Click on Apps in the top menu. The “Apps” window displays showing only those apps that have been allocated to you as a specific user. 2. Click on Reports.
	Click on Data Set Report either in the left menu or in the middle of the screen. The left menu option is shown in the screenshot. The Data Set Report window will open.

The screenshot shows the 'Data Set Report' interface. On the left, a tree view under 'Report organisation unit' shows a hierarchy: 'hi_HISPland' > 'an_Animal Province' > 'an_Carnivores District' > 'an_Birds Subdistrict'. Under 'an_Birds Subdistrict', 'an_Crane Clinic' is selected and highlighted in orange. Other units listed include 'an_Birds Local Municipality - LG EHS', 'an_Birds Local Municipality - Prov EHS', 'an_Heron EMS Station', 'an_Hornbill Hospital', 'an_Old World Sparrow EMS Station', 'an_Owl Clinic', 'an_Parrot Clinic', 'an_Penguin EMS Station', 'an_Potoo EMS Station', 'an_Sparrow Clinic', 'an_Spoonbill Clinic', 'an_Swallow EMS Station', and 'an_Tit EMS Station'. A 'Show more options' link is at the bottom of the tree. On the right, the 'Data set' dropdown is set to 'NIDS 2020 PHC Other (Monthly)'. The 'Report period' dropdown is set to 'Monthly'. The 'year' dropdown is set to '2023' and the 'month' dropdown is set to 'June'. A checkbox labeled 'Use data for selected unit only' is unchecked. The 'Number of signatures' dropdown is set to '2'. A blue 'GET REPORT' button is at the bottom left.

1. Select the **Report organisation unit** in the hierarchy that you want the report for.

TIP: You can select an Orgunit at any level in the hierarchy, as the data will be aggregated up to this level automatically (if you haven't ticked the option in 6).

2. Click on the **Data set** dropdown arrow and select a data set.
3. Click on the **Report Period** dropdown arrow and select a period type.

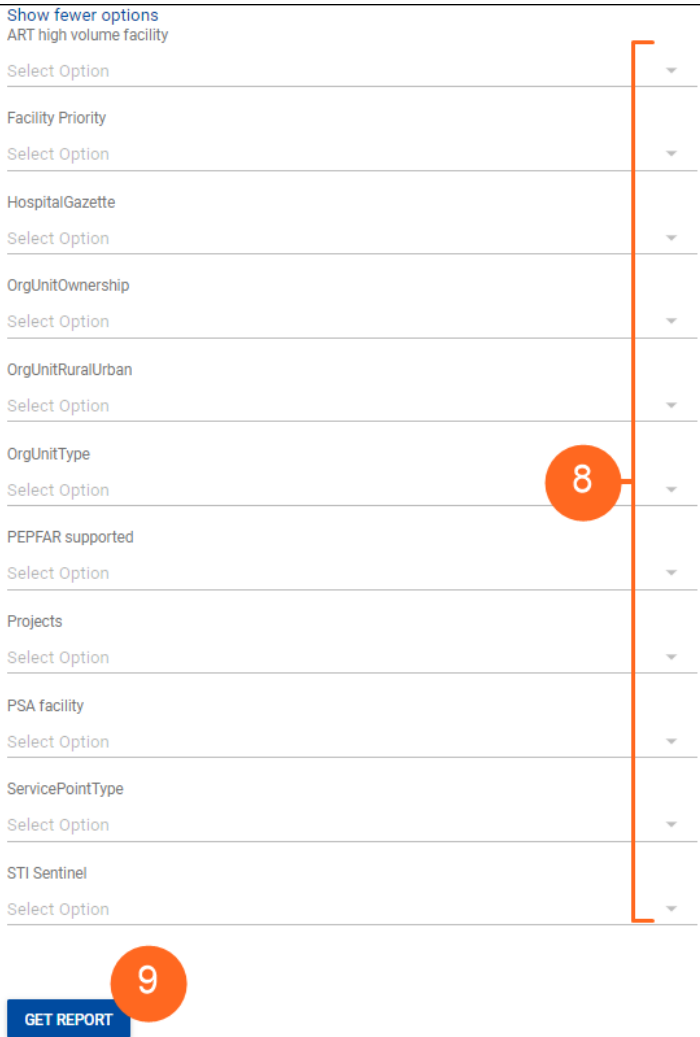
TIP: You can aggregate data on the period dimension by the period type you choose here e.g. you may like to see the monthly data for the quarter.

4. Click on the **year** dropdown arrow and select the year.
5. Click on the **month** dropdown arrow and select the month.
6. Tick this option if you want a report for an orgunit that has children, but only want the data collected directly for this orgunit and not the data collected by its children.

TIP: If you want a typical aggregated report for an orgunit, do not tick this option.

7. Click on the **Number of signatures** dropdown arrow to specify the number of signatures required on the report when it is printed as a PDF.

Note: There should be **3** signatures for daily data sets, which are assigned to orgunit level 6. These are for the clinician, the data capturer, and the facility manager. Only **2** signatures are required for monthly data sets, which are assigned at orgunit level 5, which are usually the data capturer and the facility manager.

	8. Additionally, you can specify filters for your report e.g. you may only want data for clinics, so you would select OrgUnitType = “Clinic”. 9. Click on Get report.
	A message displays that the table has been successfully loaded.
Scroll down to view your report:	

Write a comment, question or interpretation of this report

1

2

SHARE

[DOWNLOAD AS XLS](#)
[DOWNLOAD AS PDF](#)

ART Monthly MonthTotal

Data element	MonthTotal
ART adult naive start ART in month	1
ART adult remain on ART end of period	190
ART child under 15 years naive start ART in month	
ART child under 15 years remain on ART end of period	

HIV MonthTotal

Data element	MonthTotal
--------------	------------

- Click here to type a comment, question or interpretation of your report, then click on **SHARE** to share your interpretation with other users (providing you have the allocated authorities to do so).
- The results can be exported to a Microsoft Excel workbook by clicking on **DOWNLOAD AS XLS** or to a PDF document by clicking on **DOWNLOAD AS PDF**.

To specify different criteria for the report, simply scroll back up and enter the new criteria.

This concludes Chapter 5 on the data set report. Chapter 6 focuses on pivot tables.

Chapter 6. Data Visualizer – Pivot Tables

After reading this chapter you will be able to:

- Select the pivot table visualisation type.
- Select dimension and dimension items to create your pivot table.
- Arrange your pivot table using the layout area.
- Fine-tune your pivot table.
- Manage your pivot tables.
- Download a pivot table.
- Convert a pivot table to a chart or map.

6.1 About the Data Visualizer App

Pivot tables are created in the Data Visualizer app, which is designed firstly to be easy to use. Secondly it is designed to be fast and work well over poor Internet connections – pivot tables are generated in the web browser and very little data is transferred over the Internet.

With the Data Visualizer app, you can create pivot tables based on all available **data dimensions** in webDHIS. A pivot table is a dynamic tool for data analysis which lets you quickly summarise and arrange data according to its dimensions.

Compulsory Dimensions:

The following 3 data elements are compulsory:

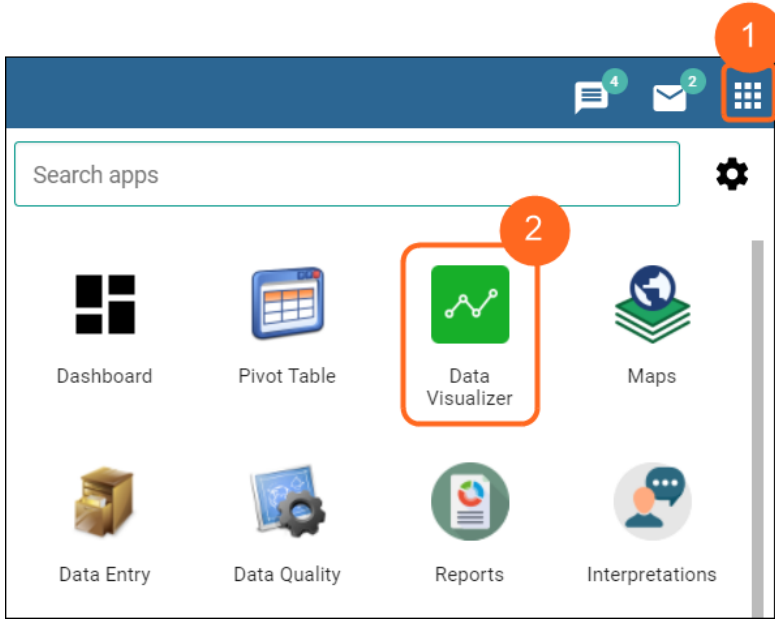
1. **Data:** Represents the phenomenon for which data has been captured/imported. This includes data elements, indicators, data sets (reporting rates), event data items and program indicators. This is also known as the **What** dimension.
2. **Periods:** Representing the time period for the data. This is also known as the When dimension.
3. **Organisation units:** Represents the geographical location of the data. This is also known as the **Where** dimension.

Additional Data Dimensions:

webDHIS also contains other optional dimensions which you can use to slice your data further. These are listed under YOUR DIMENSIONS in the selection window. An example is orgunit groups e.g. facility types like District Hospital, Community Health Centre etc.

From these compulsory dimensions, you can freely select **dimension items** to include in the pivot table. None or any one or combination of the additional data dimensions can be selected when creating a pivot table.

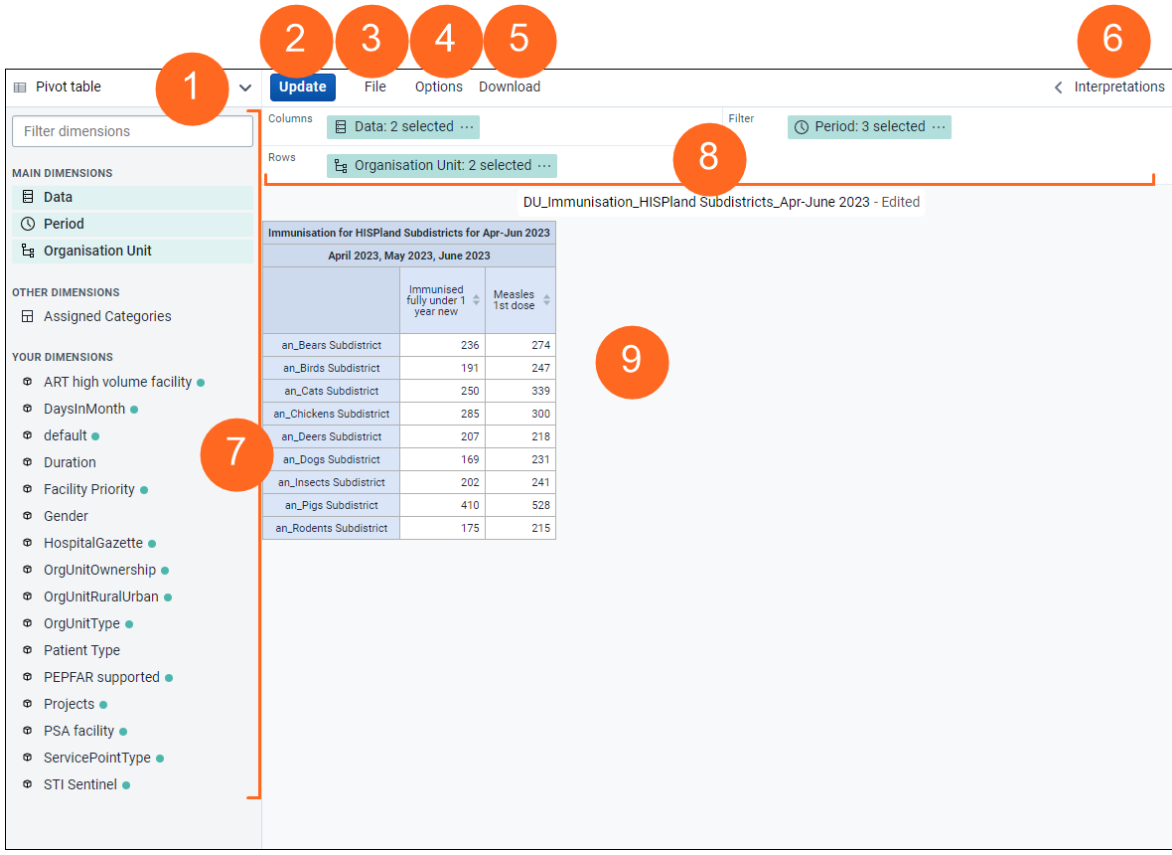
6.2 Access the Data Visualizer App



1. Click on **Apps** in the top menu.
2. Click on **Data Visualizer**.

If you can't find it, you can type *Data* in the "Search apps" box.

6.3 The Data Visualizer Interface



1. Shows that you have chosen the **pivot table** visualisation type.

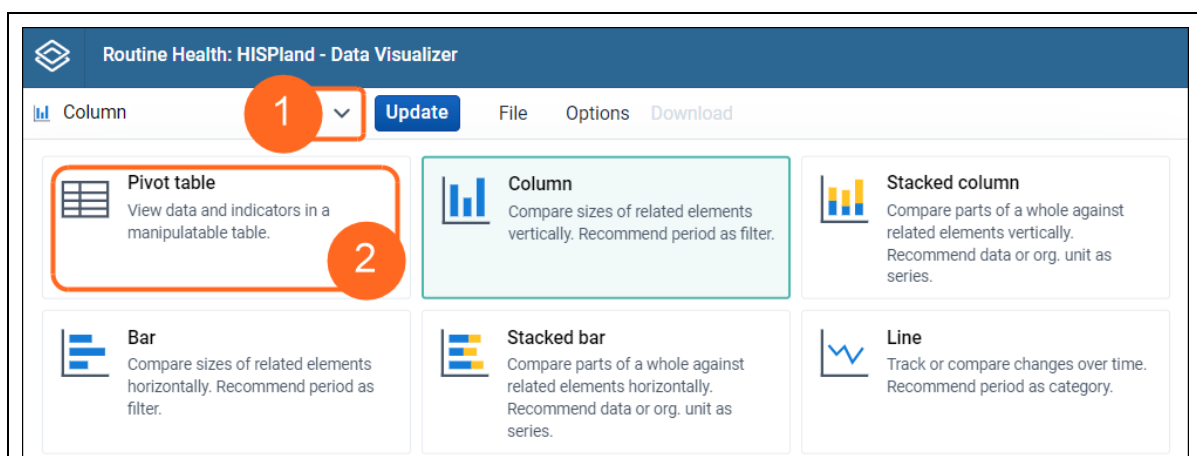
2. **Update** button – the button you need to click when you have made any changes to your pivot table.
3. **File** menu – allows you to save, open and manage pivot tables.
4. **Options** menu – allows you to fine-tune your pivot table.
5. **Download** button – allows you to download your pivot table.
6. **< Interpretations** button – opens the “Interpretations” panel on the right side of the pivot table. This button is greyed out until a pivot table is saved.

Interpretations allows you to view, add, edit, and share interpretations about the current pivot table. Interpretations are covered in detail in [Chapter 8](#).

7. The **Dimensions Area** – where you select dimensions.
8. The **Layout Area** – where you set up the layout of your pivot table.
9. **Display Area** – where your pivot table displays.

6.4 Select Visualisation Type

The Data Visualizer app has 15 different visualisation types, each with different characteristics – 14 of them are chart visualisations and one is for pivot tables.



1. Click on the **Visualization Type** dropdown arrow.
2. Click on **Pivot table** in the top left corner of the list.

Note: “Column” is selected by default.

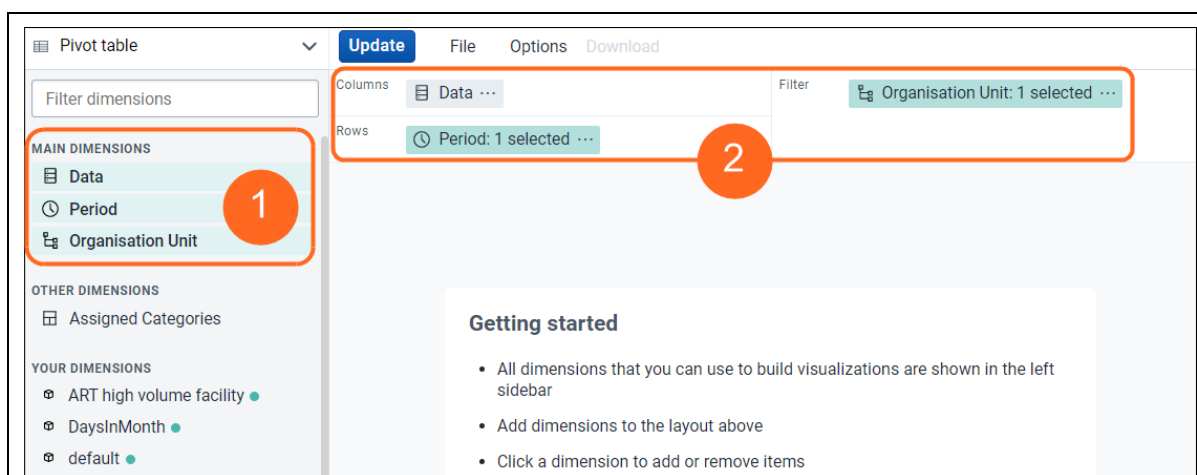
The table below gives some information on the pivot table visualisation type:

No	Visualization type	Description
1	Pivot table	Summarises the data of a more extensive table and might include sums, averages, or other statistics, which the pivot table groups together in a meaningful way. The performance of pivot tables is also dramatically

No	Visualization type	Description
		improved, allowing for very large pivot tables with at least three times more data than the classic pivot table app. Layout restrictions: None.

6.5 Select Dimensions

6.5.1 Select Compulsory Dimensions



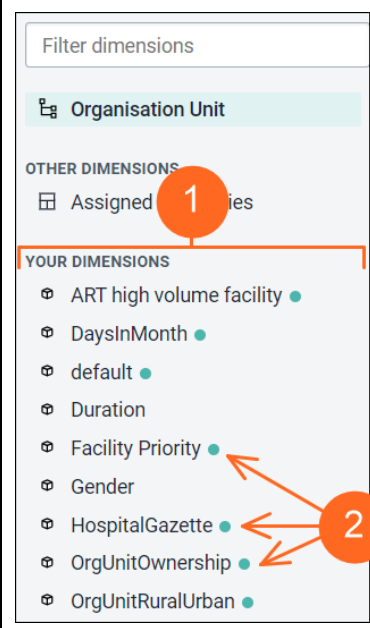
You can select the three compulsory dimensions from 2 areas:

1. Under “MAIN DIMENSIONS” in the Dimensions Menu or
2. The Layout Area.

Note:

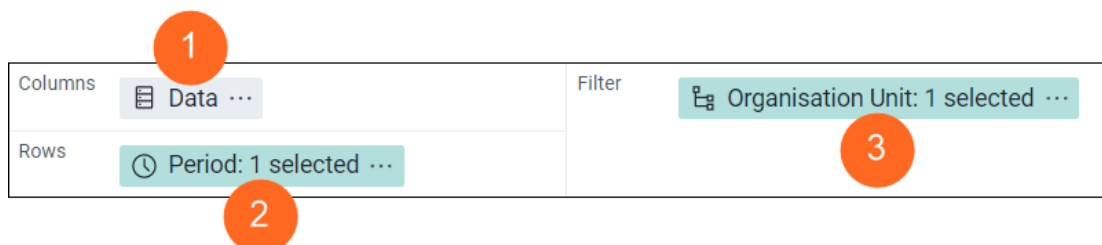
- You select a main dimension by clicking on the text and **not** the context menu (3 dots) next to the text. The context menu (3 dots) will appear next to the text when you hover over it in the Dimension Menu – they are already visible in the Layout Area.
- The use of the context menu is covered later in the section on layout.

6.5.2 Select Additional Dimensions

	1. Additional dimensions that can be selected are listed under YOUR DIMENSIONS after the four occupational groups. To select an additional dimension, click on the dimension name in the list. Note: The context menu (3 dots) will appear next to the dimension name when you point to it. The use of the context menu is covered later in the section on layout. 2. Dimensions which are relevant to the selected data elements and organisation units are indicated with a green dot.
---	---

6.6 Select Compulsory Dimension Items

When you create a new visualisation, certain defaults apply:



1. No “Data” dimension items are selected.
2. The Period selected is **Last 12 months**.
3. The Organisation Unit selected is the **country** level i.e. South Africa (National Government).

To select items for a dimension, open the dimension modal window by clicking on a dimension.

6.6.1 Select “Data” Dimension Items (the “What”)

The Data Visualizer app can display any number of data items in a visualisation. Data includes indicators, data elements, data sets, event data items and program indicators. You can combine these data types e.g. you can show data elements and indicators.

The example below shows the selection of data elements from the “EPI” data element group. **Note:** Indicators and Data Sets are selected in the same way.

Note: If you can already see the data element you want in the list on the left, you can select it straight away without filtering or searching.

The screenshot shows a web interface for selecting data elements. It is titled "Data". On the left, there is a search bar "Search by data item name". Below it is a "Data Type" dropdown menu with "Data elements" selected (callout 1). Underneath are two more dropdowns: "Data element group" with "EPI" selected (callout 2), and "Disaggregation" with "Totals only" selected. A list of data elements follows, including "BCG dose", "DTaP-IPV-Hib-HBV (Hexavalent) 1st dose", "DTaP-IPV-Hib-HBV (Hexavalent) 2nd dose", "DTaP-IPV-Hib-HBV (Hexavalent) 3rd dose", "DTaP-IPV-Hib-HBV (Hexavalent) 4th dose", "Measles 2nd dose", "OPV 0 dose under 1 year", "OPV 1st dose under 1 year", "PCV 1st dose under 1 year", "PCV 2nd dose under 1 year", and "PCV 3rd dose under 1 year" (callout 3). In the center, there are three arrows: a double right arrow (callout 4), a single right arrow (callout 5), and a double left arrow (callout 8), with a single left arrow (callout 9) below it. On the right, there is a "Selected Items" box (callout 6) containing "Immunised fully under 1 year new" and "Measles 1st dose". At the bottom right of the "Selected Items" box are up and down arrows (callout 7). At the bottom of the interface are "Hide" (callout 10) and "Update" (callout 11) buttons.

1. Click on the **Data Type** dropdown arrow and click on **Data elements**.
 2. Click on the **Data element group** dropdown arrow and click on a data element group.
 3. The list of data elements belonging to the selected group displays.
 4. Click on the **double right arrow** to move **all** the data elements to the “Selected Items” box.
 5. Double-click on a data element to move it to the “Selected Items” box or click on a data element to select it and then click on the **right arrow**.
- Note:** You can use the “Shift” and “Ctrl” keys to select multiple data elements at one time.
6. The “Selected Items” box shows all the data elements that have been selected. The order of appearance will be the same as the order in which they are selected.
 7. If multiple items are selected, click on an item in the “Selected Items” box and use the **up** and **down arrows** to change its place in the list.
 8. Click on the **double left arrow** to remove **all** the data elements from the “Selected Items” box.

9. Double-click on a data element to remove it from the “Selected Items” box or click on a data element to select it and then click on the **left arrow**.
10. Click on **Hide** to close the window. This allows you to save processing time and update your pivot table later once you have made all your selections. OR
11. Click on **Update** to apply your choices to your pivot table now.

You can also search for data items across all types, making it much easier to find the data items you want across indicators, data elements, data sets, program data elements and program indicators.

Data

Data Type

All types

- Delivery by caesarean section
- √ ◻ Delivery by Caesarean Section coverage
- √ ◻ Delivery by caesarean section rate
- √ ◻ Delivery in 10-19 years in facility rate
- Delivery in facility 35 years and older
- √ ◻ Delivery in facility rate
- √ ◻ Delivery in facility - sum
- Delivery in facility - total
- Delivery in facility under 18 years
- √ ◻ Delivery in facility under 18 years rate
- Mother postnatal visit within 6 days after delivery
- ◻ NIDS 2017 PHC Delivery DDC (Daily) - Reporting rate
- ◻ NIDS 2017 PHC Delivery DDC (Daily) - Reporting rate on time

➡

➔

⬅

⬅

Selected Items

No items selected

⬆

⬇

Hide

Update

1. Type your search criteria in the “Search by data item name” box.
2. All data items meeting your search criteria will be displayed irrespective of data item type. You can then scroll through the data items to find the one(s) you require.

Note: Each data item type has a different icon, e.g.  is for an indicator,  is for a data element.

3. As in the previous example, you can use the arrows to move the required items to the “Selected Items” box.

6.6.2 Select “Period” Dimension Items (the “Where”)

When selecting a period, you have the option to choose between **fixed periods** and **relative periods**. These can also be combined. Overlapping periods are filtered so that they only appear once. For relative periods, the names are relative to the current date, e.g. if the current month is February and “Last month” is selected, the month of January is shown in the pivot table.

The screenshot shows a web interface for selecting periods. It is divided into two main sections: 'Relative periods' and 'Fixed periods'. The 'Relative periods' section is active, showing a 'Period type' dropdown set to 'Months'. Below this, a list of relative periods is displayed: 'This month', 'Last month', 'Last 3 months', 'Last 6 months', and 'Months this year'. To the right of this list is a 'Selected Periods' box containing 'Last 12 months'. Between the two boxes are several arrow buttons: a double right arrow, a single right arrow, a double left arrow, and a single left arrow. At the bottom right, there are 'Hide' and 'Update' buttons. Numbered callouts (1-11) highlight specific UI elements: 1 points to the 'Relative periods' tab; 2 points to the 'Period type' dropdown; 3 points to the list of relative periods; 4 points to the double right arrow; 5 points to the single right arrow; 6 points to the 'Selected Periods' box; 7 points to the 'Update' button; 8 points to the double left arrow; 9 points to the single left arrow; 10 points to the 'Hide' button; and 11 points to the 'Update' button.

1. Click on **Relative periods**.
2. Click on the **Period type** dropdown arrow and select the period type (period frequency).
Note: “Months” is selected by default.
3. The list of periods belonging to the selected period type displays.
4. Click on the **double right arrow** to move **all** the periods to the “Selected Periods” box.
5. Double-click on a period to move it to the “Selected Periods” box or click on the period to select it and then click on the **right arrow**.
Note: You can use the “Shift” and “Ctrl” keys to select multiple periods at one time.
6. The “Selected Periods” box shows all the periods that have been selected. The order of appearance will be the same as the order in which they are selected.

Note: “Last 12 months” is selected by default.

7. If multiple periods are selected, click on an item in the “Selected Periods” box and use the **up** and **down arrows** to change its place in the list.
8. Click on the **double left arrow** to remove **all** the periods from the “Selected Periods” box.
9. Double-click on a period to remove it from the “Selected Periods” box or click on the period to select it and then click on the **left arrow**.
10. Click on **Hide** to close the window. This allows you to save processing time and update your pivot table later once you have made all your selections. OR
11. Click on **Update** to apply your choices to your pivot table now.

The screenshot shows a 'Period' selection window. At the top, there are two tabs: 'Relative periods' and 'Fixed periods', with 'Fixed periods' being the active tab (callout 1). Below the tabs, there are two sections: 'Period type' and 'Year'. The 'Period type' section has a dropdown menu currently set to 'Monthly' (callout 2). The 'Year' section has a text box showing '2023' with up and down arrows (callout 3). To the left of these sections is a list of months from January 2023 to December 2023, each with a radio button (callout 4). In the center, there are four arrows: a right arrow (callout 5), a single right arrow (callout 6), a double left arrow (callout 9), and a single left arrow (callout 10). To the right of these arrows is a 'Selected Periods' box (callout 7) containing 'April 2023', 'May 2023', and 'June 2023'. At the bottom right of the 'Selected Periods' box are up and down arrows (callout 8). At the bottom of the window are two buttons: 'Hide' (callout 11) and 'Update' (callout 12).

1. Click on **Fixed periods**.
2. Click on the **Period type** dropdown arrow and select the period type.
Note: “Monthly” is selected by default.
3. Click on the **Year** up or down arrow to select the year.
Note: The current year is selected by default.
4. The list of periods belonging to the selected period type displays.

5. Click on the **double right arrow** to move all the periods to the “Selected Periods” box.
6. Double-click on a period to move it to the “Selected Periods” box or click on the period to select it and then click on the **right arrow**.

Note: You can use the “Shift” and “Ctrl” keys to select multiple periods at one time.
7. The “Selected Periods” box shows all the periods that have been selected. The order of appearance will be the same as the order in which they are selected.

Note: “Last 12 months” will still appear here. If you only want the fixed periods you have selected, you need to remember to remove it.
8. If multiple periods are selected, click on an item in the “Selected Periods” box and use the **up** and **down arrows** to change its place in the list.
9. Click on the **double left arrow** to remove all the periods from the “Selected Periods” box.
10. Double-click on a period to remove it from the “Selected Periods” box or click on the period to select it and then click on the **left arrow**.
11. Click on **Hide** to close the window. This allows you to save processing time and update your pivot table later once you have made all your selections. OR
12. Click on **Update** to apply your choices to your pivot table now.

6.6.3 Select “Organisation Unit” Dimension Items (the “Where”)

The Organisation Unit dialog is flexible, offering three ways of selecting organisation units:

1. **Explicit selection** – Use the tree to explicitly select the organisation units you want to appear in your pivot table.
2. **Using orgunit levels and groups** – The “Level” and “Group” dropdowns are a convenient way to select all orgunits at specific levels and/or in one or more orgunit groups. For example, select “Sub-district” to show all orgunits at Sub-district level; select “Clinic” to show only those orgunits that belong to the “Clinic” orgunit group.
3. Using the user’s organisation units
 - **User organisation unit** – This is a way to dynamically select the orgunits that the logged in user is associated to.
 - **User sub-units** – Selects the sub-units of the user organisation unit.
 - **User sub-x2-units** – Selects the units two levels below the user organisation unit.

EXPLICIT SELECTION

The screenshot shows the 'Organisation Unit' selection window. At the top, there are three checkboxes: 'User organisation unit' (checked), 'User sub-units', and 'User sub-x2-units'. Below this is a tree view of organisation units. The tree starts with 'hi_HISPland', which is expanded to show 'an_Animal Province'. Under 'an_Animal Province', there are three districts: 'an_Carnivores District' (checked), 'an_Herbivores District' (checked), and 'an_Omnivores District' (unchecked). Below the districts are 'fo_Food Province' and 'pl_Plant Province'. To the right of the tree, there are two dropdown menus: 'Select a level' and 'Select a group'. Below these, it says 'Selected: 2 org units' and 'Deselect all'. At the bottom right, there are two buttons: 'Hide' and 'Update'.

1. ☐ User organisation unit ☐ User sub-units ☐ User sub-x2-units

2. ☒ hi_HISPland
 ☒ an_Animal Province
 ☒ an_Carnivores District
 ☒ an_Herbivores District
 ☐ an_Omnivores District
 ☐ fo_Food Province
 ☐ pl_Plant Province

Select a level Select a group

Selected: 2 org units Deselect all

Hide Update

1. If this is a new pivot table, remove the tick from the **User organisation unit** checkbox, which is ticked by default.
2. Click on each organisation unit that you want to select. A tick displays in the checkbox next to the organisation unit. Notice that the parent levels above the selected item are also highlighted, but you need to also click on the parent if you want to select it.

Note: You may need to click on the right arrow next to an organisation unit to expand a level.

3. Click on **Deselect all** to remove all your selections.
4. Click on **Hide** to close the window. This allows you to save processing time and update your pivot table later once you have made all your selections. OR
5. Click on **Update** to apply your selections to your pivot table now.

USING ORGUNIT LEVELS AND GROUPS

The screenshot shows the 'Organisation Unit' selection window. At the top, there are three checkboxes: 'User organisation unit' (checked by default), 'User sub-units', and 'User sub-x2-units'. Below these is a tree view of organisation units. The tree starts with 'hi_HISPland', which has three sub-items: 'an_Animal Province', 'fo_Food Province' (which is selected with a green checkmark), and 'pl_Plant Province'. Below the tree, there are two dropdown menus for selecting levels and groups. The first dropdown is labeled 'Sub-district' and has a dropdown arrow. The second dropdown is labeled 'Clinic' and has a dropdown arrow. Below these dropdowns, there is a text box that says 'Selected: 1 org unit, 1 level, and 2 groups'. To the right of this text box is a 'Deselect all' button. At the bottom right, there are two buttons: 'Hide' and 'Update'.

1. If this is a new pivot table, remove the tick from the **User organisation unit** checkbox, which is ticked by default.
2. Click on the **Select a level** dropdown arrow to select one or more levels.
3. Click on the **Select a group** dropdown arrow to select one or more orgunit groups.
4. **Note:** As soon as at least one level or group has been selected, the orgunit tree now acts as the boundary for the levels/groups. In the screenshot, we would see all clinics and community health centres for all sub-districts in Food Province.
5. Click on the **X** next to an item to remove it from the selection.
6. Click on **Deselect all** to remove all your selections.
7. Click on **Hide** to close the window. This allows you to save processing time and update your pivot table later once you have made all your selections. OR
8. Click on **Update** to apply your selections to your pivot table now.

USING THE USER'S ORGANISATION UNITS

Organisation Unit

☒ User organisation unit ☒ User sub-units ☐ User sub-x2-units 1

☐ hi_HISPland

- ☐ an_Animal Province
- ☐ fo_Food Province
- ☐ pl_Plant Province

Select a level ▼

Select a group ▼

Selected: User organisation unit and User sub-units

Deselect all 2

3
Hide

4
Update

1. Click the checkbox next to an option to select it.

Note: You can select more than one option. All other selection methods are then greyed out.

2. Click on **Deselect all** to remove all your selections.
3. Click on **Hide** to close the window. This allows you to save processing time and update your pivot table later once you have made all your selections. OR
4. Click on **Update** to apply your selections to your pivot table now.

6.7 Select Additional Dimension Items

After you've clicked on the additional dimension you want under YOUR DIMENSIONS, the dimension modal window opens.

Gender

1

☐ Automatically include all items
 Select all Gender items. With this option, new items added in the future will be automatically included.

2

☒ Manually select items...

Search

Male

→

→

←

←

Selected Items

Female

3

Hide

4

Add to Columns

↑

↓

When selecting an additional dimension item, either individual items or all items can be selected.

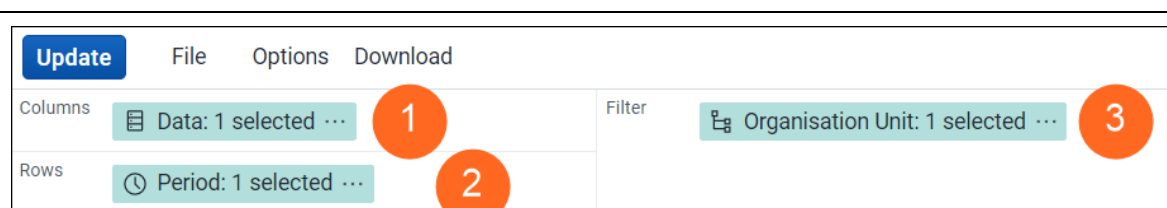
1. To automatically select all items, click on **Automatically include all items** i.e. you will not need to select them manually, they will **all** be moved to the “Selected Items” window.

Note: This will also include any additional items that are added in the future if the available dimension items are updated.

2. By default, **Manually select items...** is selected, which allows for individual items to be picked out of a list, in the same way as described in the **Data** and **Period** dimensions sections above.
3. Click on **Hide** to close the window. This allows you to save processing time and update your pivot table later once you have made all your selections. OR
4. If you want to update your pivot table now, click on **Add to Column**, or click on the dropdown arrow and select **Add to Rows** or **Add to Filter** depending on where you want the dimension to appear in the layout.

(Note: Layout is covered in the next section).

6.8 Select Layout



The Layout Area is divided into 3 sections:

1. **Columns:** When you place a data dimension on columns, the pivot table will display one column per dimension item. If you place multiple dimension items on columns, the pivot table will display one column for all combinations of the items in the selected dimensions.
2. **Rows:** When you place a data dimension on rows, the pivot table will display one row per dimension item in a similar fashion.
3. **Filter:** The dimensions you select as filters will not be included in the pivot table but will aggregate and filter the table data based on the selected filter items.

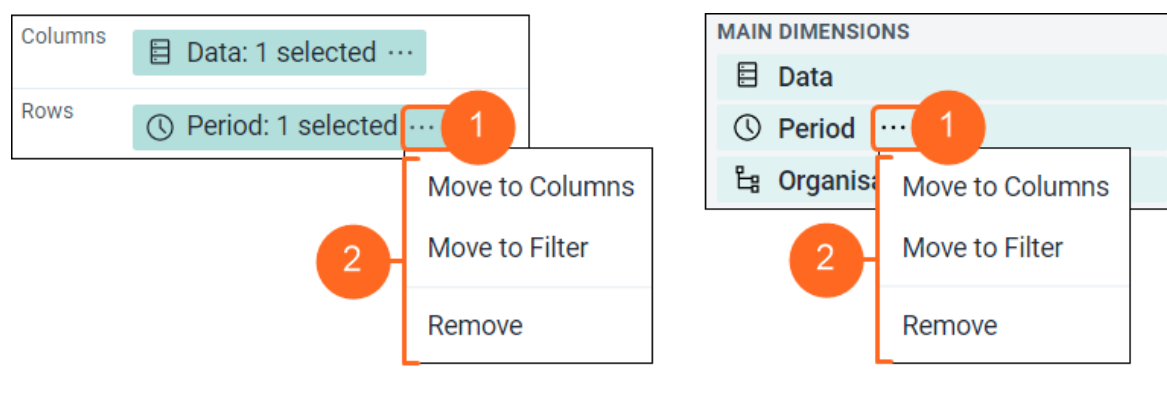
When selecting and arranging dimensions, there are a few constraints that apply. All these constraints are validated, and feedback will be provided if any constraint is violated:



- At least one dimension must be selected on columns or rows.
- At least one period must be selected.
- Data element group sets and reporting rates can't appear in the same pivot table.
- A pivot table can't contain more than the maximum number of analytic records which have been specified in the system settings. The maximum number of records could also be constrained by the maximum RAM which is available to your browser. Consider making smaller tables instead of one table which displays all your data elements and indicators together.

You can move the dimensions that are already in the Layout Area by clicking and dragging them to another section. Or you can use the **context menu (3 dots)** in either the Layout Area or the Dimensions Area to move dimensions around.

Note: The options on the context menu will depend on where the dimension you are moving is currently located.

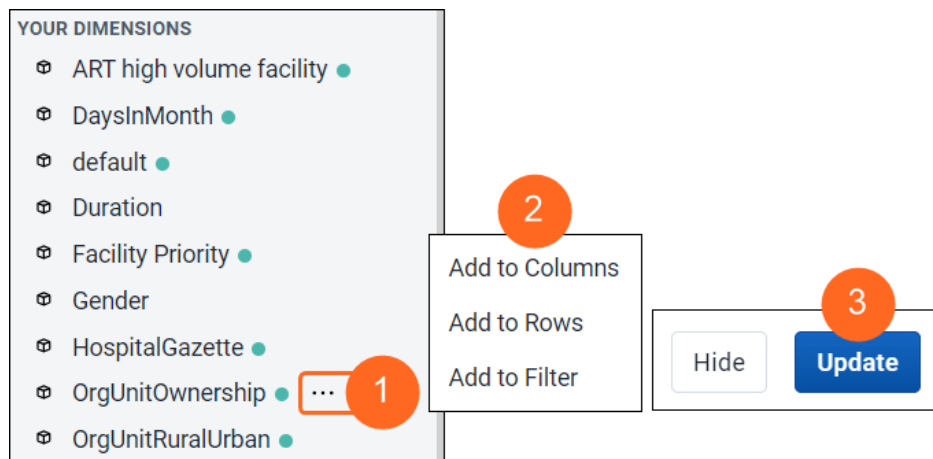


1. Click on the **context menu** of the dimension you want to move.
2. As the dimension is in **Rows**, the options are **Move to Columns** and **Move to Filter**.

Note: You can also choose to delete a dimension from your pivot table by clicking on **Remove**.

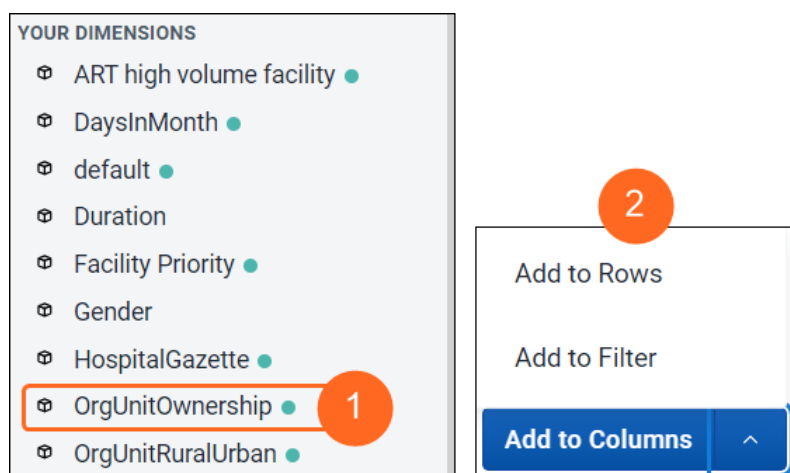
Main dimensions are already added to the Layout Area.

There are 2 ways to add additional dimensions.

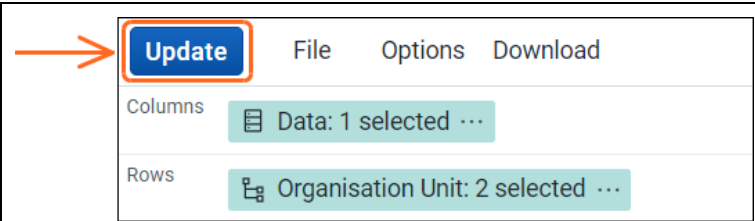


1. Click on the **context menu** of the dimension you want to add.
2. Select **Add to Columns**, **Add to Rows** or **Add to Filter**.
3. If you have not yet selected any dimension items, the modal window will open so that you can do so. Click on **Update** to add the dimension to the Layout Area.

OR

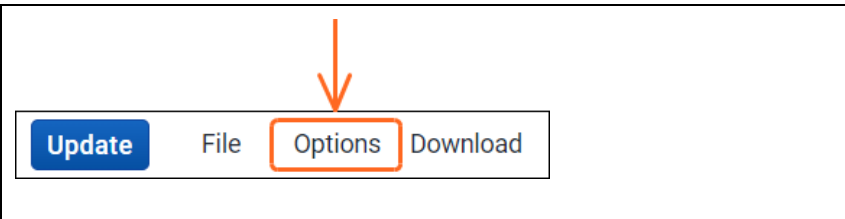
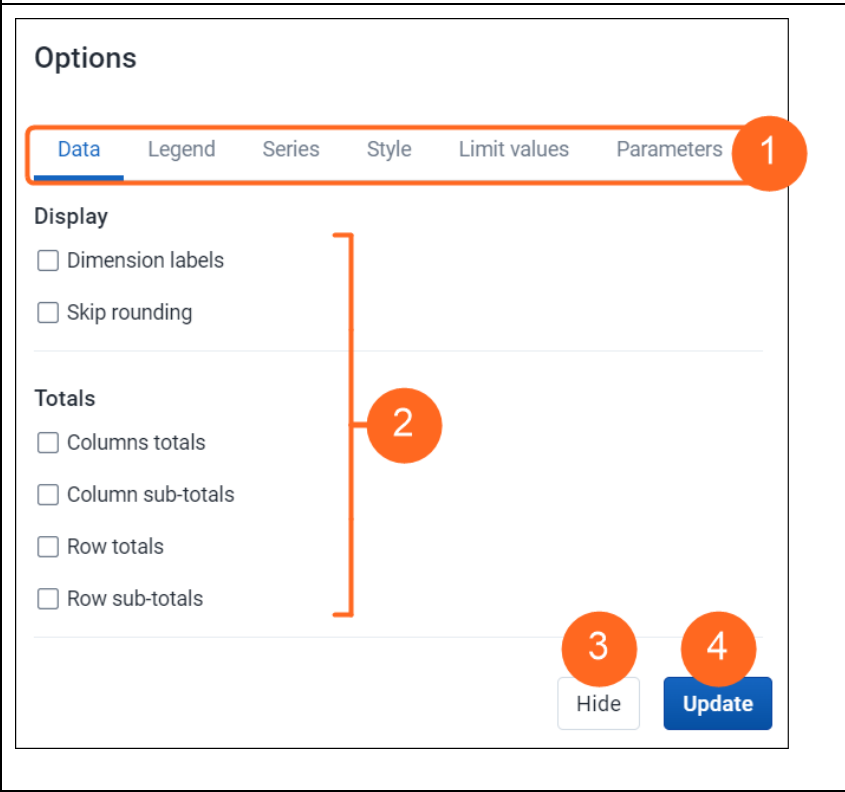


1. Click on the dimension you want to add.
2. The modal window will open whether or not you have selected dimension items previously, or still need to do so. Then click on **Add to Columns** (the default), **Add to Rows** or **Add to Filter** to add the dimension to the Layout Area.

	If you have made changes to the layout in the Layout Area, you must click on Update to apply them to your pivot table.
---	--

6.9 Change the Display of your Pivot Table

The display of a pivot table can be changed by enabling/disabling and configuring several options. The options are organised in tabs in the “Options” dialog and in sections within each tab.

	Click on Options in the top menu.
	1. Click on the required tab. 2. Configure the desired options on the tab displayed. 3. Click on Hide to close the window and update later. 4. Click on Update to apply the changes to your visualisation

6.9.1 Data Tab

Options

[Data](#)[Legend](#)[Series](#)[Style](#)[Limit values](#)[Parameters](#)

Display

☐ Dimension labels

☐ Skip rounding

Totals

☐ Columns totals

☐ Column sub-totals

☐ Row totals

☐ Row sub-totals

Empty data

☐ Hide empty columns

☐ Hide empty rows

Option	Description
Display	
Dimension labels	Shows the dimension names as part of a pivot table.
Skip rounding	Skips the rounding of data values, offering the full precision of data values.
Totals	
Column totals	Displays total values for each column in a pivot table, as well as a total for all values in the table.
Column sub-totals	Displays sub-totals for each dimension in a pivot table. If you only select one dimension, sub-totals will be hidden for those columns. This is because the values will be equal to the sub-totals.
Row totals	Displays total values in a pivot table for each row, as well as a total for all values in the table.
Row sub-totals	Displays sub-totals in a pivot table for each dimension.

Option	Description
	If you only select one dimension, sub-totals will be hidden for those rows. This is because the values will be equal to the sub-totals.
Empty data	
Hide empty columns	Hides empty columns from a pivot table. This is useful when you look at large tables where a large portion of the dimension items don't have data in order to keep the table more readable.
Hide empty rows	Hides empty columns from a pivot table. This is useful when you look at large tables where a large portion of the dimension items don't have data to keep the table more readable.

6.9.2 Legend Tab

Options

Data
Legend
Series
Style
Limit values
Parameters

☒ Use legend for chart colors

Legend style

☒ Legend changes background color

☐ Legend changes text color

Legend type

☒ Use pre-defined legend per data item

☐ Select a single legend for the entire visualization

☐ Show legend key

Option	Description
Use legend for chart colors	Applies a legend to the pivot table, which is a value-based colour for each item. The legends themselves are configured elsewhere in HRIS.
Legend style	Controls where the colour is applied. Options are: Legend changes background color Legend changes text color You can use this option for scorecards to identify high and low values at a glance.
Legend type	Controls which legend is applied. Options are:

Option	Description
	• Use pre-defined legend per data item – applies a legend to each data element individually, based on the legend assigned to each one in the system. • Select a single legend for entire visualisation – applies a single legend to all data items, chosen from a dropdown list of available legends.
Show legend key	Displays a key for the legend on the right side of the pivot table, to indicate the value ranges and their respective colour. If the pivot table is added to a dashboard, this option can also be toggled from the top right corner of the dashboard item.

6.9.3 Style Tab

Options

Data
Legend
Series
Style
Limit values
Parameters

Table title

Display density

Normal ▾

Font size

Normal ▾

Digit group separator

Space ▾

☐ Fix column headers to top of table
☐ Fix row headers to left of table

Labels

☐ Display organisation unit hierarchy

Option	Description
Table title	Controls the title that appears above the pivot table.

Option	Description
Display density	Controls the size of the cells in a pivot table. You can set it to Comfortable , Normal or Compact . Compact is useful when you want to fit large tables into the browser screen.
Font size	Controls the size of a pivot table text font. You can set it to Large , Normal or Small .
Digit group separator	Controls which character to use to separate groups of digits or “thousands”. You can set it to Comma , Space or None .
Fix column headers to top of table	Freezes column headers in pivot tables so they are always visible when scrolling the table content.
Fix row headers to left of table	Freezes row headers in pivot tables so they are always visible when scrolling the table content.
Display organisation unit hierarchy	Shows the name of all ancestors for organisation units, for example “za South Africa (National Government) / fs Free State Province / fs Xhariep District Municipality / fs Kopanong Local Municipality / fs Flora Clinic” for “fs Flora Clinic”. The organisation units are then sorted alphabetically which will order the organisation units according to the hierarchy. When you download a pivot table with organisation units as rows and you’ve selected “Display organisation unit hierarchy”, each organisation unit level is rendered as a separate column. This is useful for example when you create Excel pivot tables on a local computer.

6.9.4 Limit Values Tab

Options

Data
Axes
Series
Style
Limit values

Limit minimum/maximum values

You can set a minimum or maximum value. This will apply to the entire visualization, all values outside of the minimum/maximum range will not be displayed

Minimum data value

▼

Maximum data value

▼

Clear min/max limits

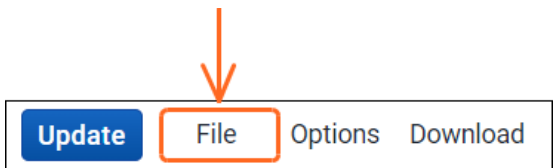
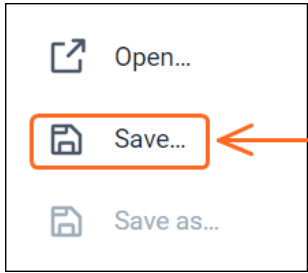
Limit values Tab

Limit minimum/ maximum values	Allows for the data to be filtered on the server side. You can instruct the system to return only records where the aggregated data value is equal, greater than, greater or equal, less than or less or equal to certain values. If both parts of the filter are used, it's possible to filter out a range of data records.
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6.10 Save a Pivot Table

You need to save your pivot tables so that you can easily find them later. You can also choose to share them with other users or display them on a dashboard.

A pivot table also needs to be saved before interpretations can be added.

	Click on File in the menu above the chart.
	Click on Save to: • save your pivot table for the first time. • save changes to an existing pivot table.
Save visualization as Name * 1 Description 2 3 4 Cancel Save 1. Type the Name of your pivot table. Note: Make sure the name reflects the dimension items you have selected. 2. Type an optional Description. The creator of the pivot table should type a description if it needs some explanation, but a description can be added or edited at any time. 3. Click on Cancel to exit without saving. 4. Click on Save to save your pivot table.	

Columns

Data: 3 selected ...

Filter

Period: 1 selected ...

Rows

Organisation Unit: 2 selected ...

ANC Visits_HISPland Subdistricts_Last year

2022			
	Antenatal 1st visit before 20 weeks	Antenatal 1st visit 20 weeks or later	Antenatal 1st visit coverage
an_Bears Subdistrict	844	385	87.7
an_Birds Subdistrict	528	341	86.6
an_Cats Subdistrict	915	457	67.8
an_Chickens Subdistrict	825	513	85.9
an_Deers Subdistrict	533	321	165.8
an_Dogs Subdistrict	564	274	90.3
an_Insects Subdistrict	669	312	99.8
an_Pigs Subdistrict	1 043	820	79.4
an_Rodents Subdistrict	751	932	167.4

The name given to the pivot table is shown above the pivot table.

6.11 Create a New Pivot Table

When you select the “Data Visualizer” app from the “Apps” menu, you can start creating your chart from scratch.

+ New

Open...

Save

If you’ve been working in the app and would now like to create a new pivot table from scratch, click on **File > New**.

6.12 Manage Saved Pivot Tables

All the options for managing pivot tables are on the “File” menu.

Note: Options will be greyed out if you do not have a pivot table open or if you do not have permission to execute them e.g. if **Share** is greyed out, it means that you do not have permission to share the displayed pivot map.

6.12.1 Open an Existing Pivot Table

+ New

 Open...

 Save

Click on **File > Open**.

Open a visualization

1 epi 2 Type  Pivot table  3 Created by Anyone  4 Clear filters

Name 	Type 	Created 	Last updated 
DB06_L2&L3_EPI DE_Last 12 months		12/04/2017	05/22/2019
DB06_L2&L3_EPI Ind_Last 12 months		09/10/2018	09/30/2020
DB06_L2&L3_EPI comparison Ind_Last 12 months		09/10/2018	09/30/2020
DB06_L3_EPI programme reporting rate_Last month		01/21/2020	09/30/2020
DB18_L2&3&4_EPI campaign_Ind_2016		11/07/2016	09/30/2020
DB18_L2&L3_EPI campaign_DE_Daily		11/07/2016	05/22/2019
DB18_L4_EPI campaign_DE_Daily		11/07/2016	05/22/2019
EPI & STI		07/21/2016	07/21/2016

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1. To search for the pivot table that you want to open, type part of its name in the **Filter by name** box.
2. To filter your search, click on the **Type** dropdown arrow and select **Pivot Table**.
3. You can also filter the list displayed by choosing the owner of the pivot table. Click on the **Created by** dropdown arrow and select one of the following from the list:
 - Anyone (the default)
 - Only you
 - Others
4. Click on **Clear filters** to display the full list of visualisations.

- For each pivot table in the list, the name, the type, the date it was created and the date it was last updated are shown. You can click on any of the column headings to sort the list by that column in either ascending or descending order. A blue arrow indicates the order selected.
- Note that the icon under Type indicates that you have selected pivot tables.
- The buttons at the bottom right of the window allow you to move from page to page to see more pivot tables. You can either click on the **Previous** and **Next** buttons, or you can click on the Page dropdown arrow and select a specific page.
- When you have located the pivot table that you want to open, simply click on its name in the list to open it.

Note: If you don't want to select an item, just click anywhere outside the window to remove it.

Getting started - All dimensions that you can use to build visualizations are shown in the left sidebar - Add dimensions to the layout above - Click a dimension to add or remove items Your most viewed charts and tables - DU_Immunisation_HISPland Subdistricts_Apr-June 2023 - Immunisation_Clinics & CHCs_HISPland Subdistricts_Apr-June 2023 Deliveries_Plant Province by District_Last 12 months ← - ANC Visits_HISPland Subdistricts_Last year - ANC Visits_Animal Province by Sub-district_Last year - Immunisation_HISPland Subdistricts_Apr-June 2023	The most viewed charts and tables are shown in the main window when you access the “Data Visualizer” app. You can also get there by clicking on File > New. Click on a file in the list to open it.
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6.12.2 Save Changes to an Existing Pivot Table to create a New Pivot Table

- Save Save as... ← - Rename...	You can use an existing pivot table as the basis for creating a new pivot table. After you have made your changes: Click on File > Save as.
---	---

Save visualization as Name * ANC Visits_HISPland Subdistricts_Last six months Description Cancel Save	1. The name of the original pivot table displays. Type the name of the new pivot table. 2. You can add a description or edit the existing description if necessary. 3. Click on Cancel to exit without saving. 4. Click on Save to save the new pivot table.
--	---

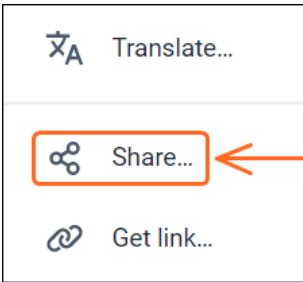
6.12.3 Rename a Pivot Table

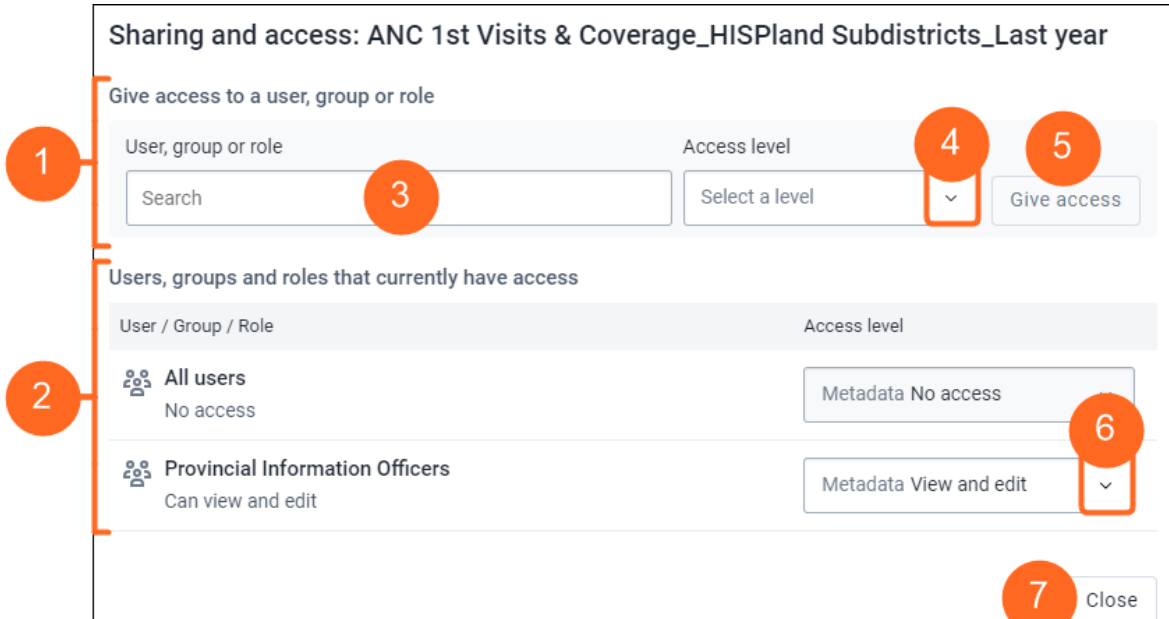
Save as... Rename... Translate...	This assumes that you have a pivot table open that you wish to rename. Click on File > Rename. Note: You can only changes the names of pivot tables that you've created or that have been shared with you with edit rights – you will notice that the rename option is greyed out for pivot tables that you did not create.
Rename visualization Name * ANC 1st Visits & Coverage_HISPland Subdistricts_Last year Description Cancel Rename 1. Type the new Name of your pivot table. Note: Make sure the name reflects the dimension items you have selected. 2. Type an optional Description or amend the current description. 3. Click on Cancel to exit without saving the new name. OR 4. Click on Save to save your pivot table with its new name.	

✓ Rename successful ✕	A message will display very briefly at the bottom of the screen.
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6.12.4 Share a Pivot Table

You can share a pivot table with other users, user groups and user roles. **Note:** You need to share a pivot table before you can share an interpretation of that pivot table.

 Translate... Share... Get link...	This assumes that you have a pivot table open that you wish to share. Click on File > Share.
---	--



The dialog shows the sharing interface with numbered callouts 1 through 7. It includes a search bar for users, a table of current access levels, and a close button.

The window is divided into 2 areas:

1. The area where you give access to a user, user group or user role.
2. The area that lists those users, user groups and user roles who have been given access, and where you can edit the level of access given.

To give access:

3. Click in the **Search** box and start typing the name of the user, user group or user role you want to share your chart with. Users, user groups and user roles that match your criteria will be listed below the “Search” box. Click on the one you want to select it.
4. Click on the **Access level** dropdown arrow and select a level. Options are:

- View only
- View and edit

5. Click on **Give access**.

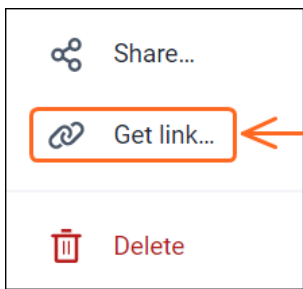
To edit access:

6. The selected user, user group or user role will now show in the list of those who have been given access. To edit the access given, click on the **Access level** dropdown arrow next to the user, user group or user role and select a level. Options are:

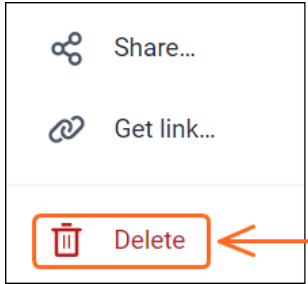
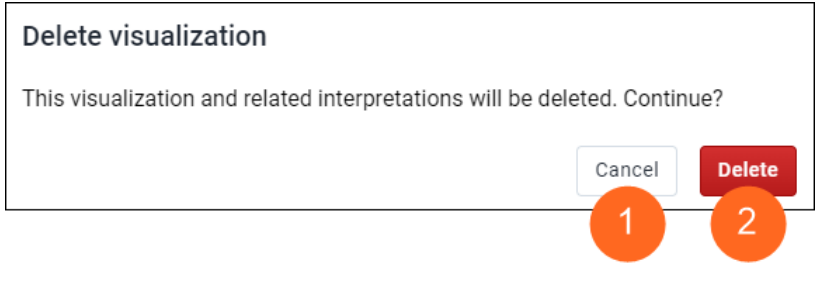
- View only
- View and edit
- Remove access

7. Click on **Close** to exit.

6.12.5 Get Link for a Pivot table

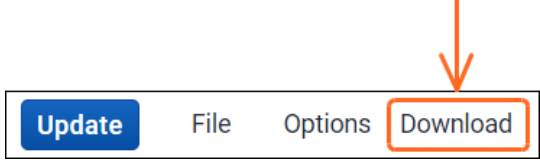
	Click on File > Get link.
 Right-click on the link and click on Copy link address. You can then send this link to others.	

6.12.6 Delete a Pivot Table

	This assumes that you have a pivot table open that you wish to delete. You can also only delete a pivot table that you created or that has been shared with you with edit rights. Click on File > Delete.
	1. Click on Cancel to exit without deleting. 2. Click on Delete to delete the chart.

6.13 Download a Pivot Table

Pivot tables can be downloaded so that they can be included in reports and presentations or sent to others.

	Click on Download in the menu above the pivot table.
---	--

	1. Table Layout options are for users. Click on one of the following formats: • Excel (.xls) • CSV (.csv) • HTML (.html) 2. Plain data source options are really for developers. Depending on your settings, your pivot table will automatically download to your “Downloads” folder, or you can choose a filename and location.
--	---

6.14 See your Pivot Table as a Map

To see how your pivot table would look on map, select the **Open as Map** visualisation type after you're finished building your pivot table.

Routine Health: HISPland - Data Visualizer Pivot table 1 Update File Options Download		
Year over year (column) Compare changes over time between multiple time periods.	Single value Display a single value. Recommend relative period to show latest data.	Scatter View the relationship between two data items at a place or time. Recommended for finding outliers.
Open as Map Visually plot data on a world map. Data elements use separate map layers. 2		

1. Click on the **Visualisation Type** dropdown arrow.
2. Click on **Open as Map**.

This concludes Chapter 6 on creating and managing pivot tables in the “Data Visualizer” app. Chapter 7 focuses on creating and managing charts.

Chapter 7. Data Visualizer - Charts

After reading this chapter you will be able to:

- Select your chart type.
- Select dimensions and dimension items to create your chart.
- Arrange your chart using the layout area.
- Fine-tune your chart.
- Manage your charts.
- Download a chart.
- Convert a chart to a table or map.

7.1 About the Data Visualizer App

Charts are created in the Data Visualizer app, which is designed firstly to be easy to use. Secondly it is designed to be fast and work well over poor Internet connections.

With the Data Visualizer app, you can create charts based on all available **data dimensions** in webDHIS. A chart is a dynamic tool for data analysis which lets you quickly summarise and arrange data according to its dimensions.

Compulsory Dimensions:

The following 3 data elements are compulsory:

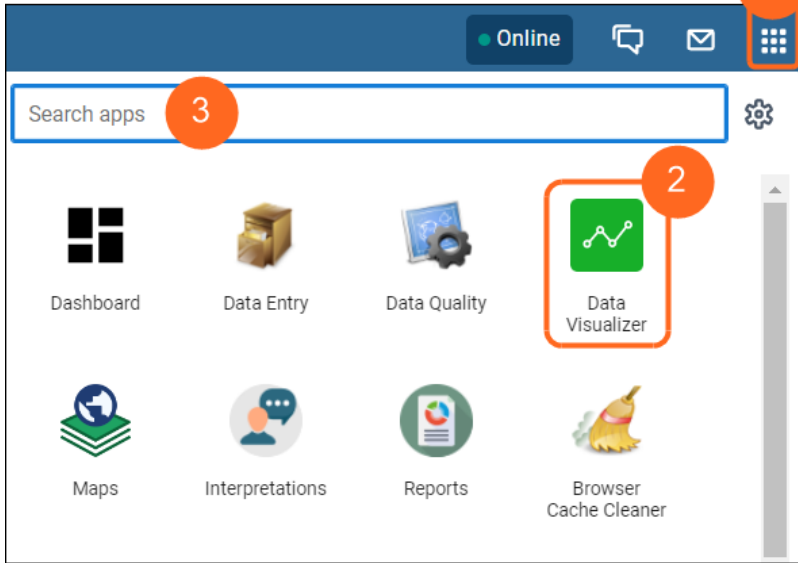
1. **Data:** Represents the phenomenon for which data has been captured/imported. This includes data elements, indicators, data sets (reporting rates), event data items and program indicators. This is also known as the **What** dimension.
2. **Periods:** Representing the time period for the data. This is also known as the **When** dimension.
3. **Organisation units:** Represents the geographical location of the data. This is also known as the **Where** dimension.

Additional Data Dimensions:

webDHIS also contains other optional dimensions which you can use to slice your data further. These are listed under YOUR DIMENSIONS in the selection window. An example is orgunit groups e.g. facility types like District Hospital, Community Health Centre etc.

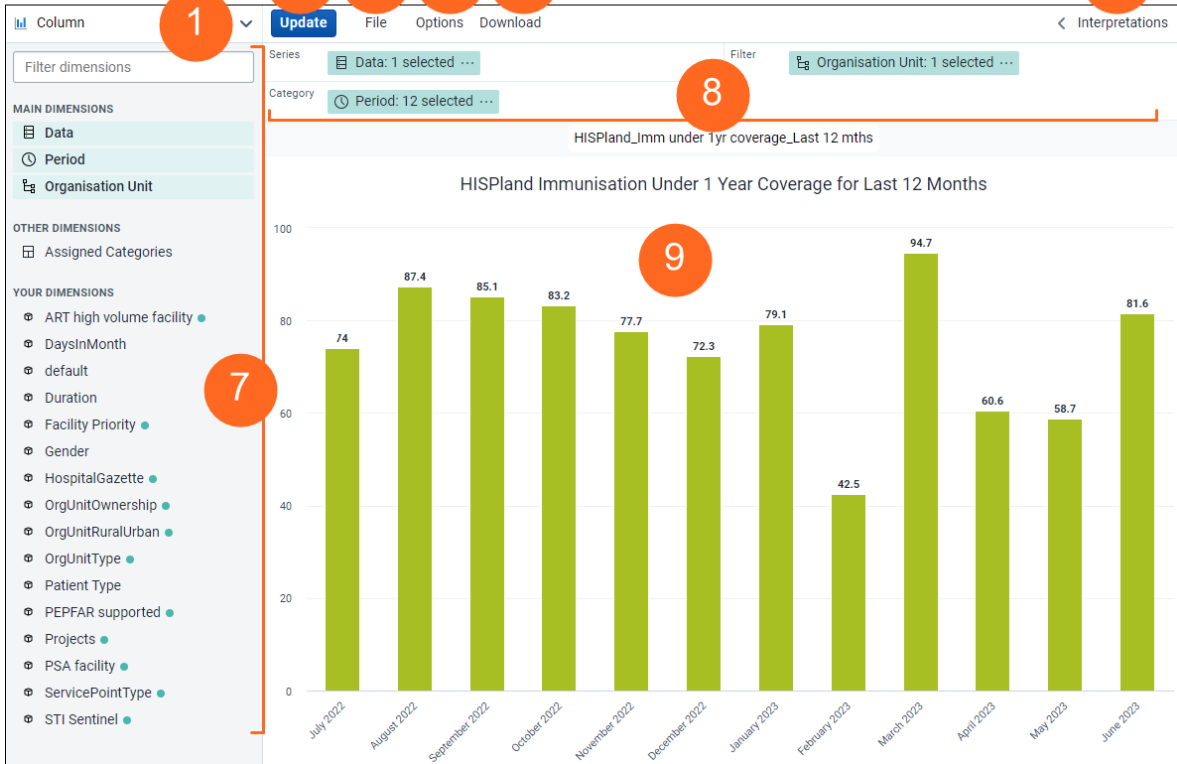
From these compulsory dimensions, you can freely select **dimension items** to include in the chart. None or any one or combination of the additional data dimensions can be selected when creating a chart.

7.2 Access the Data Visualizer App



1. Click on **Apps** in the top menu.
2. Click on **Data Visualizer**.
3. If you can't find it, you can type *Data* in the "Search apps" box.

7.3 The Data Visualiser Interface



1. Shows the **chart type**.
2. **Update** button – the button you need to click when you have made any changes to your chart.

Month	Coverage (%)
July 2022	74
August 2022	87.4
September 2022	85.1
October 2022	83.2
November 2022	77.7
December 2022	72.3
January 2023	79.1
February 2023	42.5
March 2023	94.7
April 2023	60.6
May 2023	58.7
June 2023	81.6

3. **File** menu – allows you to save, open and manage charts.
4. **Options** menu – allows you to fine-tune your chart.
5. **Download** button – allows you to download your chart.
6. **< Interpretations** button – opens the “Interpretations” panel on the right side of the chart. This button is greyed out until a chart is saved.

Interpretations allows you to view, add, edit, and share interpretations about the current chart. Interpretations are covered in detail in [Chapter 8](#).

7. The **Dimensions Area** – where you select dimensions.
8. The **Layout Area** – where you set up the layout of your chart.
9. **Display Area** – where your chart displays.

7.4 Select Visualisation Type

The Data Visualizer app has 15 different visualisation types, each with different characteristics – 14 of them are for charts.

The screenshot shows the 'Routine Health Data: HISPland - Data Visualizer' interface. At the top, there's a blue header bar with a logo and the title. Below the header, there's a navigation bar with a 'Column' dropdown menu (labeled 1), an 'Update' button, and links for 'File', 'Options', and 'Download'. The main area displays a grid of 15 visualization options, each with an icon and a brief description. The 'Column' option is highlighted with a blue border. A red vertical line on the right side of the grid is labeled 2.

Visualization Type	Description
Pivot table	View data and indicators in a manipulatable table.
Column	Compare sizes of related elements vertically. Recommend period as filter.
Stacked column	Compare parts of a whole against related elements vertically. Recommend data or org. unit as series.
Bar	Compare sizes of related elements horizontally. Recommend period as filter.
Stacked bar	Compare parts of a whole against related elements horizontally. Recommend data or org. unit as series.
Line	Track or compare changes over time. Recommend period as category.
Area	Track or compare changes over time. Recommend period as category.
Stacked area	Track or compare parts of a whole over time. Recommend data as series and period as category.
Pie	Compare parts of a whole at a single point in time. Recommend period as filter.
Radar	Compare several items against multiple variables.
Gauge	Compare a percentage indicator against a 100% scale. Recommend period as filter.
Year over year (line)	Compare changes over time between multiple time periods.
Year over year (column)	Compare changes over time between multiple time periods.
Single value	Display a single value. Recommend relative period to show latest data.
Scatter	View the relationship between two data items at a place or time. Recommended for finding outliers.

1. Click on the **Visualization Type** dropdown arrow.
2. Select the type of chart visualisation you want by clicking on one of the icons in the window. For each visualisation type, there is a brief description with suggestions about where to use the main dimensions in the layout.

Note: “Column” is selected by default.

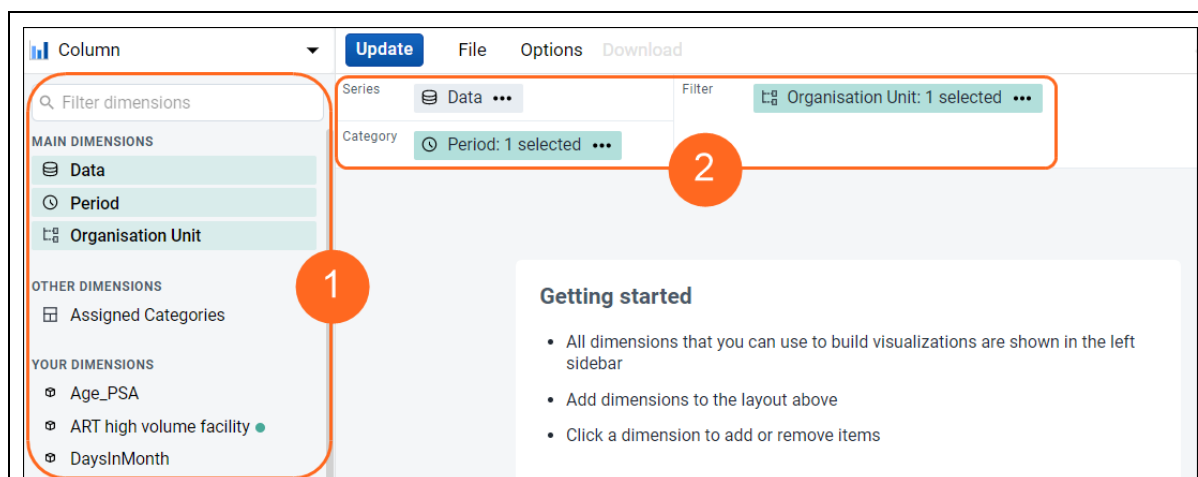
The table below gives some information on the different chart visualisation types:

No	Visualization Type	Description
1	Column	Displays information as vertical rectangular columns with lengths proportional to the values they represent. Example: Comparing performance of different districts. Layout restrictions: Exactly 1 dimension as series, exactly 1 dimension as category.
2	Stacked column	Displays information as vertical rectangular columns, where bars representing multiple categories are stacked on top of each other. Example: Displaying trends or sums of related data elements. Layout restrictions: Same as for Column.
3	Bar	Same as Column only with horizontal bars.
4	Stacked bar	Same as Stacked column only with horizontal bars.
5	Line	Displays information as a series of points connected by straight lines. Also referred to as time series. Example: Visualising trends in indicator data over intervals of time. Layout restrictions: Same as for Column.
6	Area	Is based on a line, with the space between the axis and the line filled with colours and the lines stacked on top of each other. Example: Comparing the trends of related indicators. Layout restrictions: Same as for Column.
7	Stacked Area	Same as “Area”, but the areas of the various dimension items are stacked on top of each other. Example: Comparing the trends of related indicators. Layout restrictions: Same as for Area.
8	Pie	Circle divided into sectors (or slices). Example: Visualising the proportion of data for individual data elements compared to the total sum of all data elements. Layout restrictions: Exactly 1 dimension as series, has no category.
9	Radar	Displays data on axes starting from the same point. Also known as spider chart. Layout restrictions: Same as for Column.
10	Gauge	Semi-circle which displays a single value, typically out of 100% (start and end values are configurable). Layout restrictions: Exactly 1 dimension with exactly 1 item

No	Visualization Type	Description
		as series, data dimension is locked to series.
11	Year over year (line)	Useful when you want to compare one year of data to other years of data. Based on calendar years. Layout restrictions: Period dimension is disabled.
12	Year over year (column)	Same as Year over year (line), only with columns.
13	Single value	Displays a single value in a dashboard friendly way. Layout restrictions: Same as for Gauge.
14	Scatter	Scatter plots enable users to chart organisational units as points against two variables for a single fixed or relative period. Layout restrictions: Exactly 1 item each as vertical and horizontal, data dimension is locked to vertical and horizontal, organisation unit is locked to points.

7.5 Select Dimensions

7.5.1 Select Main Dimensions



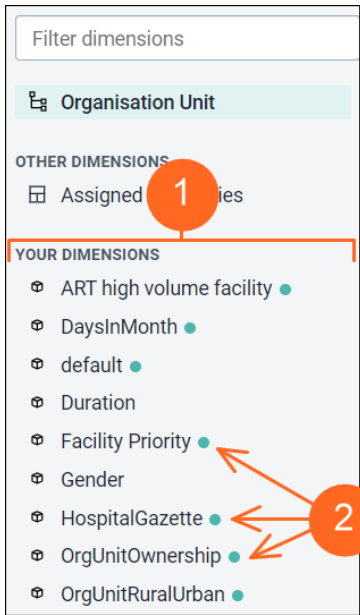
You can select the three compulsory dimensions from 2 areas:

1. Under “MAIN DIMENSIONS” in the Dimensions Menu OR
2. The Layout Area.

Note:

- You select a main dimension by clicking on the text and **not** the context menu (3 dots) next to the text. The context menu (3 dots) will appear next to the text when you hover over it in the Dimension Menu – they are already visible in the Layout Area.
- The use of the context menu is covered later in the section on layout.

7.5.2 Select Additional Dimensions



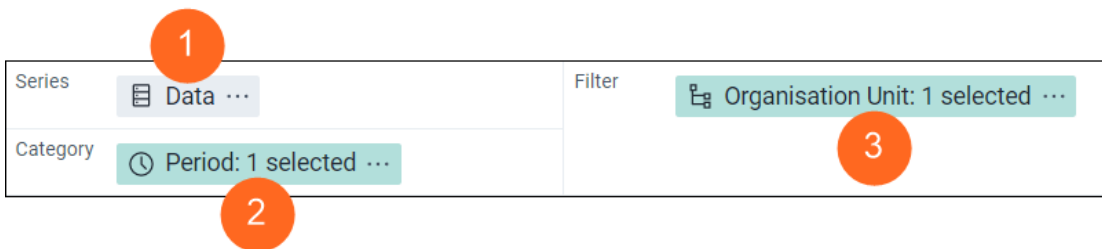
1. Additional dimensions that can be selected are listed under YOUR DIMENSIONS after the four occupational groups.

To select an additional dimension, click on the dimension name in the list.

Note: The context menu (3 dots) will appear next to the dimension name when you point to it. The use of the context menu is covered later in the section on layout.
2. Dimensions which are relevant to the selected data elements and organisations are indicated with a green dot.

7.6 Select Compulsory Dimension Items

When you create a new chart, certain defaults apply:



1. No “Data” dimension items are selected.
2. The Period selected is **Last 12 months**.
3. The Organisation Unit selected is the **country** level i.e. South Africa (National Government).

To select items for a dimension, open the dimension modal window by clicking on a dimension.

7.6.1 Select “Data” Dimension Items (the “What”)

The Data Visualizer app can display any number of data items in a visualisation. Data includes indicators, data elements, data sets, event data items and program indicators. You can combine these data types e.g. you can show data elements and indicators.

The example below shows the selection of data elements from the “EPI” data element group. **Note:** Indicators and Data Sets are selected in the same way.

Note: If you can already see the data element you want in the list on the left, you can select it straight away without filtering or searching.

The screenshot shows the 'Data' section of the application. On the left, there is a search bar labeled 'Search by data item name'. Below it, the 'Data Type' dropdown is set to 'Data elements' (callout 1). The 'Data element group' dropdown is set to 'EPI' (callout 2). The 'Disaggregation' dropdown is set to 'Totals only'. A list of data elements is displayed, including 'BCG dose', 'DTaP-IPV-Hib-HBV (Hexavalent) 1st dose', 'DTaP-IPV-Hib-HBV (Hexavalent) 2nd dose', 'DTaP-IPV-Hib-HBV (Hexavalent) 3rd dose', 'DTaP-IPV-Hib-HBV (Hexavalent) 4th dose', 'Measles 2nd dose', 'OPV 0 dose under 1 year', 'OPV 1st dose under 1 year', 'PCV 1st dose under 1 year', 'PCV 2nd dose under 1 year', and 'PCV 3rd dose under 1 year' (callout 3). On the right, the 'Selected Items' box (callout 6) contains 'Immunised fully under 1 year new' and 'Measles 1st dose'. Between the two boxes are arrows: a double right arrow (callout 4), a double left arrow (callout 8), and single arrows (callout 9). A double-click on a data element (callout 5) moves it to the 'Selected Items' box. At the bottom right, there are 'Hide' (callout 10) and 'Update' (callout 11) buttons. Up and down arrows (callout 7) are also present at the bottom of the 'Selected Items' box.

1. Click on the **Data Type** dropdown arrow and click on **Data elements**.
2. Click on the **Data element group** dropdown arrow and click on a data element group.
3. The list of data elements belonging to the selected group displays.
4. Click on the **double right arrow** to move **all** the data elements to the “Selected Items” box.
5. Double-click on a data element to move it to the “Selected Items” box or click on a data element to select it and then click on the **right arrow**.

Note: You can use the “Shift” and “Ctrl” keys to select multiple data elements at one time.

6. The “Selected Items” box shows all the data elements that have been selected. The order of appearance will be the same as the order in which they are selected.
7. If multiple items are selected, click on an item in the “Selected Items” box and use the **up** and **down arrows** to change its place in the list.
8. Click on the **double left arrow** to remove **all** the data elements from the “Selected Items” box.
9. Double-click on a data element to remove it from the “Selected Items” box or click on a data element to select it and then click on the **left arrow**.
10. Click on **Hide** to close the window. This allows you to save processing time and update your chart later once you have made all your selections. OR
11. Click on **Update** to apply your choices to your chart now.

You can also search for data items across all types, making it much easier to find the data items you want across indicators, data elements, data sets, program data elements and program indicators.

Data

Data Type

All types

- Delivery by caesarean section
- ✓ Delivery by Caesarean Section coverage
- ✓ Delivery by caesarean section rate
- ✓ Delivery in 10-19 years in facility rate
- Delivery in facility 35 years and older
- ✓ Delivery in facility rate
- ✓ Delivery in facility - sum
- Delivery in facility - total
- Delivery in facility under 18 years
- ✓ Delivery in facility under 18 years rate
- Mother postnatal visit within 6 days after delivery
- NIDS 2017 PHC Delivery DDC (Daily) - Reporting rate
- NIDS 2017 PHC Delivery DDC (Daily) - Reporting rate on time

→

→

←←

←

Selected Items

No items selected

↑

↓

Hide

Update

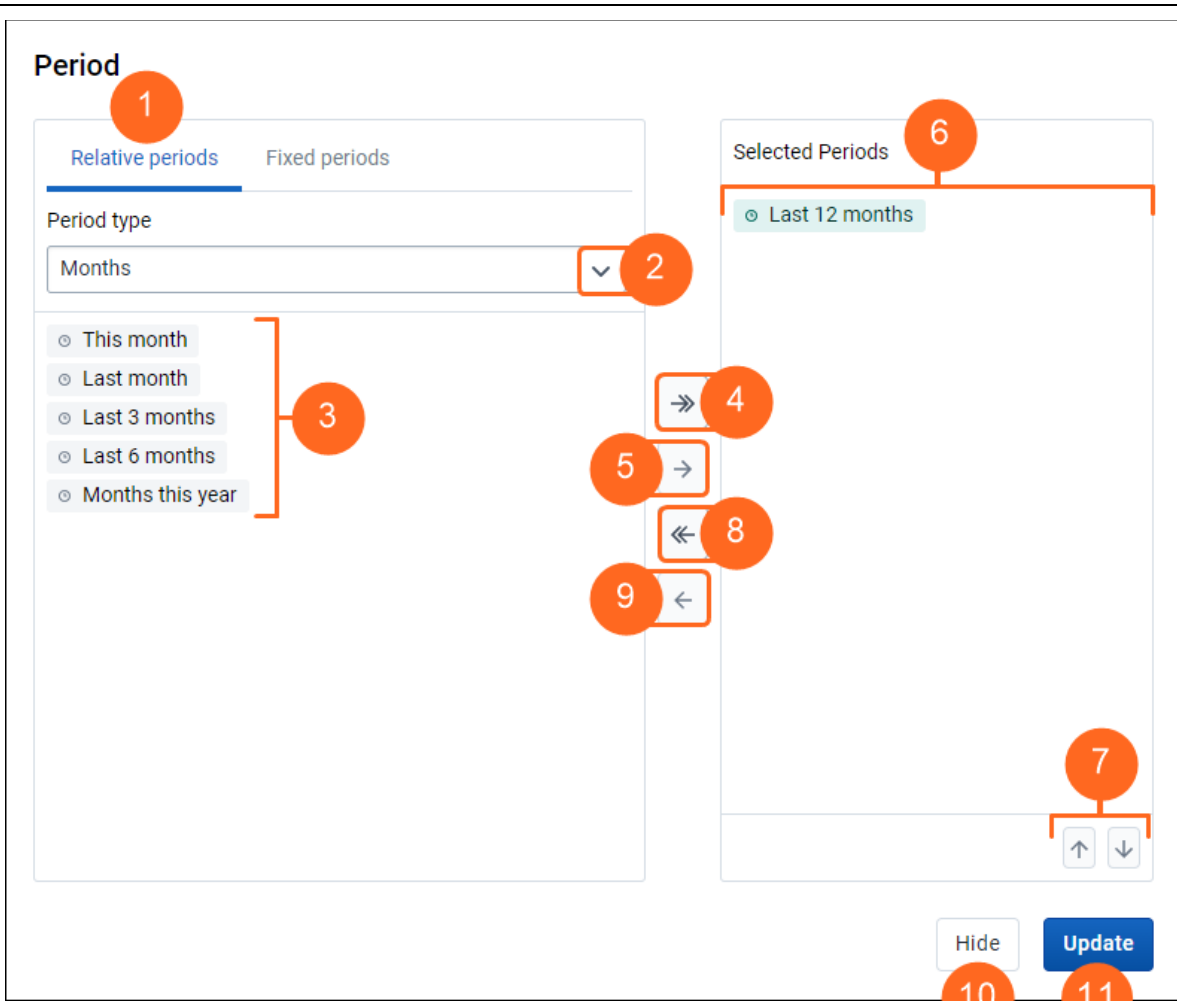
1. Type your search criteria in the “Search by data item name” box.
2. All data items meeting your search criteria will be displayed irrespective of data item type. You can then scroll through the data items to find the one(s) you require.

Note: Each data item type has a different icon e.g.  is for an indicator,  is for a data element.

3. As in the previous example, you can use the arrows to move the required items to the “Selected Items” box.

7.6.2 Select “Period” Dimension Items (the “Where”)

When selecting a period, you have the option to choose between **fixed periods** and **relative periods**. These can also be combined. Overlapping periods are filtered so that they only appear once. For relative periods, the names are relative to the current date, e.g. if the current month is February and “Last month” is selected, the month of January is shown in the chart.



The screenshot shows the 'Period' selection interface. It has two tabs: 'Relative periods' (selected) and 'Fixed periods'. Under 'Relative periods', there is a 'Period type' dropdown menu currently set to 'Months'. Below this is a list of relative period options: 'This month', 'Last month', 'Last 3 months', 'Last 6 months', and 'Months this year'. To the right of this list is a 'Selected Periods' box containing 'Last 12 months'. Between the two boxes are four arrow buttons: a right arrow, a right arrow with a plus sign, a left arrow with a minus sign, and a left arrow. At the bottom right of the interface are 'Hide' and 'Update' buttons.

1. Click on **Relative periods**.
2. Click on the **Period type** dropdown arrow and select the period type (period frequency).
3. The list of periods belonging to the selected period type displays.

Note: “Months” is selected by default.

4. Click on the right arrow button to move the selected period to the Selected Periods box.
5. Click on the right arrow with plus button to add the selected period to the Selected Periods box.
6. Click on the left arrow with minus button to remove the selected period from the Selected Periods box.
7. Click on the left arrow button to move the selected period back to the list of periods.
8. Click on the right arrow button to move the selected period to the Selected Periods box.
9. Click on the right arrow with plus button to add the selected period to the Selected Periods box.
10. Click on the Hide button.
11. Click on the Update button.

4. Click on the **double right arrow** to move all the periods to the “Selected Periods” box.
5. Double-click on a period to move it to the “Selected Periods” box or click on the period to select it and then click on the **right arrow**.

Note: You can use the “Shift” and “Ctrl” keys to select multiple periods at one time.

6. The “Selected Periods” box shows all the periods that have been selected. The order of appearance will be the same as the order in which they are selected.

Note: “This year” is selected by default.

7. If multiple periods are selected, click on an item in the “Selected Periods” box and use the **up** and **down arrows** to change its place in the list.
8. Click on the **double left arrow** to remove all the periods from the “Selected Periods” box.
9. Double-click on a period to remove it from the “Selected Periods” box or click on the period to select it and then click on the **left arrow**.
10. Click on **Hide** to close the window. This allows you to save processing time and update your chart later once you have made all your selections. OR
11. Click on **Update** to apply your choices to your chart now.

The screenshot shows a 'Period' selection window. At the top, there are two tabs: 'Relative periods' and 'Fixed periods', with 'Fixed periods' being the active tab (callout 1). Below the tabs, there are two sections: 'Period type' and 'Year'. The 'Period type' section has a dropdown menu set to 'Monthly' (callout 2). The 'Year' section has a dropdown menu set to '2023' (callout 3). Below these sections is a list of months for 2023: January 2023, February 2023, March 2023, July 2023, August 2023, September 2023, October 2023, November 2023, and December 2023. A bracket groups the months from January to December (callout 4). To the right of the month list are four arrows: a double right arrow (callout 5), a single right arrow (callout 6), a single left arrow (callout 9), and a double left arrow (callout 10). To the right of these arrows is a 'Selected Periods' box (callout 7) containing three items: April 2023, May 2023, and June 2023. Below the 'Selected Periods' box are two arrows: an up arrow and a down arrow (callout 8). At the bottom of the window are two buttons: 'Hide' (callout 11) and 'Update' (callout 12).

1. Click on **Fixed periods**.

2. Click on the **Period type** dropdown arrow and select the period type.
Note: “Months” are selected by default.
3. Click on the **Year** up or down arrow to select the year.
Note: The current year is selected by default.
4. The list of periods belonging to the selected period type displays.
5. Click on the **double right arrow** to move **all** the periods to the “Selected Periods” box.
6. Double-click on a period to move it to the “Selected Periods” box or click on the period to select it and then click on the **right arrow**.
Note: You can use the “Shift” and “Ctrl” keys to select multiple periods at one time.
7. The “Selected Periods” box shows all the periods that have been selected. The order of appearance will be the same as the order in which they are selected.
Note: “This year” will still appear here. If you only want the fixed periods you have selected, you need to remember to remove it.
8. If multiple periods are selected, click on an item in the “Selected Periods” box and use the **up** and **down arrows** to change its place in the list.
9. Click on the **double left arrow** to remove **all** the periods from the “Selected Periods” box.
10. Double-click on a period to remove it from the “Selected Periods” box or click on the period to select it and then click on the **left arrow**.
11. Click on **Hide** to close the window. This allows you to save processing time and update your chart later once you have made all your selections. OR
12. Click on **Update** to apply your choices to your chart now.

7.6.3 Select “Organisation Unit” Dimension Items (the “Where”)

The Organisation Unit dialog is flexible, offering three ways of selecting organisation units:

1. **Explicit selection** – Use the tree to explicitly select the organisation units you want to appear in your pivot table.
2. **Using orgunit levels and groups** – The “Level” and “Group” dropdowns are a convenient way to select all orgunits at specific levels and/or in one or more orgunit groups. For example, select “Sub-district” to show all orgunits at Sub-district level; select “Clinic” to show only those orgunits that belong to the “Clinic” orgunit group.
3. Using the user’s organisation units
 - **User organisation unit** – This is a way to dynamically select the orgunits that the logged in user is associated to.
 - **User sub-units** – Selects the sub-units of the user organisation unit.
 - **User sub-x2-units** – Selects the units two levels below the user organisation unit.

EXPLICIT SELECTION

The screenshot shows the 'Organisation Unit' selection window. At the top, there are three checkboxes: 'User organisation unit' (checked), 'User sub-units', and 'User sub-x2-units'. Below this is a tree view of organisation units. The tree starts with 'hi_HISPland', which is expanded to show 'an_Animal Province'. Under 'an_Animal Province', there are three districts: 'an_Carnivores District' (checked), 'an_Herbivores District' (checked), and 'an_Omnivores District' (unchecked). Below the districts are 'fo_Food Province' and 'pl_Plant Province'. To the right of the tree, there are two dropdown menus: 'Select a level' and 'Select a group'. Below the dropdowns, it says 'Selected: 2 org units' and 'Deselect all'. At the bottom right, there are two buttons: 'Hide' and 'Update'.

1. ☐ User organisation unit ☐ User sub-units ☐ User sub-x2-units

2. ☒ hi_HISPland
 ☒ an_Animal Province
 ☒ an_Carnivores District
 ☒ an_Herbivores District
 ☐ an_Omnivores District
 ☐ fo_Food Province
 ☐ pl_Plant Province

Select a level Select a group

Selected: 2 org units Deselect all

Hide Update

1. If this is a new chart, remove the tick from the **User organisation unit** checkbox, which is ticked by default.
2. Click on each organisation unit that you want to select. A tick displays in the checkbox next to the organisation unit. Notice that the parent levels above the selected item are also highlighted, but you need to also click on the parent if you want to select it.

Note: You may need to click on the right arrow next to an organisation unit to expand a level.

3. Click on **Deselect all** to remove all your selections.
4. Click on **Hide** to close the window. This allows you to save processing time and update your chart later once you have made all your selections. OR
5. Click on **Update** to apply your selections to your chart now.

USING ORGUNIT LEVELS AND GROUPS

The screenshot shows the 'Organisation Unit' selection window. At the top, there are three checkboxes: 'User organisation unit' (checked by default), 'User sub-units', and 'User sub-x2-units'. Below these is a tree view of organisation units. The tree starts with 'hi_HISPland', which has three sub-items: 'an_Animal Province', 'fo_Food Province' (which is selected with a checkmark), and 'pl_Plant Province'. Below the tree, there are two dropdown menus for selecting levels and groups. The first dropdown is labeled 'Sub-district' and the second is labeled 'Clinic'. Below these dropdowns, there is a 'Deselect all' button. At the bottom right, there are two buttons: 'Hide' and 'Update'.

1. ☐ User organisation unit ☐ User sub-units ☐ User sub-x2-units

2. Sub-district x 3. Clinic x Community Health Centre x

4. Selected: 1 org unit, 1 level, and 2 groups 5. Deselect all 6. Hide 7. Update

1. If this is a new chart, remove the tick from the **User organisation unit** checkbox, which is ticked by default.
2. Click on the **Select a level** dropdown arrow to select one or more levels.
3. Click on the **Select a group** dropdown arrow to select one or more orgunit groups.
4. **Note:** As soon as at least one level or group has been selected, the orgunit tree now acts as the boundary for the levels/groups. In the screenshot, we would see all clinics and community health centres for all sub-districts in Limpopo Province.
5. Click on the **X** next to an item to remove it from the selection.
6. Click on **Deselect all** to remove all your selections.
7. Click on **Hide** to close the window. This allows you to save processing time and update your chart later once you have made all your selections. OR
8. Click on **Update** to apply your selections to your chart now.

USING THE USER'S ORGANISATION UNITS

Organisation Unit

☒ User organisation unit ☒ User sub-units ☐ User sub-x2-units 1

☐ hi_HISPland

- ☐ an_Animal Province
- ☐ fo_Food Province
- ☐ pl_Plant Province

Select a level ▼

Select a group ▼

Selected: User organisation unit and User sub-units

Deselect all 2

3
Hide

4
Update

1. Click the checkbox next to an option to select it.

Note: You can select more than one option. All other selection methods are then greyed out.

2. Click on **Deselect all** to remove all your selections.
3. Click on **Hide** to close the window. This allows you to save processing time and update your chart later once you have made all your selections. OR
4. Click on **Update** to apply your selections to your chart now.

7.7 Select Additional Dimension Items

After you've clicked on the occupational group you want under YOUR DIMENSIONS, the dimension modal window opens.

Gender

1 ☐ Automatically include all items
Select all Gender items. With this option, new items added in the future will be automatically included.

2 ☒ Manually select items...

Search

Male

Female

Hide

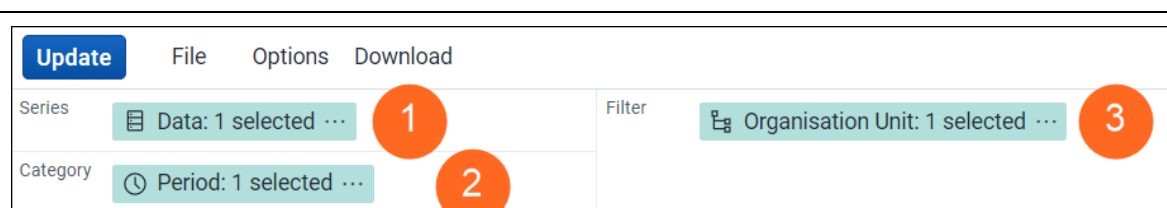
Add to Columns

When selecting an additional dimension item, either individual items or all items can be selected.

1. To automatically select all items, click on **Automatically include all items** i.e. you will not need to select them manually, they will **all** be moved to the “Selected Items” window.
Note: This will also include any additional items that are added in the future if the available dimension items are updated.
2. By default, **Manually select items...** is selected, which allows for individual items to be picked out of a list, in the same way as described in the **Data** and **Period** dimensions sections above.
3. Click on **Hide** to close the window. This allows you to save processing time and update your chart later once you have made all your selections. OR
4. If you want to update your chart now, click on **Add to Series**, or click on the dropdown arrow and select **Add to Category** or **Add to Filter** depending on where you want the dimension to appear in the layout.

(Note: Layout is covered in the next section).

7.8 Select Layout

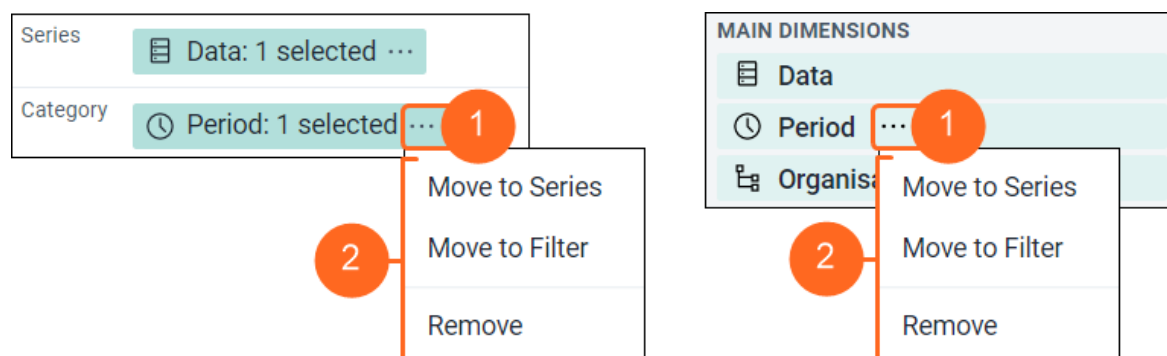


The Layout Area is divided into 3 sections:

1. **Series:** A set of continuous, related elements (e.g. periods or data elements) that you want to visualise to emphasise trends or relations in its data.
2. **Categories:** A set of elements (e.g. indicators or organisation units) for which you want to compare its data.
3. **Filter:** The filter selection will filter the data displayed in the visualisation.

You can move the dimensions that are already in the Layout Area by clicking and dragging them to another section. Or you can use the **context menu (3 dots)** in either the Layout Area or the Dimensions Area to move dimensions around.

Note: The options on the context menu will depend on where the dimension you are moving is currently located.



1. Click on the **context menu** of the dimension you want to move.
2. As the dimension is in **Category**, the options are **Move to Series** and **Move to Filter**.

Note: You can also choose to delete a dimension from your pivot table by clicking on **Remove**.

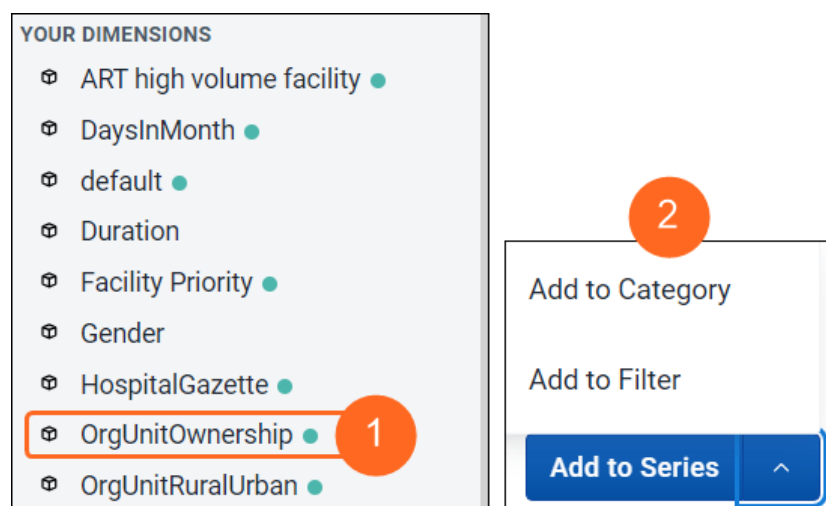
Main dimensions are already added to the Layout Area.

There are 2 ways to add additional dimensions.

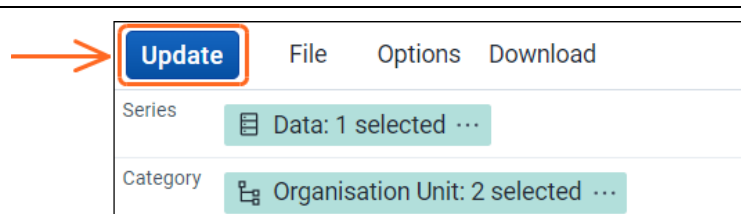


1. Click on the **context menu** of the dimension you want to add.
2. Select **Add to Columns**, **Add to Rows** or **Add to Filter**.
3. If you have not yet selected any dimension items, the modal window will open so that you can do so. Click on **Update** to add the dimension to the Layout Area.

OR



1. Click on the dimension you want to add.
2. The modal window will open whether or not you have selected dimension items previously, or still need to do so. Then click on **Add to Series** (the default), **Add to Category** or **Add to Filter** to add the dimension to the Layout Area.



If you have made changes to the layout in the Layout Area, you must click on **Update** to apply them to your chart.

Note: The Layout Area changes according to the chart type you have selected e.g. if you select a Gauge, Pie or Single Value visualisation, there is no Category in the Layout Area:

Series	Data: 1 selected	Filter	Organisation Unit: 1 selected ...	Period: 12 selected ...
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7.9 Change the Display of your Chart

The display of a chart can be changed by enabling/disabling and configuring several options. The options are organised in tabs in the “Options” dialog and in sections within each tab. Tabs and options will vary according to the selected chart type.

Note: The “Series” tab is an advanced feature and is not covered in this document. Advanced options are also outside the scope of this document.

	Click on Options in the menu above the chart.
	1. Click on the required tab. This screenshot shows the tabs that are available for a column chart. 2. Configure the desired options on the tab displayed. 3. Click on Hide to close the window and update later. 4. Click on Update to apply the changes to your chart.

7.9.1 Data Tab

Options

[Data](#)[Axes](#)[Series](#)[Style](#)[Limit values](#)

Display

☐ Stacked values add up to 100%

☐ Cumulative values

☐ Hide empty categories

☐ Custom sort order

☐ Skip rounding

Lines

☐ Trend line

☐ Target line

☐ Base line

Option	Description
Display	
Stacked values add up to 100%	Displays 100% stacked values in Stacked Column and Stacked Bar charts.
Cumulative values	Displays cumulative values in Column, Stacked column, Bar, Stacked bar, Line and Area charts.
Hide empty categories	Hides category items with no data from the chart. This is useful e.g. when you create Column and Bar charts. Options are: • Before first – hides missing values only before the first value. • After last – hides missing values only after the last value. • Before first and after last - hides missing values only before the first value and after the last value. • All – hides all missing values.
Custom sort order	Controls the sort order of the values. The sort order can be: • Low to High • High to Low
Skip rounding	Skips the rounding of data values, offering the full precision of data values.

Option	Description
Lines	
Trend line	Displays the trend line that visualises how your data evolves over time - e.g. if performance improving or deteriorating. Useful when periods are selected as category. You can create Linear , Polynomial or Loess trend lines.
Target line	Displays a horizontal line at the given domain value. Useful e.g. when you want to compare your performance to the current target.
Base line	Displays a horizontal line at the given domain value. Useful e.g. when you want to visualise how your performance has evolved since the beginning of a process.

7.9.2 Legend Tab

Options

Data
Legend
Axes
Series
Style
Limit values

☒ Use legend for chart colors

Legend type

☒ Use pre-defined legend per data item

☐ Select a single legend for the entire visualization

☐ Show legend key

Option	Description
Use legend for chart colors	Applies a legend to your chart, which is a value-based colour for each item. The legends themselves are configured elsewhere in HRIS.
Legend type	Controls which legend is applied. Use pre-defined legend per data item – applies a legend to each data element individually, based on the legend assigned to each one in the system. Select a single legend for entire visualisation – applies a single legend to all data items, chosen from a dropdown list of available legends.
Show legend key	Displays a key for the legend on the right side of your chart, to indicate the value ranges and their respective colour. If the chart is added to a

Option	Description
	dashboard, this option can also be toggled from the top right corner of the dashboard item.

7.9.3 Axes Tab

Options

Data
Axes
Series
Style
Limit values

Vertical (y) axis
Horizontal (x) axis

Vertical (y) axis

Axis title

☐ Auto generated from axis items
☒ None
☐ Custom

Axis range

–

Values outside of the range will not be displayed

Steps

Number of axis tick steps, including the min and max. A value of 2 or lower will be ignored.

Decimals

Labels

☐

Option	Description
Axis title	Type a title here to display a label next to the x or y axis. Useful when you want to give context information to your chart, for example about the unit of measure. • Auto generated from axis item – provided a title based on the content of the axis (y axis only). • None – removes the title • Custom – allows you to type a custom title
Axis range	Defines the maximum and minimum value which will be visible on the y axis.
Steps	Defines the number of ticks which will be visible on the y axis.

Option	Description
Decimals	Defines the number of decimals that will be used for y axis values.
Axis labels	Defines the format of the x and/or y axis labels. There are options for size, colour, bold and italics.

7.9.4 Style Tab

Options

Data
Axes
Series
Style
Limit values

Chart style

☒ Value labels

☐ No space between bars/columns

☒ Show series key

Size Regular
Position Center
● B I

Titles

Chart title

☒ Auto generated
☐ None
☐ Custom

Size Regular
Position Center
● B I

Chart subtitle

☒ Auto generated
☐ None
☐ Custom

Size Small
Position Center
● B I

Color set

☐ Default
☐ Basic
☐ Extended
☒ Bright
☐ Dark
☐ Gray
☐ Color blind
☐ Patterns

Option	Description
Chart Style	
Value labels	Shows the values above the series in the chart.
No space between bars/ columns	Removes the space between the columns or bars in the chart.
Show series key	Toggles the legend on and off leaving more room for the chart itself.
Titles	
Chart title	Controls the title that appears above the chart. • Auto generated - uses the default title generated from the visualisation's dimensions/filters. • None - removes the title. • Custom - allows you to type a custom title. You can also format the chart title. There are options for size, position, colour, bold and italics.
Chart subtitle	Controls the subtitle that appears above the chart. • Auto generated - uses the default subtitle generated from the visualisation's dimensions/filters. • None - removes the subtitle. • Custom - allows you to type a custom subtitle. You can also format the chart subtitle. There are options for size, position, colour, bold and italics.
Color set	Controls the colours used in the chart. A list of available colour sets is shown with a preview of the colours. There is also a "Mono patterns" option which uses coloured patterns instead of solid colours.

7.9.5 Limit Values Tab

Options

[Data](#)[Axes](#)[Series](#)[Style](#)[Limit values](#)

Limit minimum/maximum values

You can set a minimum or maximum value. This will apply to the entire visualization, all values outside of the minimum/maximum range will not be displayed

Minimum data value

Maximum data value

▼

▼

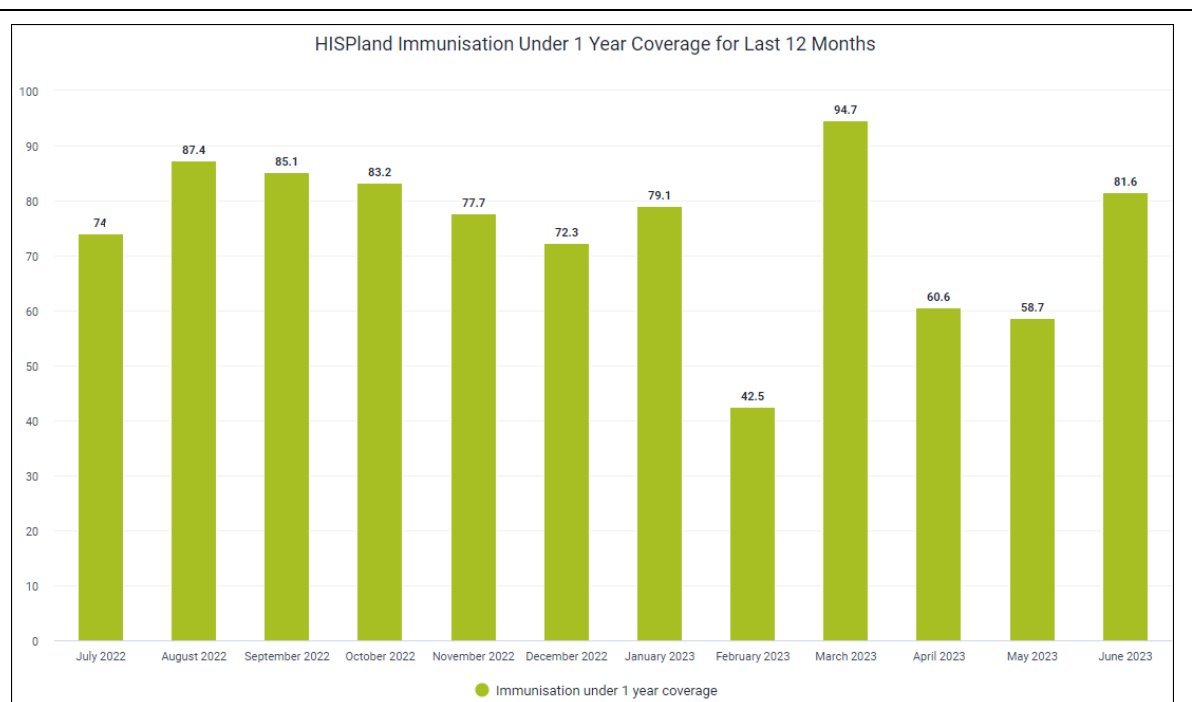
Clear min/max limits

Option	Description
Limit minimum/ maximum values	Allows for the data to be filtered on the server side. You can instruct the system to return only records where the aggregated data value is equal, greater than, greater or equal, less than or less or equal to certain values. If both parts of the filter are used, it's possible to filter out a range of data records.

7.10 Adding More Axes

When combining data with different measurement scales you will get a more meaningful visualisation by having more than a single axis e.g. you want view coverage percentages together with the raw data.

This chart shows Immunisation under 1 year coverage for HISPland for the last 12 months:



Selected Items

- Immunisation under 1 year coverage
- Immunised fully under 1 year new

To also show the raw data, select the data element “Immunised fully under 1 year new”.

1

Update File Options Download

Options

2

Data Legend Axes Series Style Limit values

Data item	Visualization type	Axis 1	Axis 2	Axis 3	Axis 4
Immunisation under 1 year coverage	☒ ☐	☒	☐	☐	☐
Immunised fully under 1 year new	☒ ☐	☐	☒	☐	☐

3

4

5

Hide Update

Immunisation under 1 year coverage is already set up as a column chart using Axis 1. To create a separate axis for the raw data:

1. Click on **Options**.
2. Click on **Series**.
3. You can stick with the default column chart, or you can choose a line chart.
4. Click in the button under **Axis 2**.
5. Click on **Update**.

To set up the axis labels:

Options

Data Legend **Axes** Series Style Limit values

Vertical (y) axis 1 **2**

Vertical (y) axis 2 **4**

Horizontal (x) axis

Vertical (y) axis 1

Axis title

☐ Auto generated from axis items

☐ None

☒ **Custom**

% Coverage

Size Regular Position Middle

Reset style to default

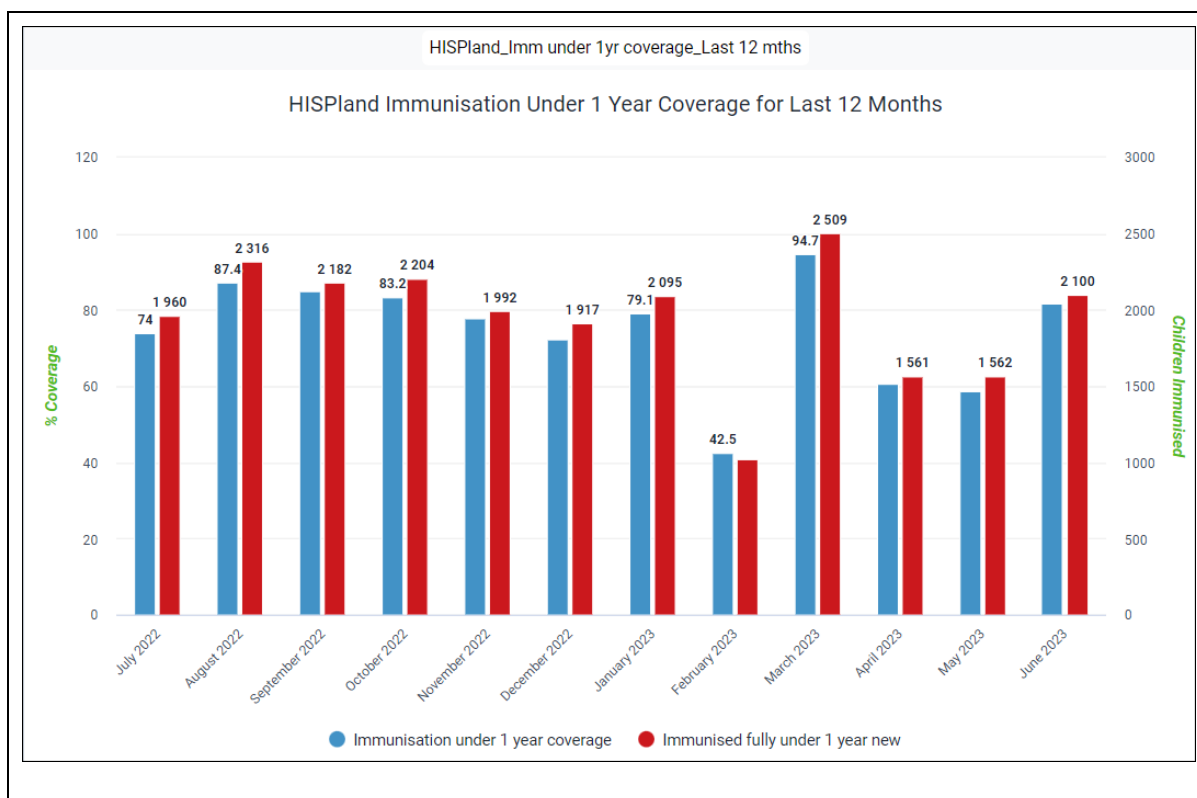
3

1. Click on **Options > Axes**.
2. Click on **Vertical (y) axis 1**.
3. Click on **Custom** and type an axis title. You can also select the formatting you would like to use i.e. font size, alignment, font colour and font style.
4. Click on **Vertical (y) axis 2** and repeat Step 3.

Note: You can also define a title for the horizontal (x) axis.

5. Click on **Update** at the bottom of the window (not shown in screenshot).

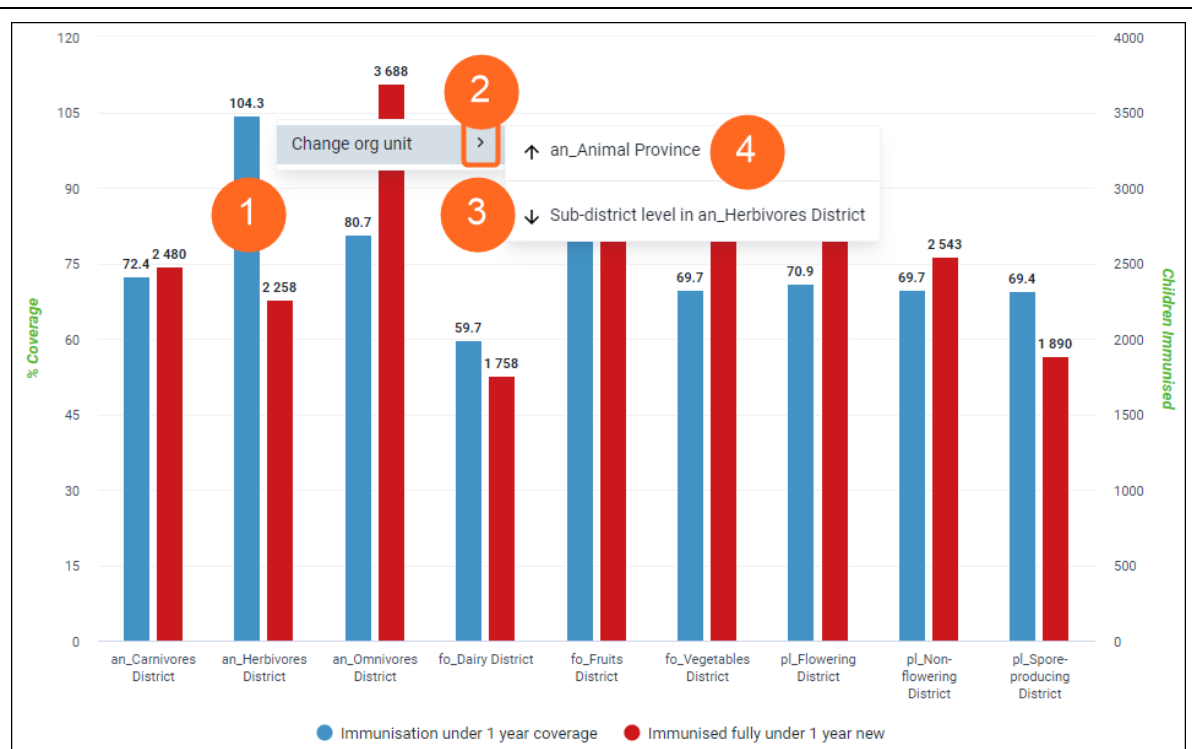
This chart now shows both “Immunisation under 1 year coverage” and “Immunisation under 1 year new” for HISPland for the last 12 months, each with its own axis:



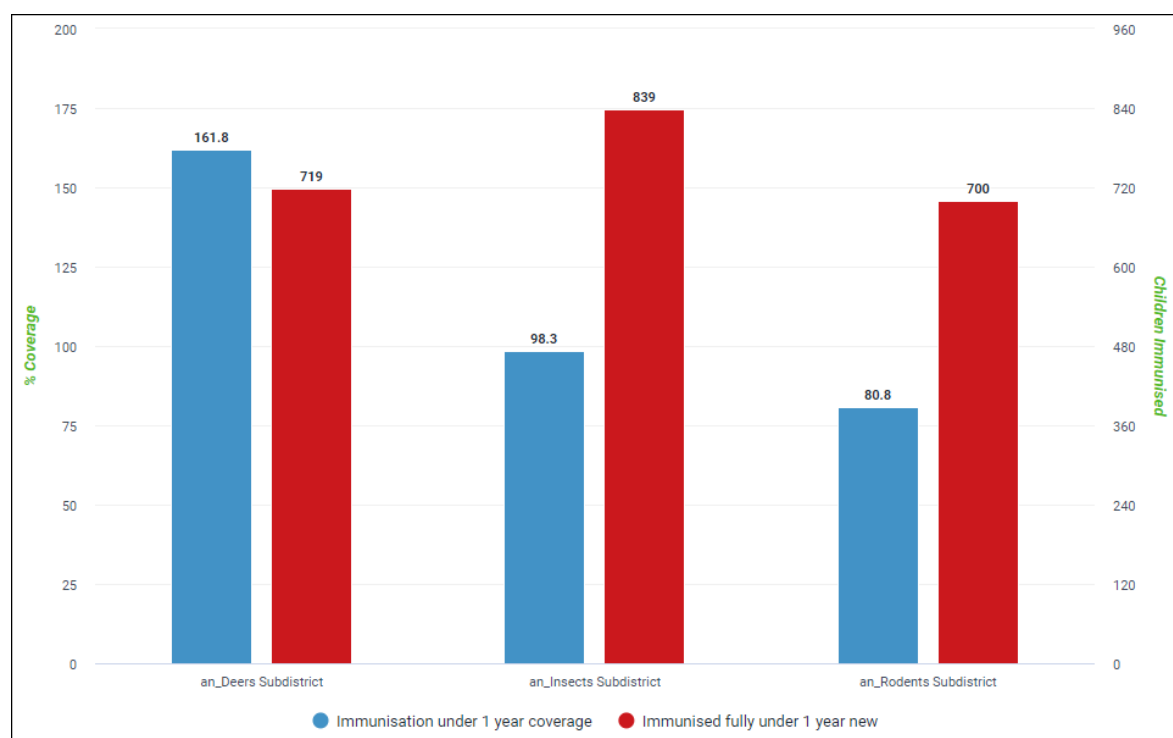
7.11 Orgunit Drill-down in Bar and Column Charts

A new feature of bar and column charts allows you to left click on a bar or column and drill down or move up one level in the organisational hierarchy.

Note: This is only possible if the organisation unit dimension is not specified as a filter.



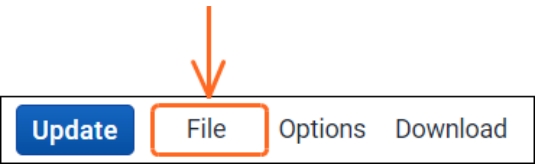
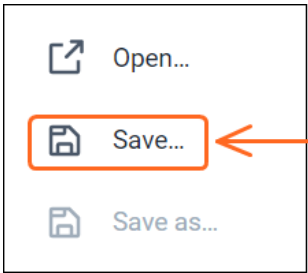
1. Left-click on the required column or bar.
2. Click on the **Change org unit** arrow.
3. Click to drill down one level in the organisational hierarchy.
4. Click to move up one level in the organisational hierarchy.

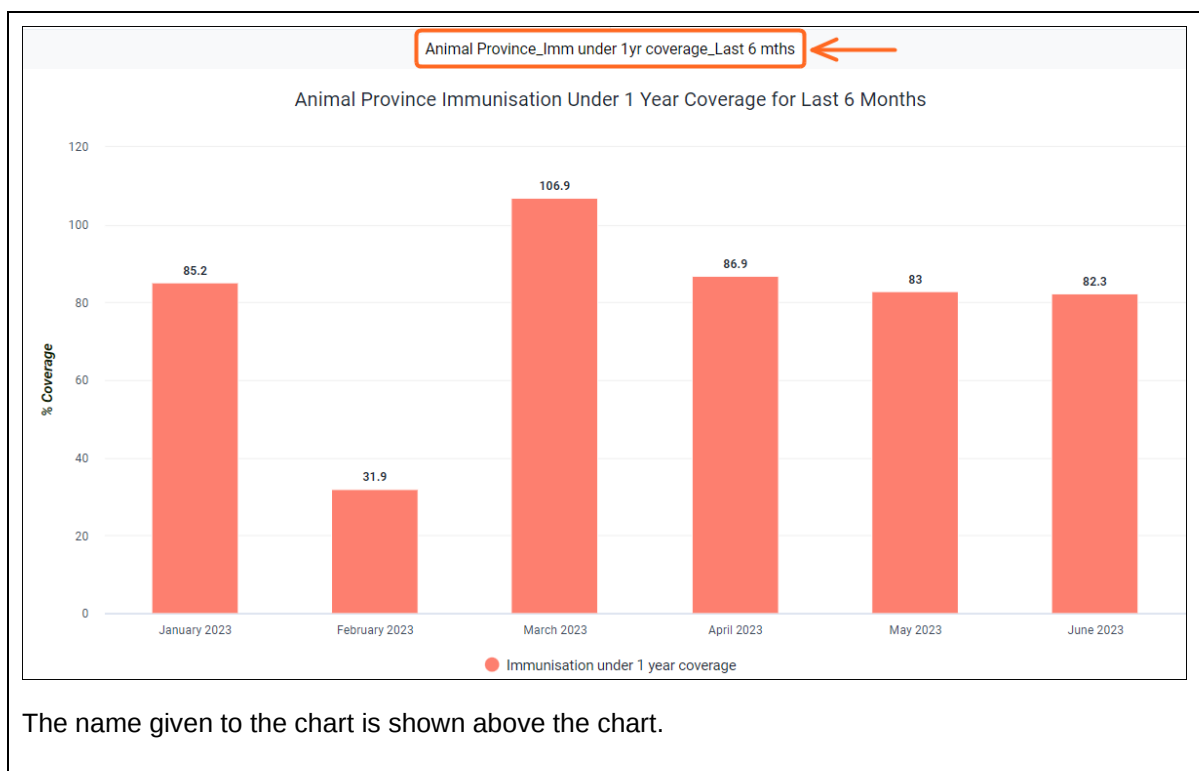


7.12 Save a Chart

You need to save your charts so that you can easily find them later. You can also choose to share them with other users or display them on a dashboard.

A chart also needs to be saved before interpretations can be added.

	Click on File in the menu above the chart.
	Click on Save to: • save your chart for the first time. • save changes to an existing chart.
Save visualization as Name * 1 Description 2 3 4 Cancel Save 1. Type the Name of your chart. Note: Make sure the name reflects the dimension items you have selected. 2. Type an optional Description. The creator of the chart should type a description if it needs some explanation, but a description can be added or edited at any time. 3. Click on Cancel to exit without saving. 4. Click on Save to save your chart.	



7.13 Create a New Chart

When you select the “Data Visualizer” app from the “Apps” menu, you can start creating your chart from scratch.

	If you've been working in the app and would now like to create a new chart from scratch, click on File > New.
--	--

7.14 Manage Saved Charts

All the options for managing charts are on the “File” menu.

Note: Options will be greyed out if you do not have a chart open or if you do not have permission to execute them e.g. if **Share** is greyed out, it means that you do not have permission to share the displayed chart.

7.14.1 Open an Existing Chart

+ New

 Open...

 Save

Click on **File** > **Open**.

Open a visualization

1 immunisation 2 Type All charts 3 Created by Anyone 4 Clear filters

Name	Type	Created	Last updated
HISPLand Districts_Immunisation under 1yr_Last 12 mths		09/12/2023	09/15/2023
Sandy_Immunisation by district for Animal Prov for last year		08/07/2023	08/07/2023
P12 BCG VS immunisation under 1 year last quarter		03/02/2021	03/02/2021
P12 Immunisation under 1 year coverage trend last 10 FY		10/14/2020	10/14/2020
ZZ_L2_Immunisation coverage under 1 year trend_Last 10 years		06/20/2018	05/22/2019
Immunisation coverage under 1 2018_2019		06/19/2018	10/19/2018
Immunisation coverage under 1 year Qtr4 Per District		05/29/2018	09/11/2018
Immunisation coverage under 1 year Qtr4 Per District		05/29/2018	05/29/2018

7 1-8 of 15 Page 1 < Previous Next >

1. To search for the file that you want to open, type part of its name in the **Filter by name** box.
2. To filter your search (e.g. you may only want to see pie charts), click on the **Type** dropdown arrow and select one of the following from the list:
 - All types (the default)
 - All charts
 - Any of the 15 visualisation types
3. You can also filter the list displayed by choosing the owner of the chart. Click on the **Created by** dropdown arrow and select one of the following from the list:
 - Anyone (the default)
 - Only you

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- Others

4. Click on **Clear filters** to display the full list of visualisations.
5. For each chart in the list, the name, the type, the date it was created and the date it was last updated are shown. You can click on any of the column headings to sort the list by that column in either ascending or descending order. A blue arrow indicates the order selected.
6. Note that the icon under Type indicates the type of chart. You can click on the **Type** dropdown arrow to see which icon is allocated to which type.
7. The buttons at the bottom right of the window allow you to move from page to page to see more charts. You can either click on the **Previous** and **Next** buttons, or you can click on the Page dropdown arrow and select a specific page.
8. When you have located the chart that you want to open, simply click on its name in the list to open it.

Note: If you don't want to select an item, just click anywhere outside the window to remove it.

Getting started

- All dimensions that you can use to build visualizations are shown in the left sidebar
- Add dimensions to the layout above
- Click a dimension to add or remove items

Your most viewed charts and tables

-  HISPland_Imm under 1yr coverage_Last 12 mths
-  ANC 1st Visits & Coverage_HISPland Subdistricts_Last year
-  HISPland Districts_Immunisation under 1yr_Last 12 mths
-  DU_Immunisation_HISPland Subdistricts_Apr-June 2023
-  Immunisation_Clinics & CHCs_HISPland Subdistricts_Apr-June 2023
-  Deliveries_Plant Province by District_Last 12 months

The most viewed charts and tables are shown in the main window when you access the "Data Visualizer" app.

You can also get there by clicking on **File > New**.

Click on a file in the list to open it.

7.14.2 Save Changes to an Existing Chart to Create a New Chart

 Save

 Save as...

 Rename...

You can use an existing chart as the basis for creating a new chart. After you have made your changes:

	Click on File > Save as.
Save visualization as Name * Animal Province_Imm under 1yr coverage_Last 6 mths 1 Description 2 3 4 Cancel Save	1. The name of the original chart displays. Type the name of the new chart. 2. You can add a description or edit the existing description if necessary. 3. Click on Cancel to exit without saving. 4. Click on Save to save the new chart.

7.14.3 Rename a Chart

Save as... Rename... Translate...	This assumes that you have a chart open that you wish to rename. Click on File > Rename. Note: You can only changes the names of charts that you've created or that have been shared with you with edit rights – you will notice that the rename option is greyed out for charts that you did not create.
Rename visualization Name * Animal Province_Immunisation under 1yr coverage_Apr-Jun 2023 1 Description 2 3 4 Cancel Rename	1. Type the new Name of your visualisation. Note: Make sure the name reflects the dimension items you have selected. 2. Type an optional Description or amend the current description. 3. Click on Cancel to exit without saving the new name. 4. Click on Save to save your visualisation with its new name.

	A message will display very briefly at the bottom of the screen.
--	---

7.14.4 Share a Chart

You can share a chart with other users and/or user groups. **Note:** You need to share a chart before you can share an interpretation of that chart.

 Translate...

 Share...

 Get link...

This assumes that you have a chart open that you wish to share.

Click on **File** > **Share**.

Sharing and access: HISPland Districts_Immunisation under 1yr_Last 12 mths

Give access to a user, group or role

User, group or role	Access level	
Search	Select a level	4 v 5 Give access

Users, groups and roles that currently have access

User / Group / Role	Access level
 All users No access	Metadata No access
 Provincial Information Officers Can view and edit	Metadata View and edit 6 v

7

Close

- View only
- View and edit

5. Click on **Give access**.

To edit access:

6. The selected user, user group or user role will now show in the list of those who have been given access. To edit the access given, click on the **Access level** dropdown arrow next to the user, user group or user role and select a level. Options are:

- View only
- View and edit
- Remove access

7. Click on **Close** to exit.

7.14.5 Get Link for a Chart

 Share...
 **Get link...** ←
 Delete

Click on **File > Get link**.

Open in this app

<https://training.dhis.dhmis.org/hispland/dhis-web-data-visualizer/#/wAj9VcErp63>

Open link in new tab

Open link in new window

Open link in incognito window

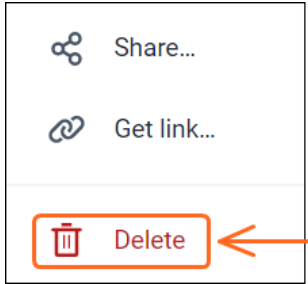
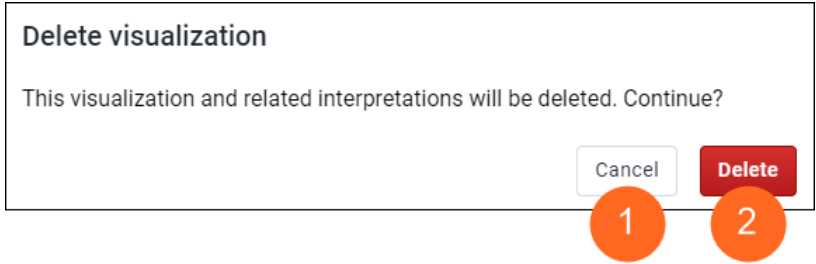
Save link as...

Copy link address ←

Close

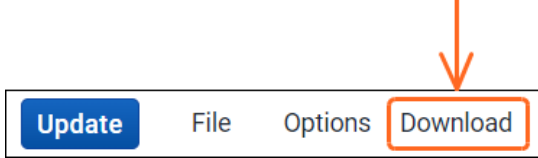
Right-click on the link and click on **Copy link address**. You can then send this link to others.

7.14.6 Delete a Chart

	This assumes that you have a chart open that you wish to delete. You can also only delete a chart which you created or that has been shared with you with edit rights. Click on File > Delete.
	1. Click on Cancel to exit without deleting. 2. Click on Delete to delete the chart.

7.15 Download a Chart

Charts can be downloaded so that they can be included in reports and presentations or sent to others.

	Click on Download in the top menu.
---	--

	1. Graphics options are for users. You can select either of the following formats: • Image (.png) • PDF (.pdf). 2. Plain data source options are really for developers. Depending on your settings, your chart will automatically download to your “Downloads” folder, or you can choose a filename and location.
--	--

7.16 See your Chart as a Map

To see how your chart would look on map, select the **Open as Map** visualisation type after you’re finished building your chart.

1. Click on the Visualisation Type dropdown arrow. 2. Click on Open as Map.
--

This concludes Chapter 7 on creating and managing charts in the “Data Visualizer” app. Chapter 8 focuses on data interpretations in webDHIS.

Chapter 8. Interpretations

After reading this chapter you will be able to:

- View an interpretation.
- Write an interpretation.
- Share an interpretation.
- Respond to (reply or like) an interpretation.
- Edit and delete an interpretation or response.
- Subscribe to an interpretation.

An interpretation is simply a link to an analytical object with a description of the data at a given period, together with text expressing some insight about the data. To create an interpretation, you first need to create a visualisation (chart or pivot table) or map, save it and share it. Then you need to add the interpretation and share that as well.



Data insights and actions should live next to the data - not in people's heads, meeting notes or emails!

You can **view**, **write**, **share**, **reply to/comment on**, **like** and **subscribe to** an interpretation for a visualisation or map in several places:

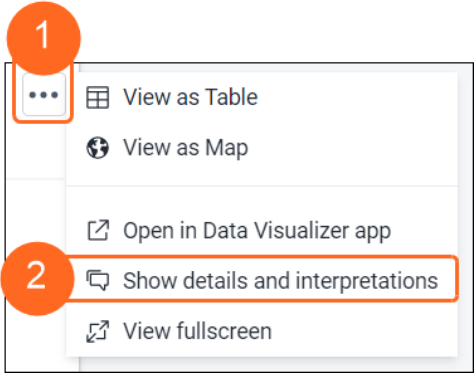
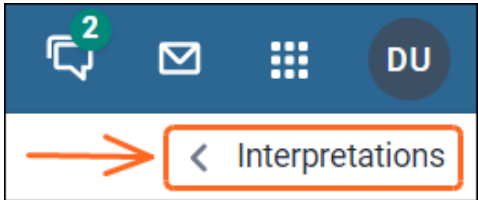
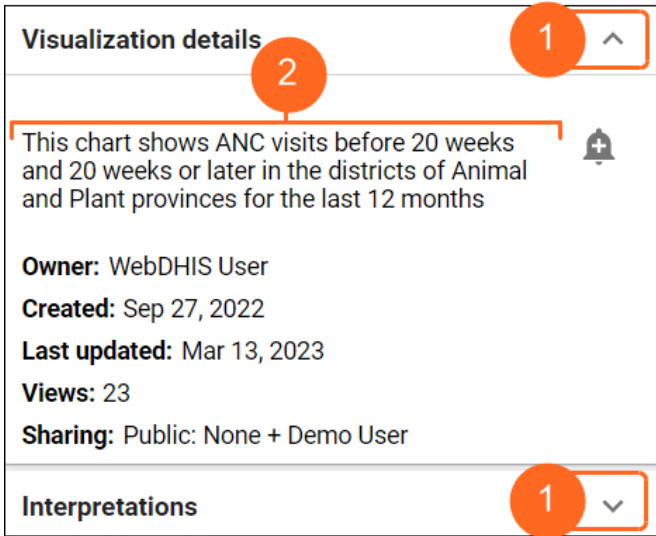
Location	Action					
	View	Write New	Share	Reply / Comment	Like	Subscribe
In the right-side window when the saved visualisation or map is opened in its app	✓	✓	✓	✓	✓	✓
From the pivot table, chart or map displayed on the dashboard	✓	✓	✓	✓	✓	✓
From the Interpretations app	✓			✓	✓	✓

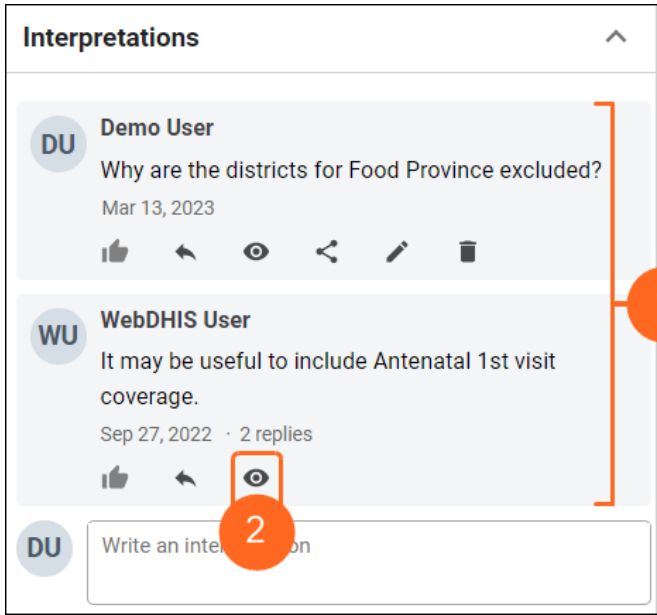
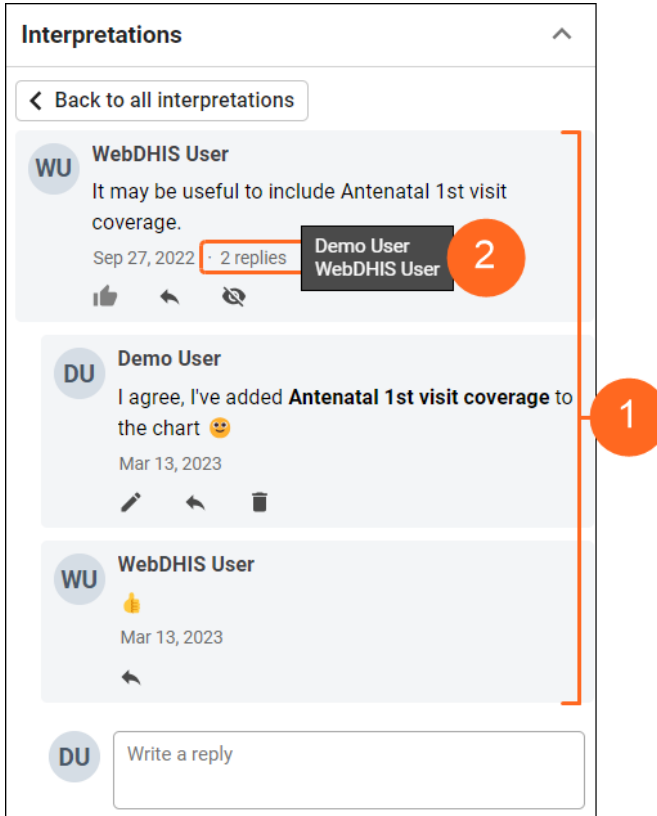
8.1 View an Interpretation

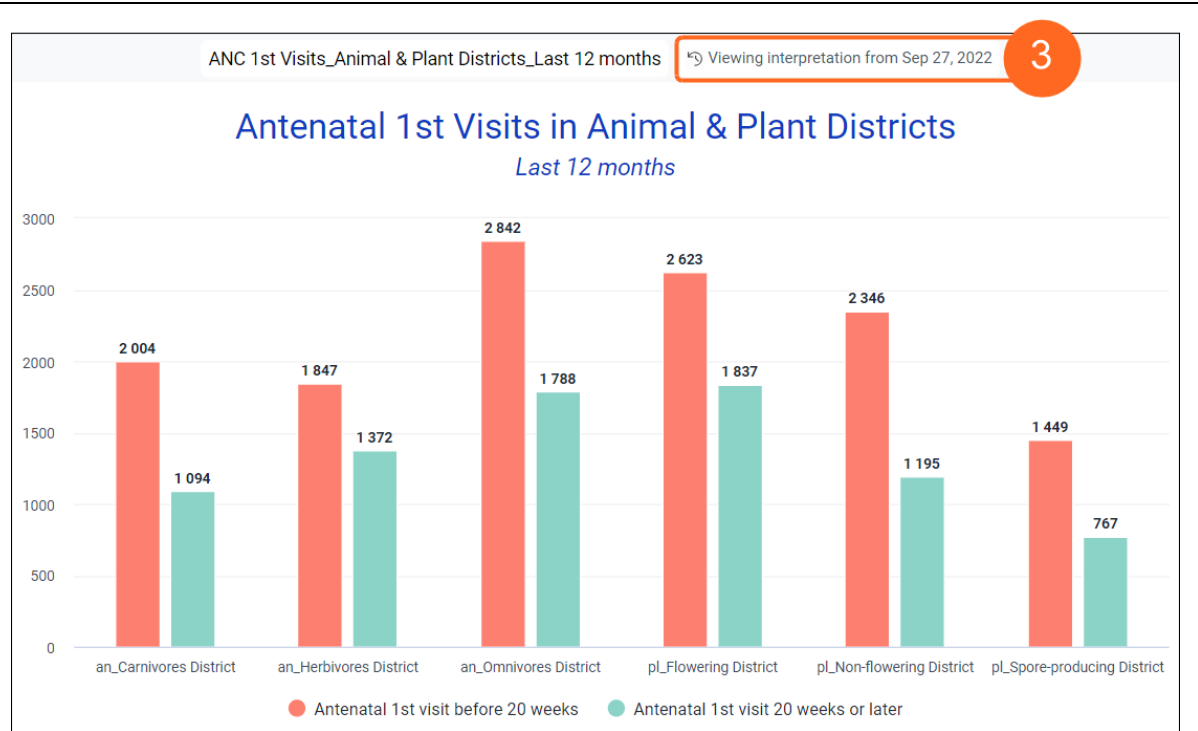
The window that opens when you access an interpretation in the right-side window of the “Data Visualizer” or “Maps” app, or when you access it from a dashboard item are the same and will be explained first. Opening an interpretation from the “Interpretations” app is a little different and will be covered after that.

Note: The screenshots below are for a chart, but the steps are the same for pivot tables and maps.

8.1.1 View in the Data Visualizer/Maps App or in a Dashboard Item

	To view an interpretation from a dashboard item: 1. Click on the Item menu (3 dots) of the required item. 2. Click on Show details and interpretations. The “Interpretations” window will open underneath the dashboard item.
	To view an interpretation from a saved chart or pivot table in the Data Visualizer app or a saved map in the Maps app: Click on < Interpretations. The “Interpretations” window will open to the right of the chart, pivot table or map.
	The “Interpretations” window is divided into 2 sections: • Visualization details • Interpretations 1. You can click on the up arrow in either section to collapse it. This is particularly useful for the “Visualization details” section as it allows you more space to view the interpretations. 2. This shows the description (if one was given) of the chart, pivot table or map, and other details about the item - who created it and when, when it was last updated, how often it has been viewed, and who it has been shared with.

	1. Interpretations are listed in the “Interpretations” section in descending date order i.e. with the latest shown first. 2. To view the visualisation or map according to the date of a particular interpretation, click on the interpretation or its View icon. TIP: Don’t click on the author’s name unless you want to view their profile.
	1. The interpretation, and all the replies to it, display. Note: Replies are shown in chronological order and are indented. 2. You can hover over the replies counter in the interpretation to see who has replied.



- When you click on the interpretation to view it, the visualisation or map will regenerate with the relevant date, which is indicated next to the visualisation or map title, in effect “rewinding” the time in your visualisation or map.

Interpretations ⤴

[← Back to all interpretations](#) **4**

WU WebDHIS User

It may be useful to include Antenatal 1st visit coverage.

Sep 27, 2022 · 2 replies

👍 ↩ **4**

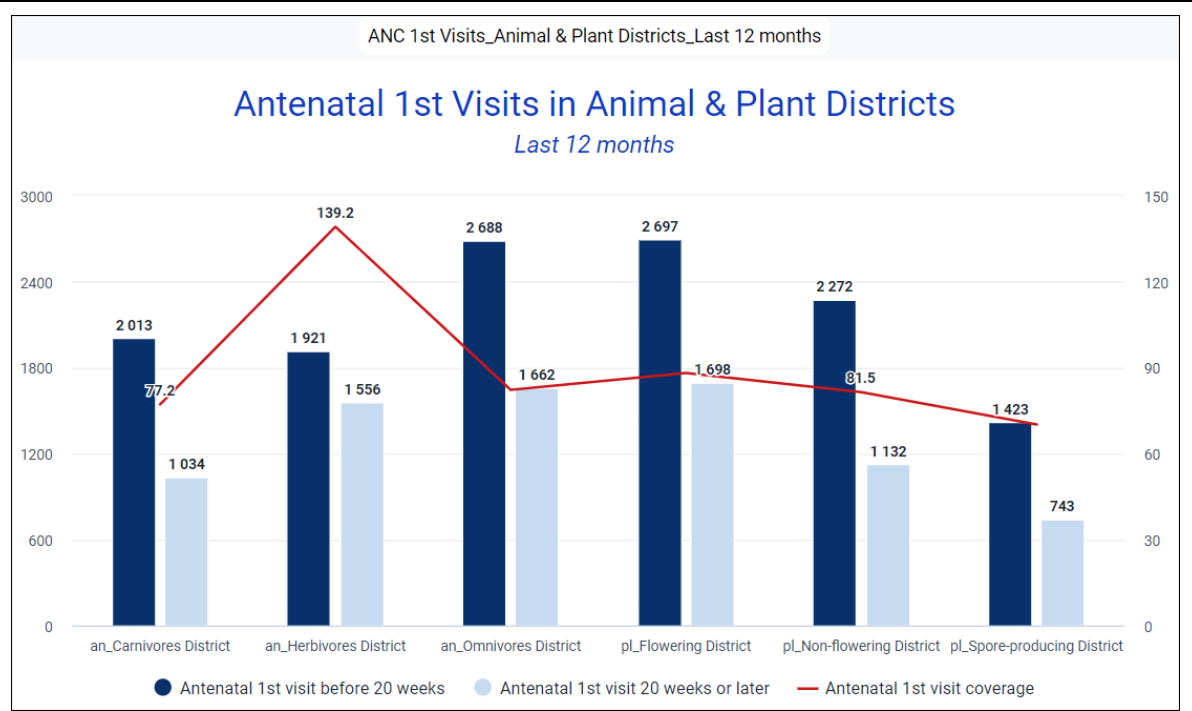
DU Demo User

I agree, I've added **Antenatal 1st visit coverage** to the chart 😊

Mar 13, 2023

✎ ↩ 🗑

- Click on the **Exit view** icon or on **< Back to all interpretations** to close the interpretation and regenerate the visualisation or map with the current date.



WU WebDHIS User
 It may be useful to include Antenatal 1st visit coverage.
 Sep 27, 2022 · 2 replies

👍 ↩️ 🚫  ←

Note: If you're viewing an interpretation underneath a dashboard item, there is an additional icon to allow you to view the interpretation in the app in which it was created. Clicking on this icon will open the visualisation or map and open the interpretation in the right-side window.

1 

-  View as Table
-  View as Map
-  Open in Data Visualizer app
- 2  Hide details and interpretations
-  View fullscreen

2 

➔  Interpretations

To hide an interpretation from a dashboard item:

- Click on the **Item menu (3 dots)**.
- Click on **Hide details and interpretations**.

To hide an interpretation from the right-side window of a visualisation or map:

Click on **> Interpretations**.

8.1.2 View in the Interpretations App

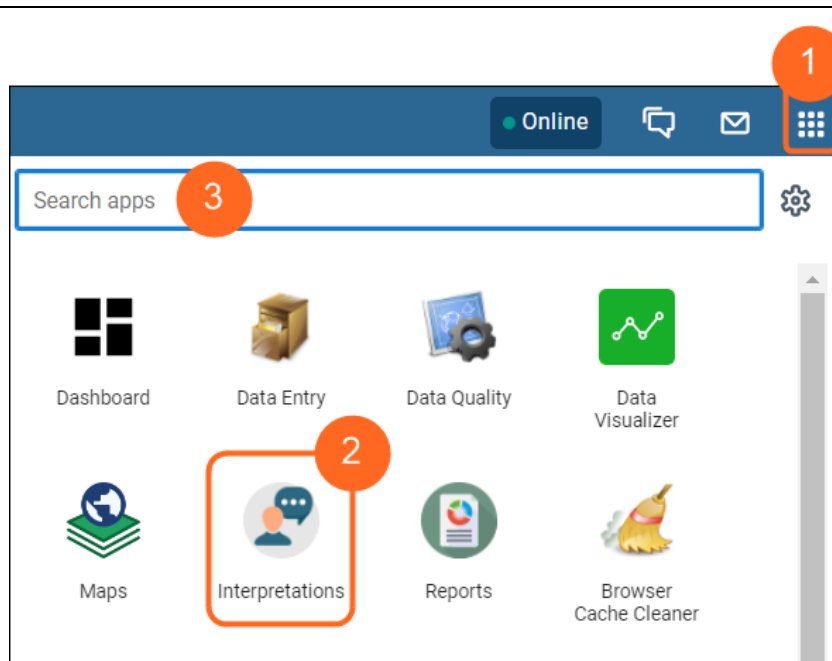
The “Interpretations” app shows **each** interpretation that has been made, together with its replies, and the chart/pivot table/map at the time of the interpretation.



To access the “Interpretations” app click on the **Interpretations** icon in the top menu.

Note: The number on the icon indicates the number of unviewed interpretations.

OR



1. Click on **Apps** in the top menu.
2. Click on **Interpretations**.
3. If you can't find it, you can type *Interp* in the “Search apps” box.

Because there can be many interpretations, it is usually quicker to search for the interpretation you want to view.

Search Interpretation

Type

No Selection

Date created

From - To

Date modified

From - To

Follow-ups

☐ Mention

Author (user)

Enter User Name

Commentator (user)

Enter User Name

Interpretation Text

Partial Interpretation Text

Comment Text

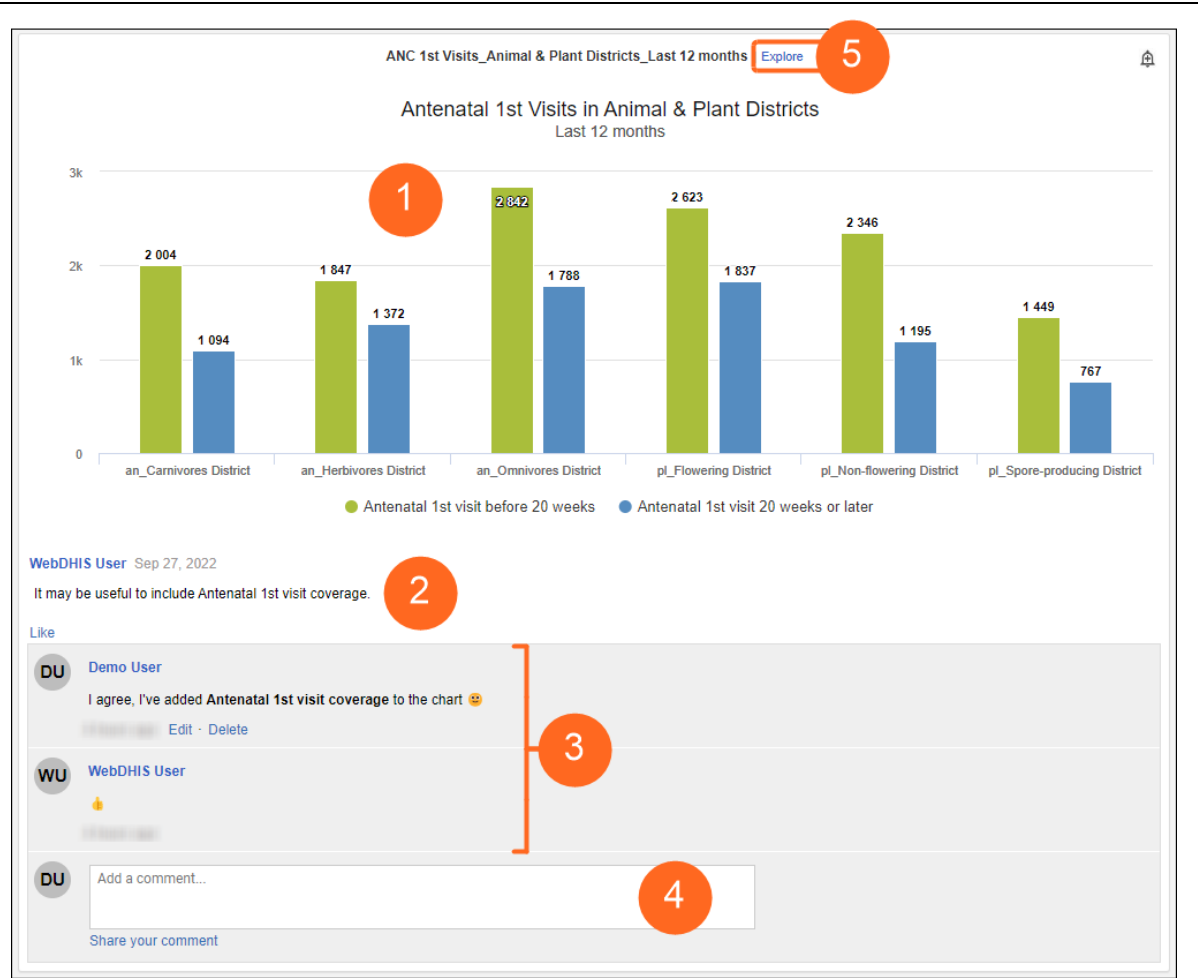
Partial Comment Text

SEARCH

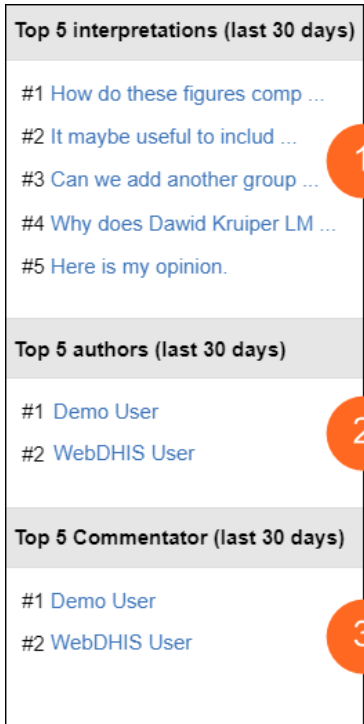
RESET

1. Click on the **Search interpretation** dropdown arrow.
2. Specify your search criteria.
3. Click on **SEARCH** to start your search.
4. If you are not successful, you can click on **RESET** and select different criteria.

Interpretations matching your search criteria display. You can then select view the one that you're looking for.



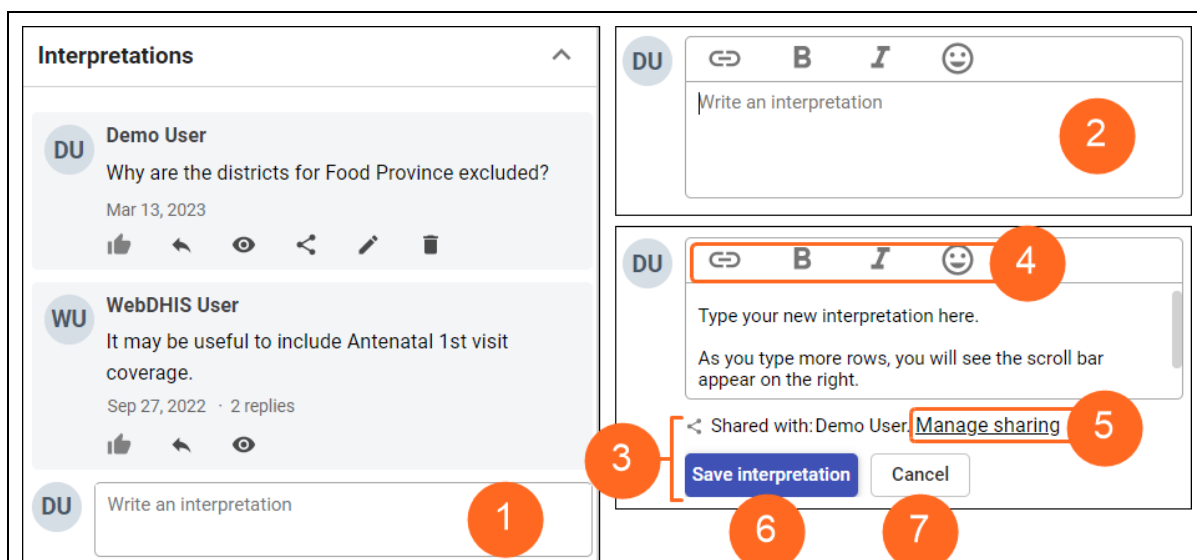
1. The chart/pivot table/map displays at the top.
2. The interpretation is displayed underneath the chart.
3. All the replies to the interpretation are displayed in chronological order underneath the interpretation.
4. The **Add a comment** (same as Reply) box shows at the bottom.
5. You can click on **Explore** next to the filename above the chart/pivot table/map to view the item in the app it was created.

 Top 5 interpretations (last 30 days) #1 How do these figures comp ... #2 It maybe useful to includ ... #3 Can we add another group ... #4 Why does Dawid Kruiper LM ... #5 Here is my opinion. Top 5 authors (last 30 days) #1 Demo User #2 WebDHIS User Top 5 Commentator (last 30 days) #1 Demo User #2 WebDHIS User	You can also search using the Top 5 statistics that are collected by HRIS for the past 30 days, and which are displayed on the right-hand side of the “Interpretations” app. Note: These are pinned so do not disappear when you scroll down through the interpretations. The Top 5 statistics are: 1. The top 5 interpretations i.e. the most viewed. 2. The top 5 authors i.e. writers of new interpretations. 3. The top 5 commentators i.e. those who have replied to/commented on interpretations.
---	---

8.2 Write an Interpretation

This section assumes that you have already opened the “Interpretation” window as explained in the previous section.

Note: New interpretations **cannot** be written from the “Interpretations” app.



1. Click in the **Write an interpretation** box.
2. The box expands to show the text area as well as some icons above it. The cursor is placed in the text area, ready for you to type.
3. As you start typing, the sharing settings, and the “Save interpretation” and “Cancel” buttons display. A vertical scroll bar displays in the text box if your typing exceeds the window size.



4. Icons display above the text area to assist you with your content. From left to right:
 - Click on the **link** icon to insert the text **http://<link-url>**. You can then edit the link accordingly.
 - Select the required text and click on **B** to make text bold. In the edit window, it looks like this - **this text is bold**.
 - Select the required text and click on **I** to italicise text. In the edit window, it looks like this - *_this text is in italics_*.

Note: You can make text bold and italics by clicking on **B** and then **I** when text is selected. In the edit window it looks like this - **_this text is bold and italics_**.

 - Click on the **emoji** icon open the emoji menu – there is a smiley face, a sad face, a thumbs up and a thumbs down.

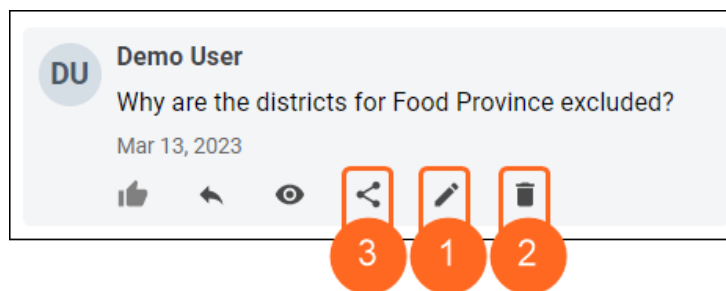
Note: You can **mention** other users with **@username**. Start by typing @ plus the first letters of the username or real name and a mentioning bar will display the available users. Mentioned users will receive a message in HRIS with the interpretation.

5. If you are the author of the interpretation, or if an interpretation has been shared with you with edit rights, you can share the interpretation. You can either do this now before you save the interpretation by clicking on **Manage sharing** and choosing with whom and with what rights you

want to share, or you can apply sharing settings after the interpretation is saved (see point 3 below).

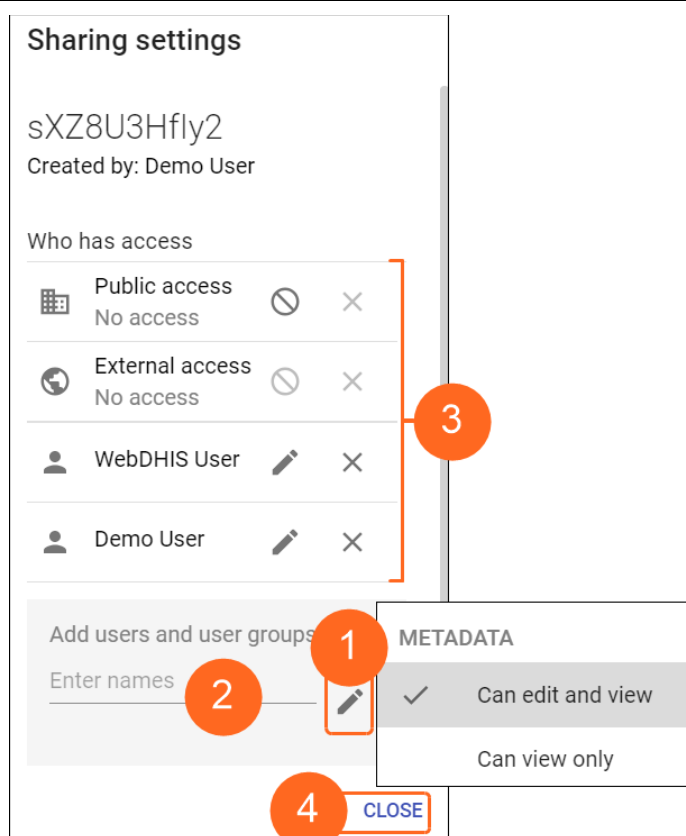
Note: You can only share interpretations with users or user groups with whom the item is shared.

6. Click on **Save interpretation** to save and display your interpretation. OR
7. Click on **Cancel** to exit without saving.



As the author of the interpretation, or if you have edit rights, you can now:

1. Click on the **Edit** icon to edit it.
2. Click on the **Delete** icon to delete it.
3. Click on the **Share** icon to share it.



1. Click on the **pen** icon if you want to change the permissions from **Can edit and view** (which is the default) to **Can view only**.
2. Click in the **Enter names** box, start typing the name of user or user group and select the required one from the displayed list.
3. The user or user group will then be added to the “Who has access” section above.
4. Click on **Close** to exit.

Note: If the interpretation is not shared, the user will not see it, even if the the visualisation or map is shared with them.

8.3 Responding to an Interpretation

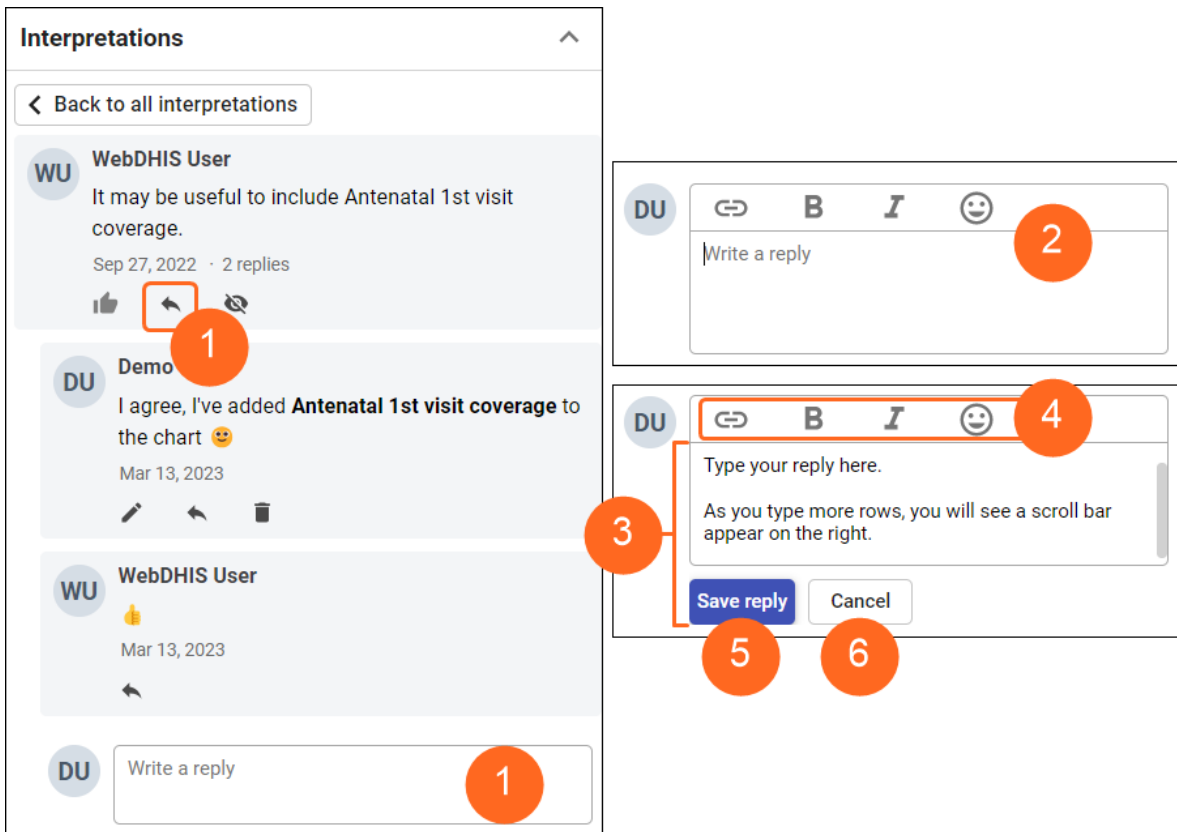
This section assumes that you have either:

- opened the “Interpretation” window to the right of a saved visualisation/map in the “Data Visualizer”/“Maps” app or shown interpretations for a dashboard item and opened the interpretation that you want to respond to.

OR

- opened the “Interpretations” app and found the interpretation that you want to respond to.

8.3.1 Reply in the Data Visualizer/Maps App or in a Dashboard Item



The screenshot shows the 'Interpretations' app interface. On the left, a list of interpretations is displayed. The first interpretation is by 'WebDHIS User' (WU) dated Sep 27, 2022, with 2 replies. Below it is an interpretation by 'Demo' (DU) dated Mar 13, 2023. At the bottom is another by 'WebDHIS User' (WU) dated Mar 13, 2023. A 'Write a reply' box is at the bottom of the list. On the right, a detailed view of the reply interface is shown. It includes a text area with a cursor, a 'Write a reply' label, and a '1' callout. Above the text area are icons for link, bold, italic, and emoji, with a '2' callout. Below the text area are 'Save reply' and 'Cancel' buttons, with '5' and '6' callouts. A vertical scroll bar is visible on the right side of the text area, with a '3' callout. A '4' callout points to the emoji icon.

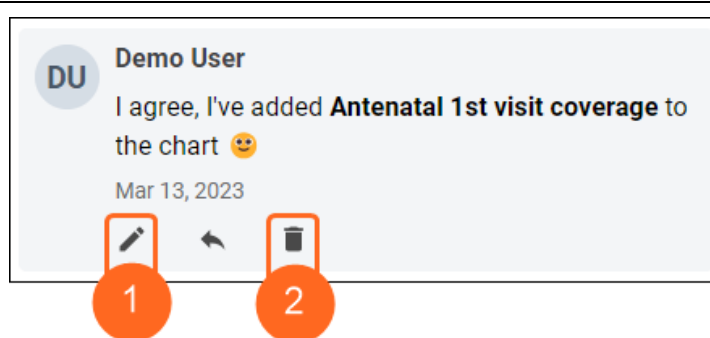
- Click on the **Reply** icon or click in the **Write a reply** box underneath the interpretation and any existing replies.
- The box expands to show the text area as well as some icons above it. The cursor is placed in the text area, ready for you to type.
- As you start typing, the “Save reply” and “Cancel” buttons display. A vertical scroll bar displays in the text box if your typing exceeds the window size.
- Icons display above the text area to assist you with your content. From left to right:
 - Click on the **link** icon to insert the text **http://<link-url>**. You can then edit the link accordingly.

- Select the required text and click on **B** to make text bold. In the edit window, it looks like this - **this text is bold**.
 - Select the required text and click on **I** to italicise text. In the edit window, it looks like this - *_this text is in italics_*.
- Note:** You can make text bold and italics by clicking on **B** and then **I** when text is selected. In the edit window it looks like this - **_this text is bold and italics_**.
- Click on the **emoji** icon open the emoji menu – there is a smiley face, a sad face, a thumbs up and a thumbs down.

Note: You can **mention** other users with **@username**. Start by typing @ plus the first letters of the username or real name and a mentioning bar will display the available users. Mentioned users will receive a message in HRIS with the comment.

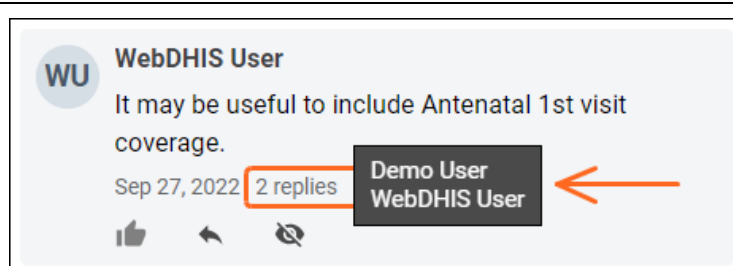
5. Click on **Save reply** to save and display your reply. OR
6. Click on **Cancel** to exit without saving.

Note: Replies are shown in chronological order, so the latest reply will be shown last.



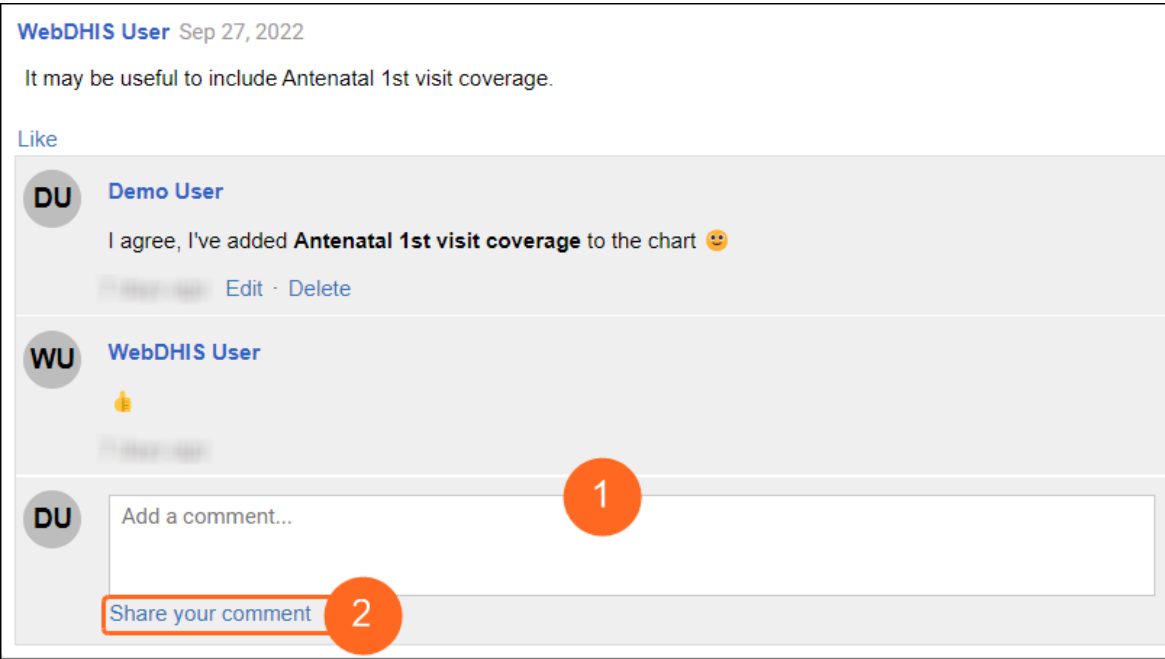
As the author of the reply, or if you have edit rights, you can now:

1. Click on the **Edit** icon to edit it.
2. Click on the **Delete** icon to delete it.



The number of replies to an interpretation is shown next to the date of the interpretation. Hover over the number to see the users who have replied.

8.3.2 Comment in the Interpretations App



WebDHIS User Sep 27, 2022

It may be useful to include Antenatal 1st visit coverage.

Like

DU Demo User

I agree, I've added **Antenatal 1st visit coverage** to the chart 😊

Edit · Delete

WU WebDHIS User

👍

Like

DU Add a comment...

Share your comment

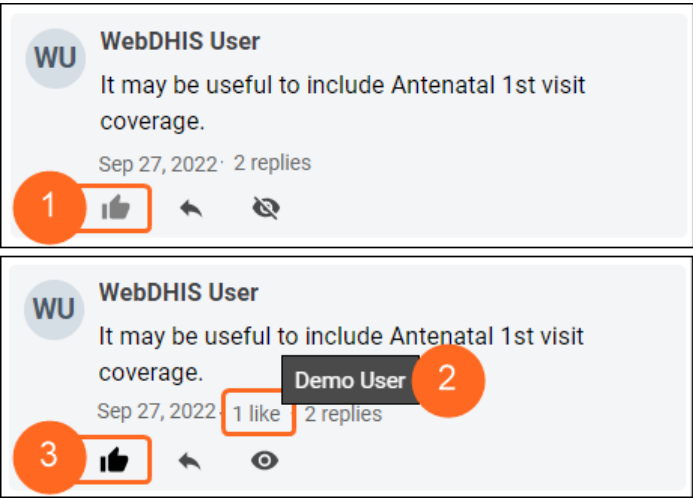
1. Click in the **Add a comment** box underneath the interpretation and any existing replies and type your comment (same as a reply).
2. Click on **Share your comment** to display it at the bottom of the list of comments/replies.

Note: There are no additional options available in the text box. However, you can still:

- **Bold** your text by typing an * on either side of it e.g. *this text will display as bold*.
- **Italicise** your text by typing an _ on either side of it e.g. _this text is in italics_.

8.3.3 Like an Interpretation

In addition to replying/commenting on an interpretation, you can also like/unlike an interpretation.



WU WebDHIS User

It may be useful to include Antenatal 1st visit coverage.

Sep 27, 2022 · 2 replies

1 👍 ↶ ↷

WU WebDHIS User

It may be useful to include Antenatal 1st visit coverage.

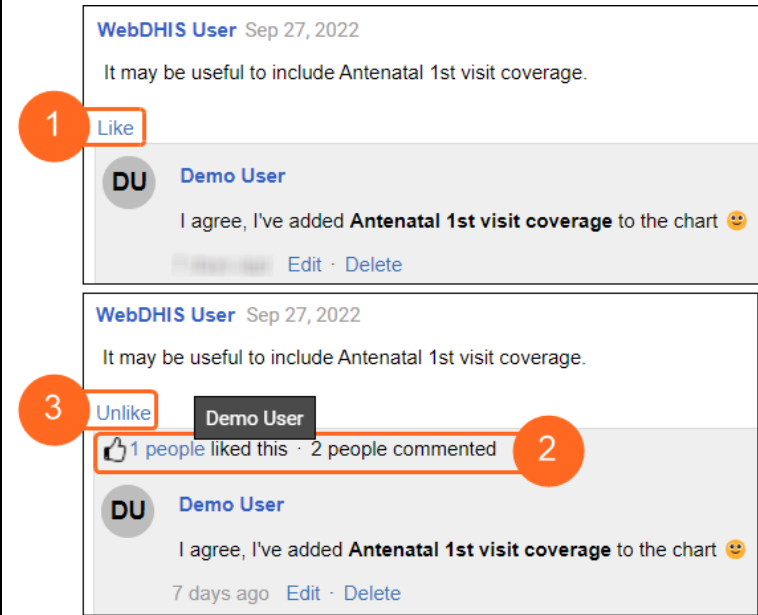
Sep 27, 2022 · 1 like · 2 replies

3 👍 ↶ ↷

Demo User 2

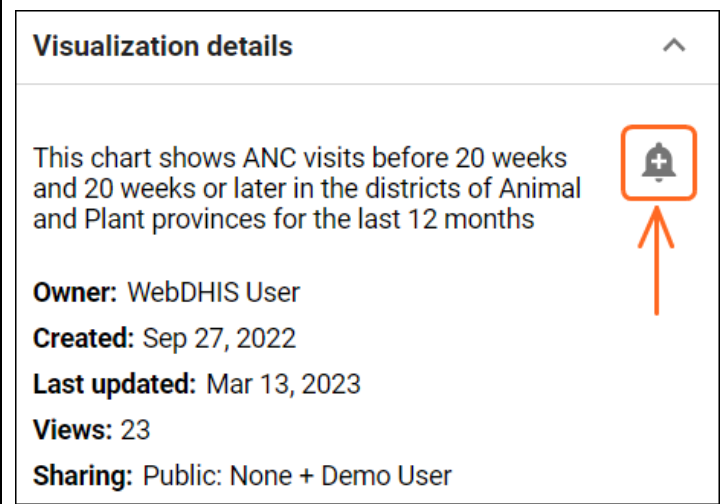
In the Data Visualizer/Maps app or in a dashboard item:

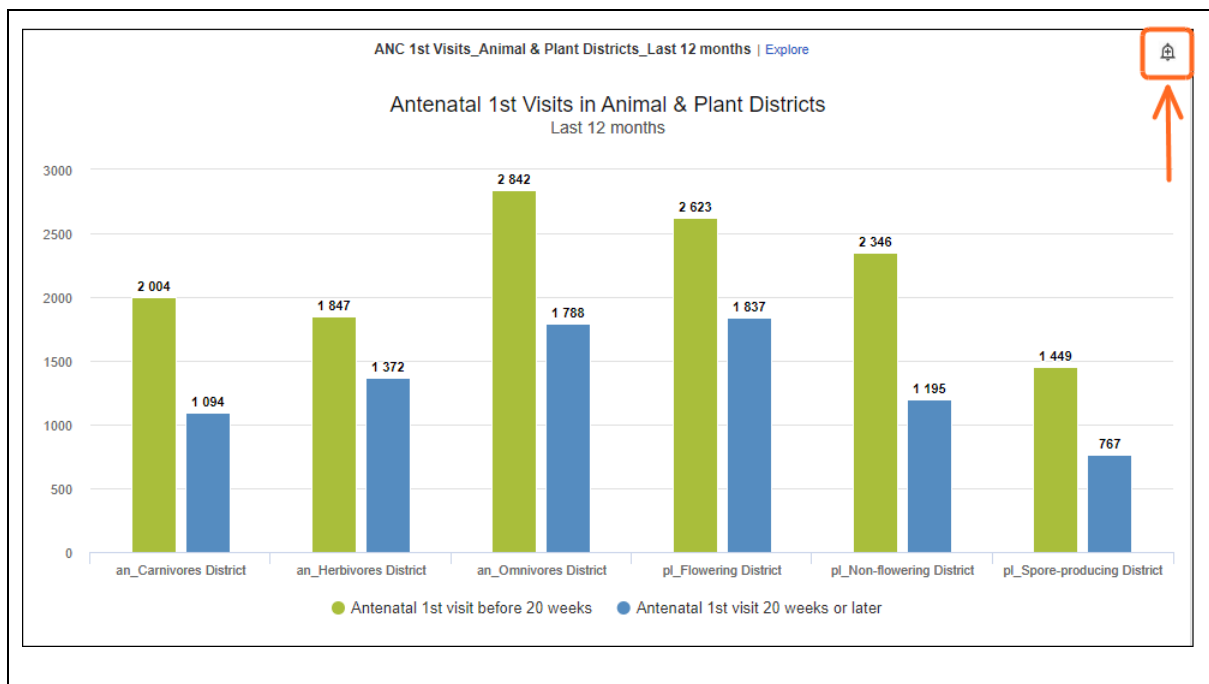
1. Click on the **Like** icon in the interpretation.
2. The number of likes displays, and if you point to the **like** link, you can see who those people are, including yourself.
3. The **Unlike** icon now displays, indicating that you have previously clicked on

	Like. Click on it to remove your like.
	In the “Interpretations” app: 1. Click on Like underneath the interpretation. 2. A thumbs up displays showing how many people have liked the interpretation, and if you point to the people link, you can see who those people are, including yourself. There is also an indication of how many people have commented. 3. Click on Unlike to remove your like.

8.4 Subscribe to an Interpretation

If you subscribe to an interpretation, this means that you will receive messages from HRIS whenever another user like/creates/updates an interpretation or creates/updates a reply.

	Click on the Bell icon to subscribe This appears wherever you can view an interpretation.
---	---



This concludes Chapter 8 on data interpretations in webDHIS. Chapter 9 focuses on creating, managing and using dashboards.

Chapter 9. Dashboards

After reading this chapter you will be able to:

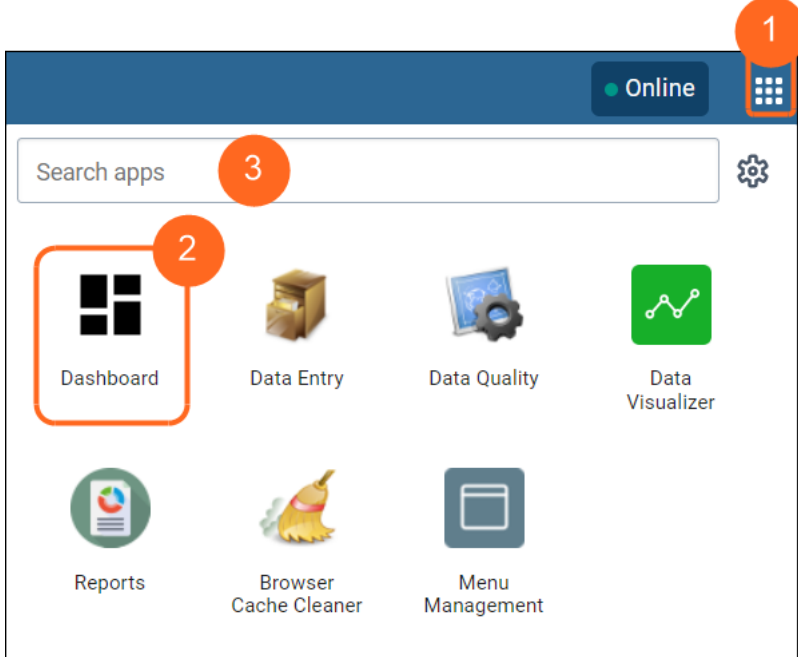
- Access dashboards.
- Find and star a dashboard.
- Create your own private dashboard and add dashboard items to it.
- Customise your dashboard.
- Share your dashboard.
- Filter a dashboard.
- Preview and print a dashboard.
- Set a dashboard offline.
- Toggle between chart and pivot table visualisations.

Dashboards make it possible to present a high-level overview of your data, including displaying analytical objects such as maps, charts, reports, and tables, as well as displaying text-based information and resource links.

Dashboards can also be shared with users and user groups. For instance, a user or administrator could create a dashboard called "Dairy District" which might contain all relevant information for Dairy district. This dashboard could then be shared with a user group called "Dairy Data Capturers". All users within this group would then be able to view the same dashboard.

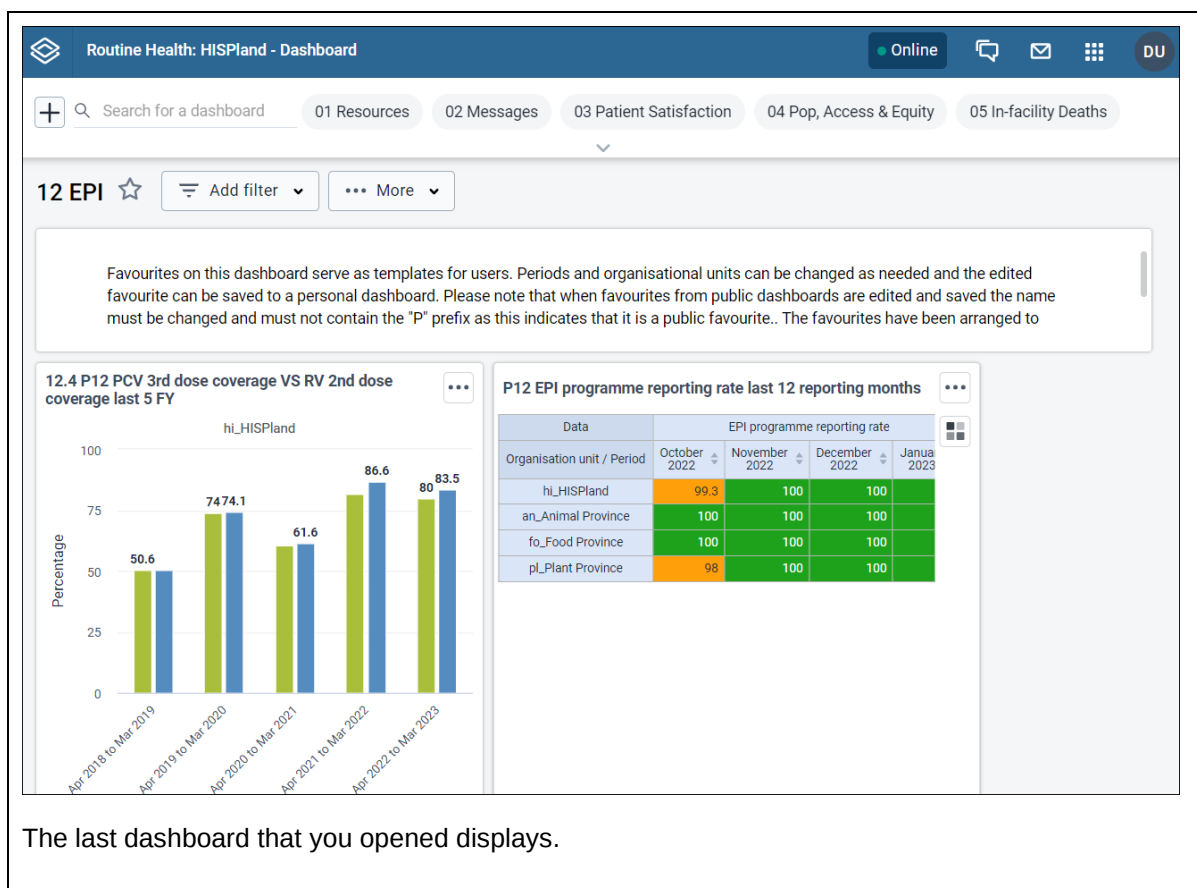
Dashboards are accessible via the "Dashboards" app.

9.1 Access the Dashboard App



The screenshot shows the webDHIS2 interface. At the top right, there is a blue bar with the word 'Online' and a grid icon labeled '1'. Below this is a search bar labeled 'Search apps' with a gear icon, labeled '3'. In the center, there is a grid of app icons. The 'Dashboard' icon, which is a black square with a white grid, is highlighted with an orange box and labeled '2'. Other icons include 'Data Entry', 'Data Quality', 'Data Visualizer', 'Reports', 'Browser Cache Cleaner', and 'Menu Management'.

1. Click on **Apps** in the top menu.
2. Click on **Dashboard**.
3. If you can't find it, you can type *Dash* in the "Search apps" box.



9.2 The Dashboards Bar

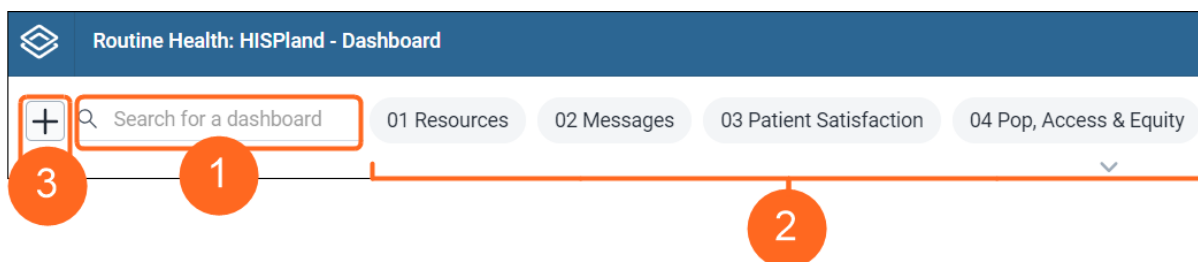
Dashboards have a title, description, and any number of dashboard items. The dashboard items can be of many different types, including charts, maps, reports, tables, resources, messages, and text items.

The dashboard has two modes: view and create/edit. When you log into webDHIS, your most recently used dashboard will be displayed in 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. A starred dashboard is one that you have marked as a favourite. Starred dashboards always show first in the dashboard list; if there are no starred dashboards, then the first dashboard will be displayed. Dashboards are displayed in alphabetical order, both in the starred and the not-starred sections.

The dashboards that display when you log into webDHIS are called **public dashboards**. Public dashboards can be viewed, but not edited, by everyone.

You will also be able to look at your own dashboards that are called **private dashboards**. Private dashboards are those that you create and/or edit and share if you have permission to do so.

The **Dashboards Bar** sits at the top of the dashboard.



It contains:

1. A dashboard search box.
2. A list of all your available dashboards.
3. A button to create a new dashboard.

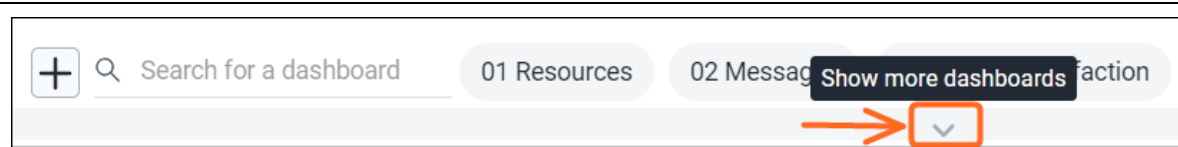
9.2.1 Search for a Dashboard

Click on **Search for a dashboard** and start typing the name of the dashboard you are looking for.

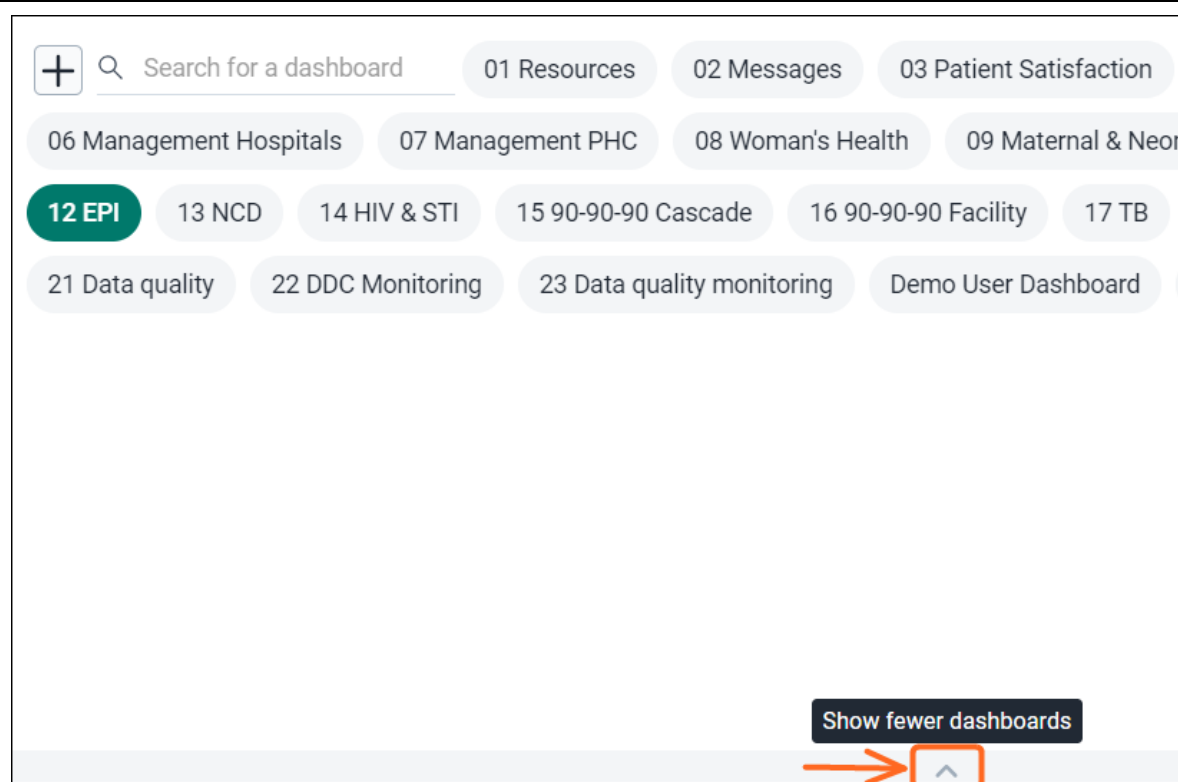
The search is case insensitive, and as you type, the list of dashboards on the right of the Dashboards Bar will filter down to those that match your search text. You can then click on the dashboard that you want so it displays.

9.2.2 Customise the Height of the Dashboards Bar

You can set a specific height for the Dashboards Bar by clicking and dragging the bottom edge of the Dashboards Bar. When you finish dragging, the new height will be set.



By default, only 1 “row” of dashboard names display. Click on the **down arrow (Show more dashboards)** to see the rest of the list.



The Dashboards Bar expands to its maximum height of 10 “rows”. Click on the **up arrow (Show less dashboards)** to reset the height to your customised height or back to the default if you did not specify a customised height.

9.3 Create your Own Dashboard

You may want to create your own private dashboard, so that you can add your own items (charts, pivot tables, maps etc.) to it. So, the first step is to create the dashboard, and the second step is to add items to it.

9.3.1 Create a Dashboard

	On the Dashboards Bar, click on the + to enter create/edit mode.
--	--

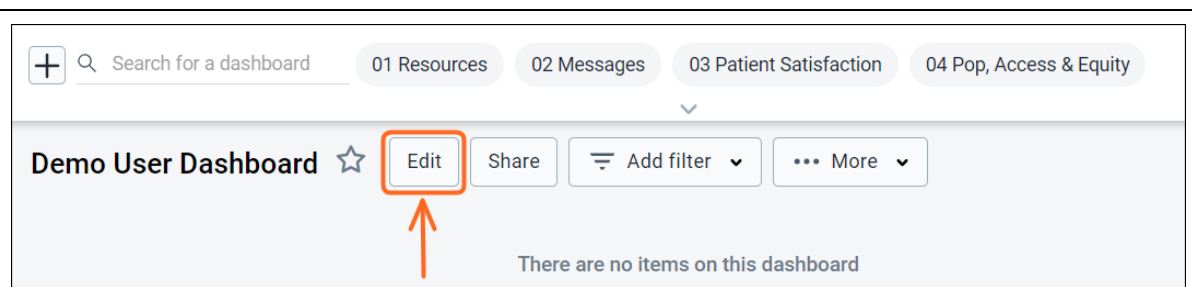
The screenshot shows the dashboard creation interface. At the top, there are buttons for 'Save changes' (6), 'Print preview' (5), 'Filter settings', and 'Exit without saving' (7). Below these are input fields for 'Dashboard title' (1) with the placeholder 'Untitled dashboard', 'Dashboard code' (2), and 'Dashboard description' (3). At the bottom, there is a section for adding items, including a 'Layout' dropdown set to 'Freeflow' with a 'Change layout' button, radio buttons for 'Add new items to' (selected: 'End of dashboard', unselected: 'Start of dashboard'), and a search bar (4) with the placeholder 'Search for items to add to this dashboard' and 'Search for visualizations, reports and more'. The main area below is empty, showing the message 'There are no items on this dashboard'.

1. Type in a meaningful **Dashboard title**, particularly if you are going to share it with others.
2. Type in a **Dashboard code** if required.
3. Type in a **Dashboard description** for your dashboard. This is useful to remind you, and to inform others with whom you may share your dashboard, of the purpose of your dashboard.
4. You can add items to your dashboard at this point, or you can save your dashboard and come back and add items later. Adding dashboard items, choosing the layout of your dashboard, and where new items are added are covered in the next section.
5. “Print preview” and “Filter settings” are also covered in the next section when the dashboard has some content added.
6. Click on **Save changes** to save your dashboard.
7. If you don't want to save your changes, click on **Exit without saving**. You will then be returned in “View” mode to the dashboard you were previously viewing.

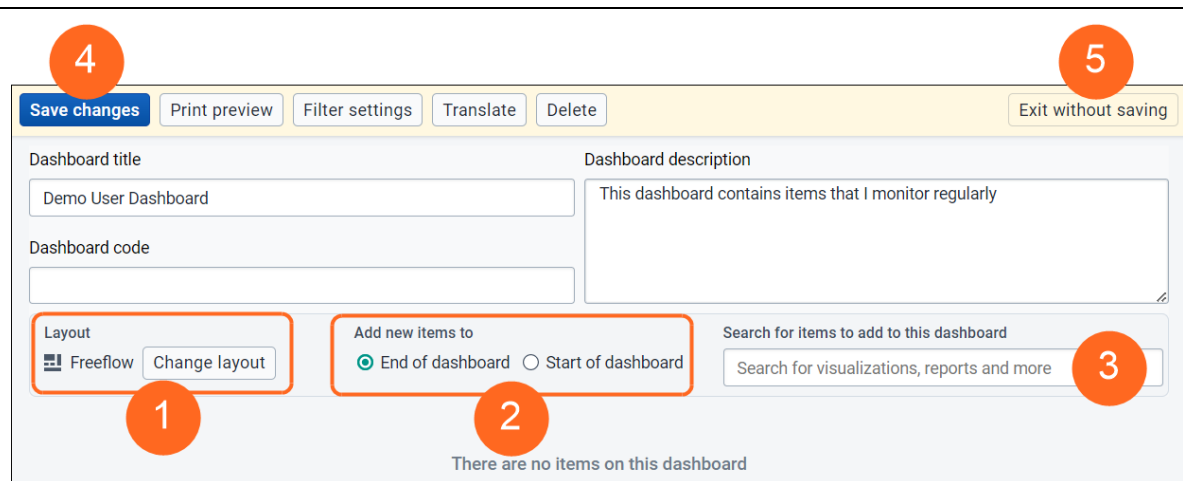
The screenshot shows the dashboard view after saving. The title bar reads 'Routine Health: HISPland - Dashboard' and includes an 'Online' status indicator, a chat icon, an email icon, a grid icon, and a user profile icon labeled 'DU'. Below the title bar is a search bar with a plus icon and the placeholder 'Search for a dashboard'. To the right of the search bar are four tabs: '01 Resources', '02 Messages', '03 Patient Satisfaction', and '04 Pop, Access & Equity'. Below the tabs is a section for the 'Demo User Dashboard' with a star icon, 'Edit', 'Share', 'Add filter' (with a dropdown arrow), and 'More' (with a dropdown arrow) buttons. The main area below is empty, showing the message 'There are no items on this dashboard'.

Once your dashboard is saved, it displays, but of course it doesn't have any items added to it yet! You are now automatically back in “View” mode.

9.3.2 Add Items to your Dashboard



If you did not add any items to your dashboard when you first created it, you will have to get back into “Edit” mode first. Click on **Edit**.



1. Change the layout if desired (described below).
2. Choose how you want to add new items to the dashboard by clicking on
 - **End of dashboard** – new items are added after other items. OR
 - **Start of dashboard** – new items are added before other items.
3. Add items to the dashboard (described below).
4. Click on **Save changes** to save your dashboard changes.
5. If you don't want to save your changes, click on **Exit without saving**. You will then be returned to your dashboard in “View” mode.

CHANGE DASHBOARD LAYOUT

Before you add items to your dashboard, you can determine the layout of the dashboard. There are 2 layout options:

1. **Freerflow** – the added items can be moved using the mouse by clicking and dragging them to the desired position. Items can also be resized with the mouse by clicking on the drag handle in the lower right corner of the item and dragging to the desired size.
2. **Fixed columns** – you can choose the number of columns to have on the dashboard. This layout will auto-configure the size and shape of all dashboard items according to the number of specified columns; items cannot be moved or resized.

Layout

Freeflow

Change layout

“Freeflow” is the default layout.

To change to fixed columns, click on **Change layout**.

Dashboard layout

Freeflow

Dashboard items can be placed anywhere, at any size.

1

Fixed columns

Dashboard items are automatically placed within fixed, horizontal columns. The number of columns can be adjusted.

Number of columns

3

2

3

Save layout

1. Select **Fixed columns**.
2. Click in the **Number of columns** box and type the number of columns you want.
3. Click on **Save layout**.

Layout

3 columns

Change layout

Add new items to

End of dashboard

Start of dashboard

Search for items to add to this dashboard

Search for visualizations, reports and more

ANC 1st Visits_Animal & Plant Districts_Last 12 months

Antenatal 1st Visits in Animal & Plant Districts Last 12 months

ANC 1st Visits & Coverage_HISPland Districts_Last year

2022

	Antenatal 1st visit before 20 weeks	Antenatal 1st visit 20 weeks or later	Antenatal 1st visit coverage
an_Carnivores District	2 007	1 072	77
an_Herbivores District	1 953	1 565	140
an_Omnivores District	2 712	1 718	83
fo_Dairy District	1 558	978	75
fo_Fruits District	2 235	1 552	91
fo_Vegetables District	2 046	1 286	
pL_Flowering District	2 657	1 756	88
pL_Non-flowering District	2 326	1 161	83
pL_Spore-producing District	1 482	738	72

HISPland Districts_Immunisation under 1yr_Last 12 mths

Immunisation Under 1 Year Coverage for HISPland Districts for Last 12 Months

ADD ITEMS TO DASHBOARD

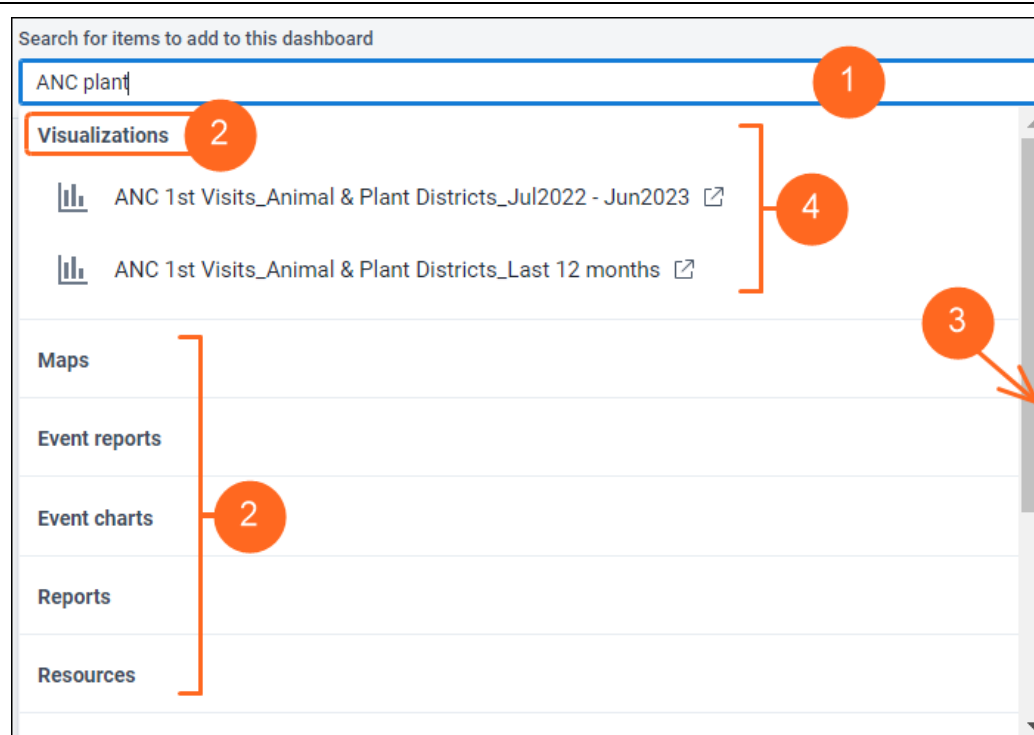
Search for items to add to this dashboard

Search for visualizations, reports and more

To add items to your dashboard, click in the **Search for items to add to this dashboard** box.

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1. Type in your search text. If you don't type in any text, the items that are displayed under each category will be in alphabetical order. If you type in search text, the items that match your search criteria will display, also in alphabetical order (numbers before letters).
2. Available items are categorised and are shown in the order below:
 - Visualisations
 - Maps
 - Event reports
 - Event charts
 - Reports
 - Resources
 - Apps
 - Additional Items
 - Text box
 - Messages
 - Spacer
3. You will need to scroll down to see all further categories and items.
4. The list of items in the dropdown initially displays 10 visualisations (charts and tables), and 5 from each of the other categories, based on the search text you enter. If there are more items in a category, a "Show more" button will display. When you click on it, the list for the category you selected will be extended to 25 items. A "Show fewer" button will then display to allow you to reduce the list to 10 items.

Visualizations

ANC 1st Visits_Animal & Plant Districts_Jul2022 - Jun2023

ANC 1st Visits_Animal & Plant Districts_Last 12 months 2 Insert 1

Once you have located the item:

1. Click on **Insert** to add the item to your dashboard.
2. If you want to open the item in the app that it was created, so that you can change it, click on the **Edit** icon.

Save changes 3

View

Filter settings

Translate

Delete

Dashboard title

Demo User Dashboard

Dashboard description

This dashboard contains items that I monitor regularly.

Dashboard code

Layout

Freeflow

Change layout

Add new items to

☒ End of dashboard

☐ Start of dashboard

Search for items to add to this dashboard

ANC plant

Visualizations

ANC 1st Visits_Animal & Plant Districts_Jul2022 - Jun2023

ANC 1st Visits_Animal & Plant Districts_Last 12 months

Maps

Event reports

Event charts

Reports

Resources

Apps

ANC 1st Visits_Animal & Plant Districts_Last 12 months

Antenatal 1st Visits in Animal & Plant Districts

Last 12 months

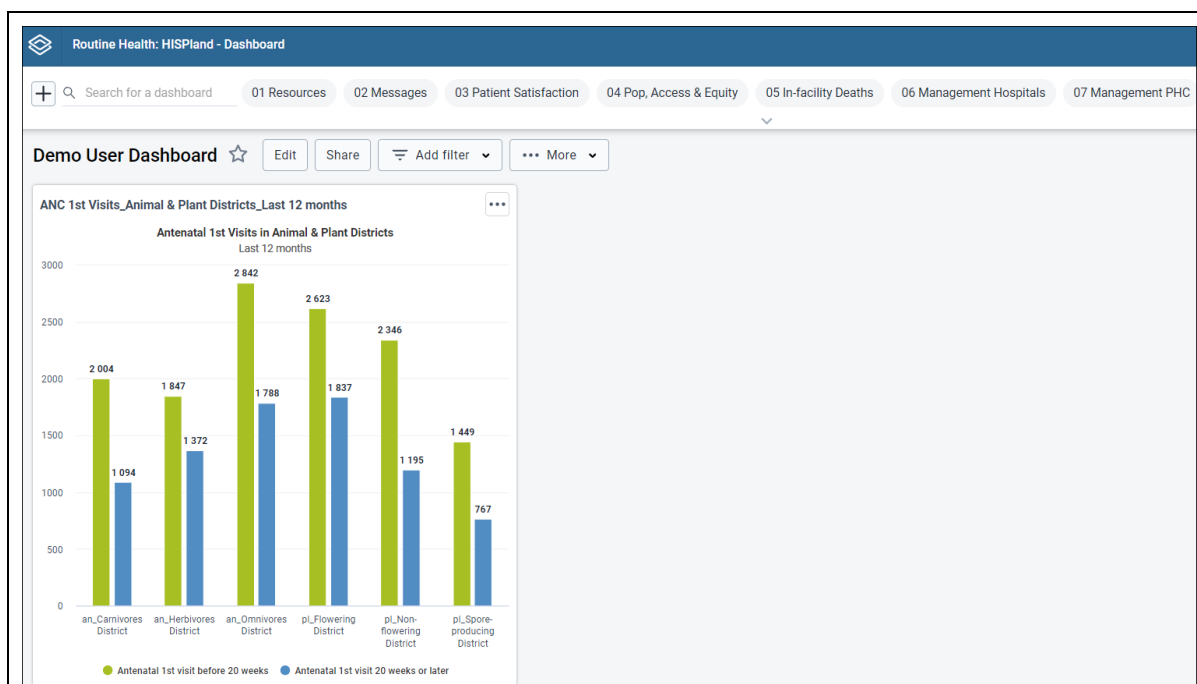
1

2

1. If your layout uses fixed columns, dashboard items will be automatically placed and resized. If your layout is freeform, your item will be added before or after existing items depending on the setting you chose for adding new items.
 - End of dashboard – An item that cannot fit to the right of the last item will be pushed downwards.
 - Start of dashboard - An item will be added to the top left position on the dashboard. Any other items will be pushed to the right or downwards if they don't fit in to the right.
2. The list of dashboard items remains open so that you can select more than one item to add to your dashboard.

When you are finished adding items, click anywhere outside the list to close the list.

3. Click on **Save changes**.



Your dashboard displays in “View” mode, with the items that you added to it.

Note: At this point, you are the only person who can see your dashboard.



Unless your use role has permissions to share dashboards, you will be the only one to see the dashboards that you create.

9.3.3 Preview a Dashboard

You can preview what your dashboard will look like when being printed with the Dashboard layout option.

Save changes
Print preview
Filter settings
Translate
Delete

Dashboard title

Demo User Dashboard

Click on **Print preview** to view what the dashboard will look like when printed with the dashboard layout option.

Exit print preview

2

ANC 1st Visits_Animal & Plant Districts_Last 12 months

Antenatal 1st Visits in Animal & Plant Districts

Last 12 months

District	Antenatal 1st visit before 20 weeks	Antenatal 1st visit 20 weeks or later
an_Carnivores District	2 004	1 094
an_Herbivores District	1 847	1 372
an_Omnivores District	2 842	1 788
pl_Flowering District	2 623	1 837
pl_Non-flowering District	2 346	1 195
pl_Spore-producing District	1 449	767

HISPland Districts_Immunisation under 1yr_Last 12 mths

Immunisation Under 1 Year Coverage

for HISPland Districts for Last 12 Months

District	Immunisation under 1 year coverage (%)	Children immunised
an_Carnivores District	2 480	104.3
an_Herbivores District	2 258	80.7
an_Omnivores District	3 588	59.7
fo_Dairy District	2 978	69.7
fo_Fruits District	2 737	70.9
fo_Vegetables District	3 086	2 543
pl_Flowering District	2 543	69.4
pl_Non-flowering District	1 890	69.4

1

- The pages are displayed.
- Click on **Exit print preview** to return to editing the dashboard.

Note: Some items may be moved to the next page to avoid being split between two pages. Items may also be shortened to fit on one page. Items that are shortened show an info icon in the upper right corner of the item in preview. The info icon is not visible in the actual print.

9.4 Edit / Customise a Dashboard

Note: The features described below are only useful with a Freeform dashboard layout.

Demo User Dashboard ☆

Edit

Share

Add filter

More

If you have permission to edit a dashboard, you will see the “Edit” button next to the dashboard name. Click on **Edit**.

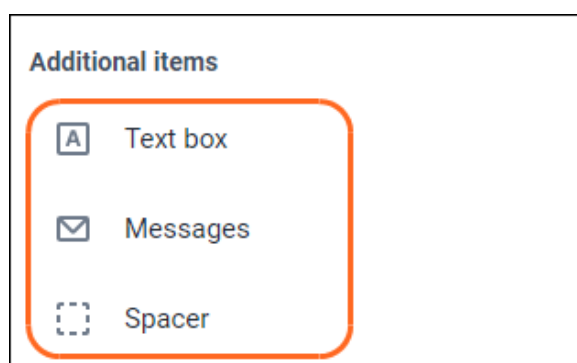
Note: You will always be able to edit the dashboards that you create i.e. your private dashboards.



1. Click anywhere on an item and drag it to the desired position on the dashboard.
2. You can resize an item by clicking and dragging the drag handle in the bottom right corner of an item until it's the size you want.
3. You can remove an item by clicking on the red trash can.

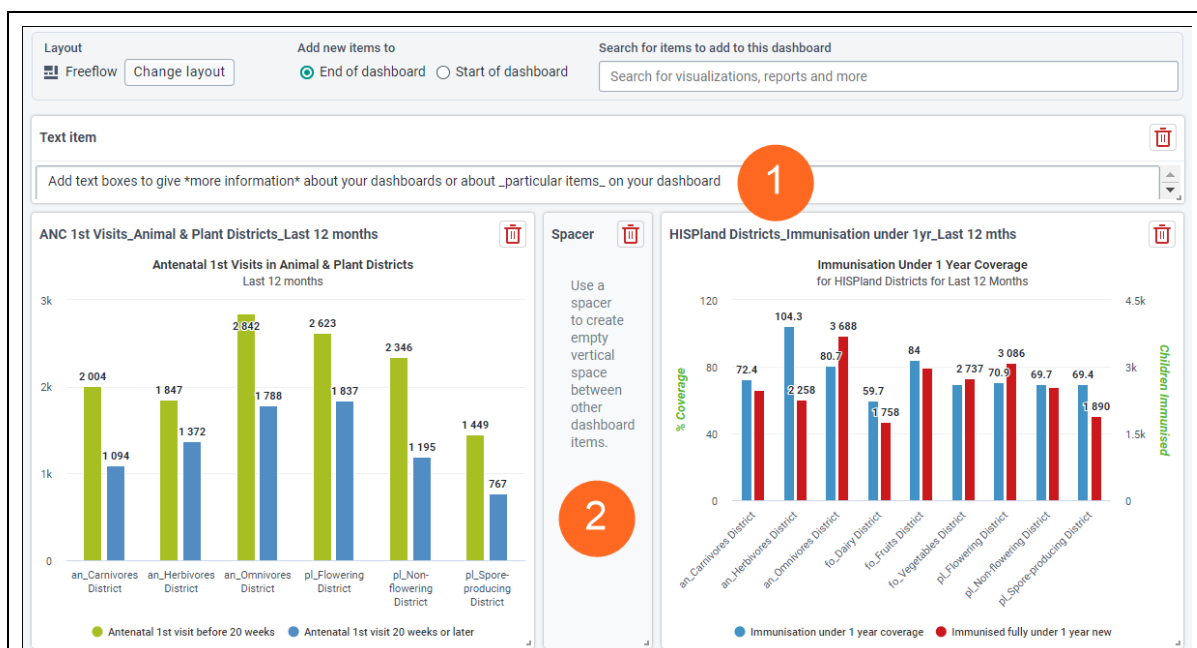
If you are using the Freeform layout, the dashboard is configured with an "anti-gravity" setting for positioning items. This means that items will "rise" upwards until they run into another item. So be aware that when you remove an item, the items that are positioned below the removed item may "rise" upwards.

Note: Clicking on the trash can only removes the item from the dashboard, it does not delete the item.



"Additional items" is the last category of items listed that can be added to a dashboard. Under "Additional items" you can add text boxes, messages and spacers to your dashboard.

You can either scroll down to the end of the list to find them or you can search for them just as you would for any other item. They are also added to the dashboard by clicking on **Insert**.



1. You can add **text boxes** to your design. These allow you to add extra text anywhere on your dashboard. For example, you may wish to add information about your dashboard in general, or a particular chart, pivot tap or map on your dashboard.

2. **Spacer** items can be added.

The "anti-gravity" setting for positioning items in a dashboard means that items will "rise" upwards until they run into another item, but you can force empty vertical space between items (like an empty row) by adding spacer items to the dashboard. You can also add spacers between items creating horizontal space (like an empty column).

Note: Spacers are only visible in edit/create mode.

This is how you make text **bold**

This is how you make text **bold**

This is how you *italicise* text

This is how you _italicise_ text

You can format the text in a text box when you are in "Edit" mode to be either bold or italics when you view the dashboard.

For bold, type an * on either side of the text you want to bold.

For italics, type an _ on either side of the text you want to italicise.

Note: There must be no spaces between the format character and the text.

Demo User Dashboard
Edit
Share
Add filter
More

Add text boxes to give more information about your dashboards or about particular items on your dashboard

ANC 1st Visits_Animal & Plant Districts_Last 12 months

Antenatal 1st Visits in Animal & Plant Districts
Last 12 months

District	Antenatal 1st visit before 20 weeks	Antenatal 1st visit 20 weeks or later
an_Carnivores District	2 004	1 094
an_Herbivores District	1 847	1 372
an_Omnivores District	2 642	1 788
pl_Flowering District	2 623	1 837
pl_Non-flowering District	2 346	1 195
pl_Spore-producing District	1 449	767

HISPland Districts_Immunisation under 1yr_Last 12 mths

Immunisation Under 1 Year Coverage
for HISPland Districts for Last 12 Months

District	Immunisation under 1 year coverage (%)	Children immunised
an_Carnivores District	72.4	2 258
an_Herbivores District	104.3	3 688
an_Omnivores District	80.7	1 758
fo_Dairy District	59.7	84
fo_Fruits District	84	2 737
fo_Vegetables District	70.9	3 086
pl_Flowering District	69.7	69.4
pl_Non-flowering District	69.4	1 890
pl_Spore-producing District	69.4	1 890

Spacers are not displayed in view mode, but they do take up the defined space.

9.5 Delete a Dashboard

Demo User Dashboard
Edit
Share
Add filter
More

Click on **Edit** to get into “Edit” mode.

Save changes
Print preview
Filter settings
Translate
Delete

Dashboard title
Demo User Dashboard

Click on **Delete**.

Note: You will only see **Delete** if you have permission to delete the dashboard.

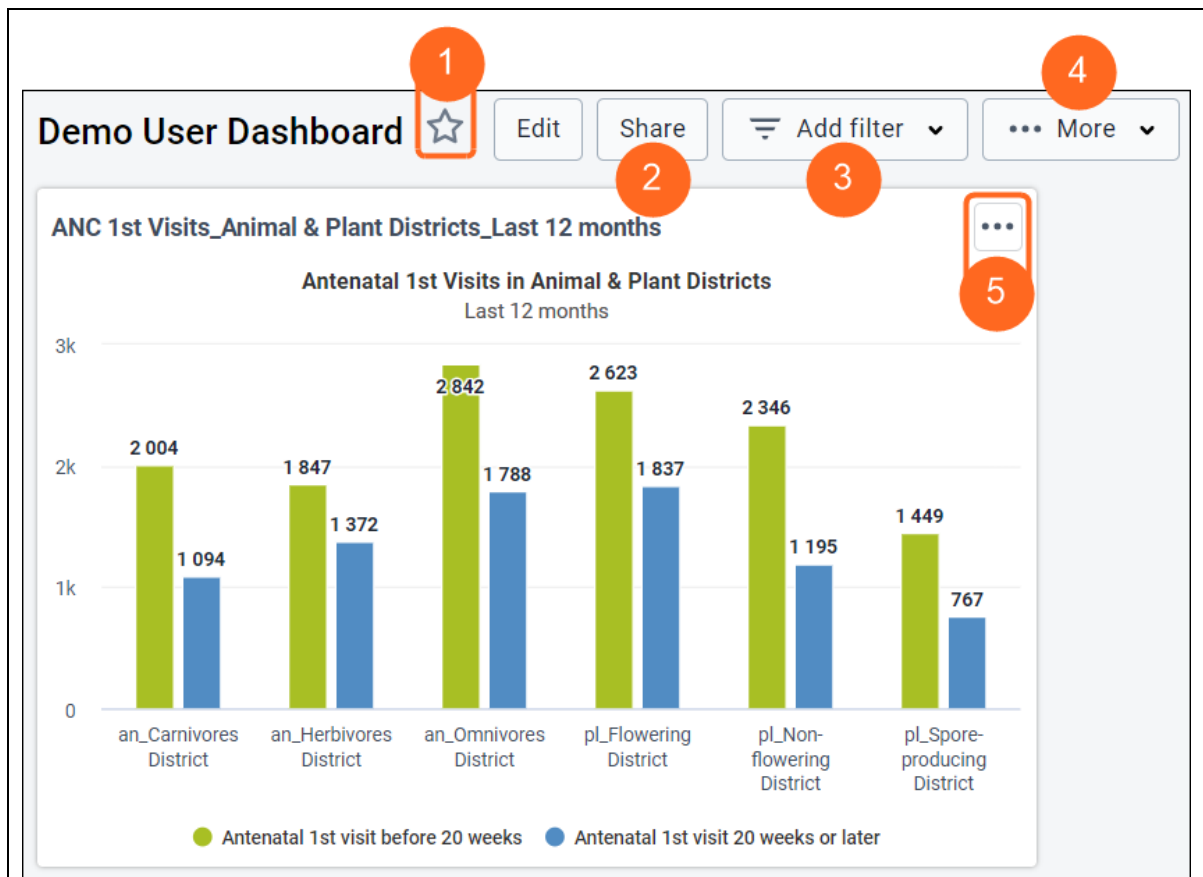
Delete dashboard

Deleting dashboard "Demo User Dashboard" will remove it for all users. This action cannot be undone. Are you sure you want to permanently delete this dashboard?

Cancel
Delete

- Click on **Delete** to delete the dashboard.
- If you change your mind, you can click on **Cancel**. This will keep you in “Edit” mode.

9.6 View a Dashboard



In “View” mode, you can:

1. Star a dashboard.
2. Share a dashboard with other users and user groups.
3. Apply a dashboard filter.
4. Use the ... **More** menu to:
 - Make a dashboard available offline.
 - Show a dashboard description.
 - Print a dashboard.
 - Close a dashboard.
5. For charts, pivot tables and maps, access the **item menu (3 dots)** to:
 - Switch between these visualisation types.
 - Open the item in its original app. **Note:** Pivot Tables will be opened in the “Data Visualizer” app.
 - Show item details and manage interpretations for the item (this is covered in the chapter on Interpretations).
 - View an item fullscreen.

9.6.1 Star a Dashboard

Starred dashboards are listed first in the list of dashboards.

Demo User Dashboard  Edit Share Add filter ... More

Click on the **Star** icon.

2

+ Q Search for a dashboard

 12 EPI

 Demo User Dashboard

01 Resources

02 Message

Demo User Dashboard  Edit Share Add filter ... More

1

1. The star is now “filled”.

2. The dashboard is listed at the beginning of the list. If there are other starred dashboards, they will be shown alphabetically.

You could also have used the option on the ... **More** menu to “star” the dashboard.

Click on the filled **Star** icon or click on ...**More** > **Unstar dashboard** to “unstar” the dashboard.

Note: Starring a dashboard only applies to you, not other users.

9.6.2 Share a Dashboard

Demo User Dashboard  Edit

Share

 Add filter ... More

Click on **Share**.

Note: You will only see **Share** if you have permission to share the dashboard.

Sharing and access: Demo User Dashboard

1
Dashboard sharing
Apply sharing to dashboard visualizations

2

Give access to a user or group

4

5
Access level
Select a level
6
Give access

3

Users and groups that currently have access

User / Group	Access level
👤 All users Can view	Metadata View only 7 ▼
👤 Admin Can view and edit	Metadata View and edit 7 ▼

8
Close

1. The “Dashboard sharing” tab shows by default.

This tab is divided into 2 areas:

2. The area where you give access to a user or user group.
3. The area that lists those users and user groups who have been given access, and where you can edit the level of access given.

To give access:

4. Click in the **Search** box and start typing the name of the user or user group you want to share your dashboard with. Users and user groups that match your criteria will be listed below the “Search” box. Click on the one you want to select it.
5. Click on the **Access level** dropdown arrow and select a level. Options are:
 - View only – Provides the user or user group with view only rights to the dashboard.
 - View and edit - Allows the user or user group to edit the dashboard in addition to viewing it. Editing allows for altering the layout, resizing, and removing items, renaming, and deleting the dashboard.
6. Click on **Give access**.

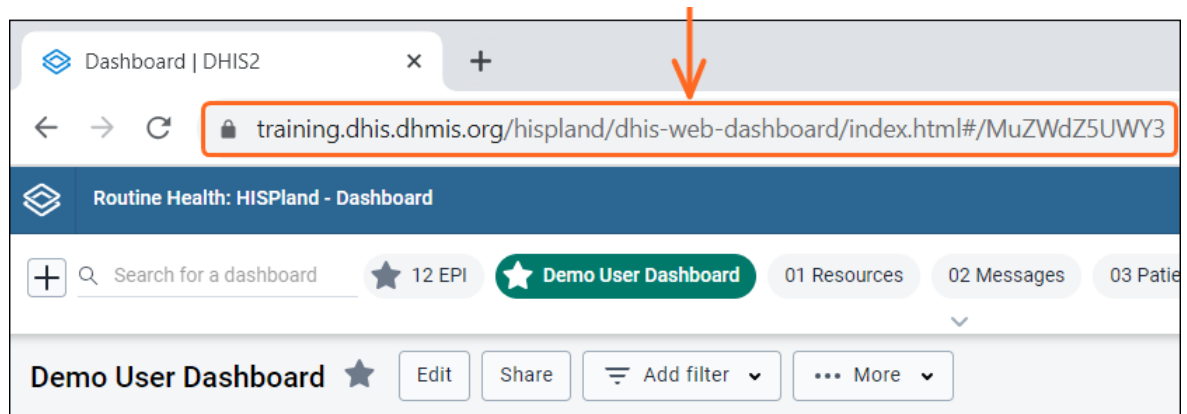
To edit access:

7. The selected user, user group or user role will now show in the list of those who have been given access. To edit the access given, click on the **Access level** dropdown arrow next to the user, user group or user role and select a level. Options are:
 - View only
 - View and edit
 - Remove access

8. Click on **Close** to exit.



We recommend that you only give other users “view-only” rights, to restrict editing permission to you as the owner. This way, you can retain control of what information you want in the dashboard.



You can provide users with the URL of the dashboard, allowing them to navigate directly to the dashboard. To get the dashboard URL, just access the dashboard in “View” mode, and copy the browser URL.

Sharing and access: Demo User Dashboard

Dashboard sharing

Apply sharing to dashboard visualizations

1

Apply dashboard sharing settings to visualizations

Applying the same sharing settings makes sure that users, groups and roles that have access to the dashboard also have at least “View only” access to its visualizations (charts, tables, maps, event charts, event reports).

If a user, group, or role already has “View and edit” access to a visualization, this won’t be reduced to “View only”. “All users” access level won’t be updated or changed.

Applying sharing can’t be undone, and needs to be done again if new visualizations are added to the dashboard or its sharing settings are changed.

ⓘ All 18 visualizations on this dashboard will potentially get updated sharing settings. These updated sharing settings will apply to 1 user or group.

Apply sharing to dashboard visualizations

2

Close

To ensure that all charts, maps, and tables on the dashboard are shared with the chosen users and user groups, you can cascade sharing to all items on the dashboard:

1. Click on the **Apply sharing to dashboard visualizations** tab.
2. Click on **Apply sharing to dashboard visualizations**.

9.6.3 Filter a Dashboard

Multiple filters can be applied to a dashboard for changing the data displayed in the various dashboard items.

The filters are applied to each dashboard item in the same way: each added filter overrides the original value for that dimension in the original chart, table, or map.

It is possible to filter on Organisation Units, Periods and other dynamic dimensions depending.

Note: Only **your** dashboard is affected by a filter; other users will not see your filtered dashboard.

Demo User Dashboard ☆ Edit Share **Add filter** ... More

To filter the dashboard, click on **Add filter**.

Filter dimensions

MAIN DIMENSIONS

Period

Organisation Unit

YOUR DIMENSIONS

ART high volume facility

Facility Priority

HospitalGazette

OrgUnitOwnership

OrgUnitRuralUrban

OrgUnitType

1

2

1. Click on a **dimension** in the list. OR

2. Click in the **Filter dimensions** box and search for a dimension.

Note: You can select multiple filters, but you have to select them one at a time.

Demo User Dashboard ☆ Edit Share **Add filter** ...

Period: Last 6 months Remove

Organisation Unit: an_Animal Province Remove

ANC 1st Visits_Animal & Plant Districts_Last 12 months

Antenatal 1st Visits in Animal & Plant Districts

Last 12 months

1 392

885

an_Animal Province

Antenatal 1st visit before 20 weeks

Antenatal 1st visit 20 weeks or later

3

2

ANC 1st Visits & Coverage_HISPlant Districts_Last year

April 2023, May 2023, June 2023, July 2023, August 2023, September 2023

	Antenatal 1st visit before 20 weeks	Antenatal 1st visit 20 weeks or later	Antenatal 1st visit coverage
an_Animal Province	1 392	885	38.9

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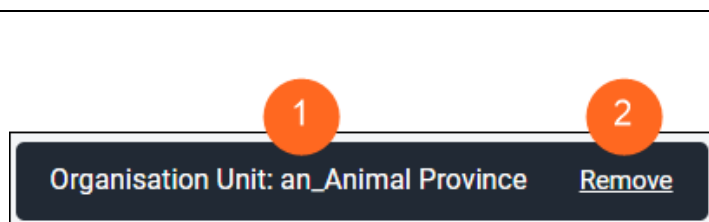
| 191

1. **Filter badges** appear above the dashboard items to indicate that what is shown in the dashboard items is not the original visualisation, but a manipulated one where the filters override the stored dimensions' values.

Note: Filter badges are always visible at the top of the page when scrolling the dashboard content.
2. You can see that both the column chart and the pivot table now reflect data for the selected organisation unit and period.
3. Note that titles and filenames are obviously not changed.



Note that filters are **not** stored so will be lost when you switch to a different dashboard or log out.



On the filter badge:

1. Click on the current filter to open the filter selection dialog box to edit it.
2. Click on **Remove** to remove the filter.

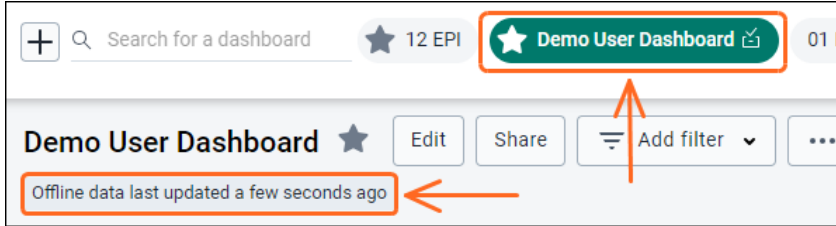
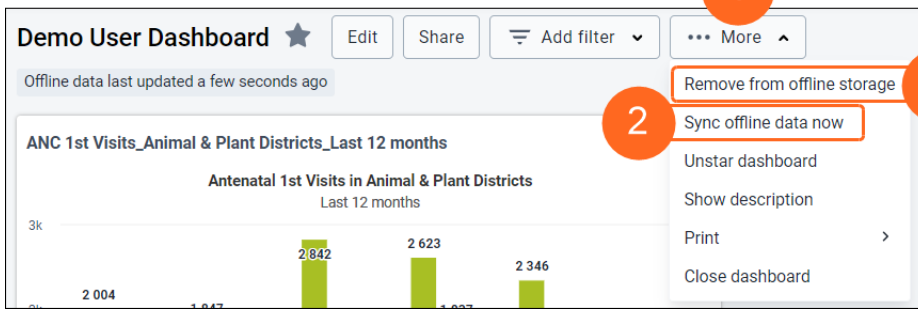
9.6.4 Make a Dashboard Available Offline

The Dashboard app now allows you to mark a dashboard to be available offline. This stores the dashboard visualisations and data locally in the web browser on laptops, desktops, and mobile devices. When selected, the dashboard will be cached on the device, and the user can view that dashboard offline. This allows you to access and view your dashboards while not being connected to the Internet, e.g., while staying or travelling in rural areas.

Note: There are a few things to remember about working offline:

- Filters and interpretations are not supported offline.
- Offline dashboards are only available on the computer and browser where you set them to offline.
- If you manually log out of webDHIS, all cached dashboards will be cleared, and they will no longer be available offline.

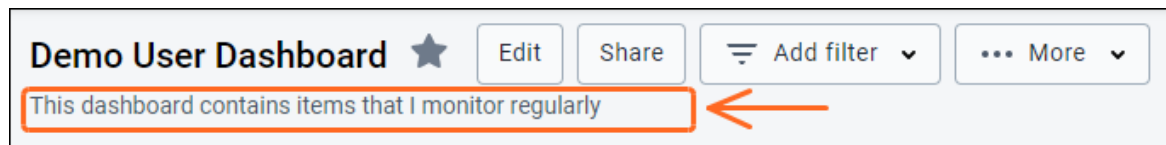
If you are offline, any buttons or actions that require a connection to complete successfully are disabled. They will be re-enabled once connectivity is restored.

 The screenshot shows the 'Demo User Dashboard' with a bar chart titled 'Antenatal 1st Visits in Animal & Plant Districts Last 12 months'. The chart has four bars with values 2,004, 2,842, 2,623, and 2,346. The 'More' menu is open, and 'Make available offline' is highlighted with a red box and a red circle with the number 2. The 'More' button is circled with a red circle with the number 1.	1. Click on the ...More menu. 2. Click on Make available offline.
 The screenshot shows the 'Demo User Dashboard' with a bar chart. The 'Offline data last updated a few seconds ago' tag is highlighted with a red box and a red arrow. The 'Demo User Dashboard' chip is highlighted with a red box and a red arrow.	Dashboards that have been saved offline have an indicator on the dashboard chip in the dashboard bar, as well as a tag showing the time it was saved.
 The screenshot shows the 'Demo User Dashboard' with a bar chart. The 'More' menu is open, and 'Sync offline data now' and 'Remove from offline storage' are highlighted with red boxes and red circles with the numbers 2 and 3 respectively. The 'More' button is circled with a red circle with the number 1.	1. Click on the ...More menu. 2. If the dashboard has been changed since you made it available offline, either by you or someone else, click on Sync offline data now to save the latest version of the dashboard. 3. Click on Remove from offline storage.

9.6.5 Show a Dashboard Description

 The screenshot shows the 'Demo User Dashboard' with a bar chart. The 'More' menu is open, and 'Show description' is highlighted with a red box and a red circle with the number 2. The 'More' button is circled with a red circle with the number 1.	1. Click on the ...More menu. 2. Click on Show description.
--	--

Click on **Show dashboard** on the "... More" menu.



The dashboard description shows beneath the dashboard name.

Click on **Hide description** on the "...More" menu to hide the description.

9.6.6 Print a Dashboard

There are two styles of dashboard print:

- **Dashboard layout** – This approximates the dashboard layout as it is shown in the browser. Note that some adjustments may need to be made to the layout to prevent items being split onto multiple pages: items that would be cut off by a page break are moved to the next page, and items that are taller than one page are shortened to fit on one page.
- **One item per page** - Each dashboard item is printed on a separate page, maximising the use of the paper size.

For both styles, a title page is added that shows the dashboard title, description (if the "Show description" setting is enabled), and any applied dashboard filters.

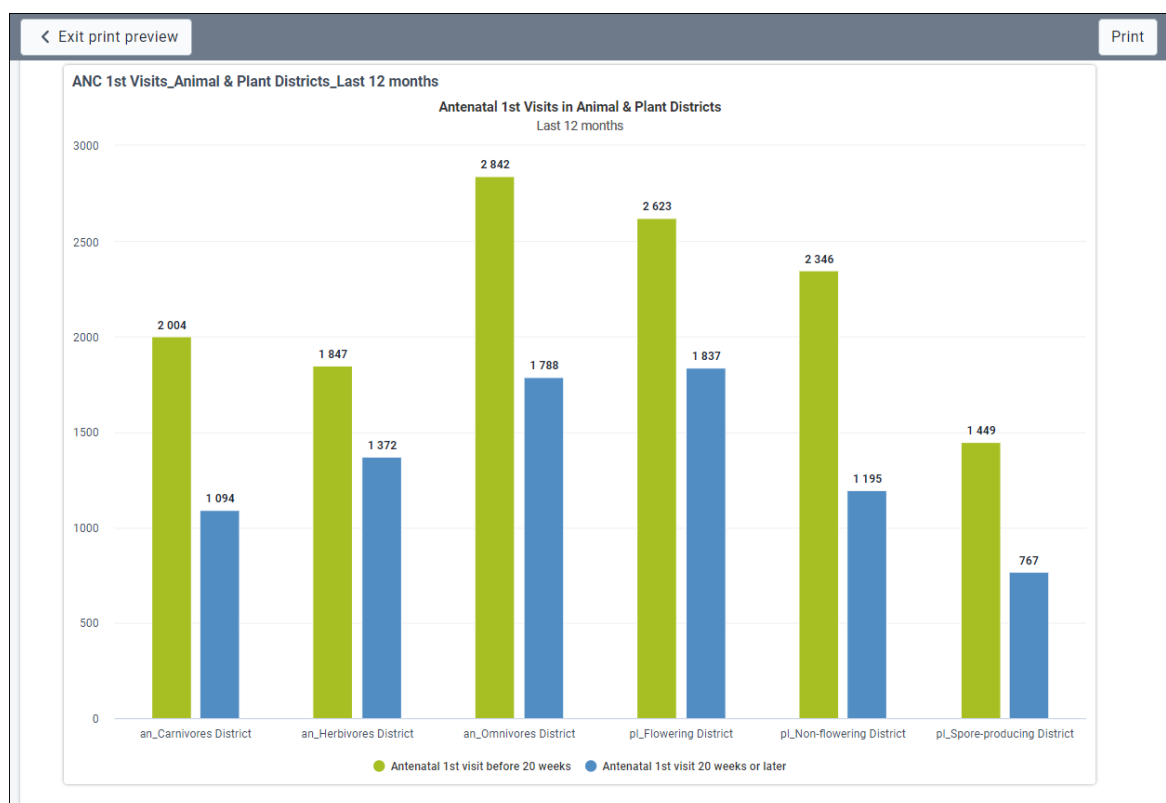
For best print results:

- Use Chrome or Edge.
- Wait until all dashboard items have loaded before printing.
- Use A4 landscape setting with default margins set and background graphics turned on.

	1. Click on Print on the "... More" menu. 2. Click on Dashboard layout or One item per page.
Dashboard layout:	



One item per page:



- 2

< Exit print preview

1

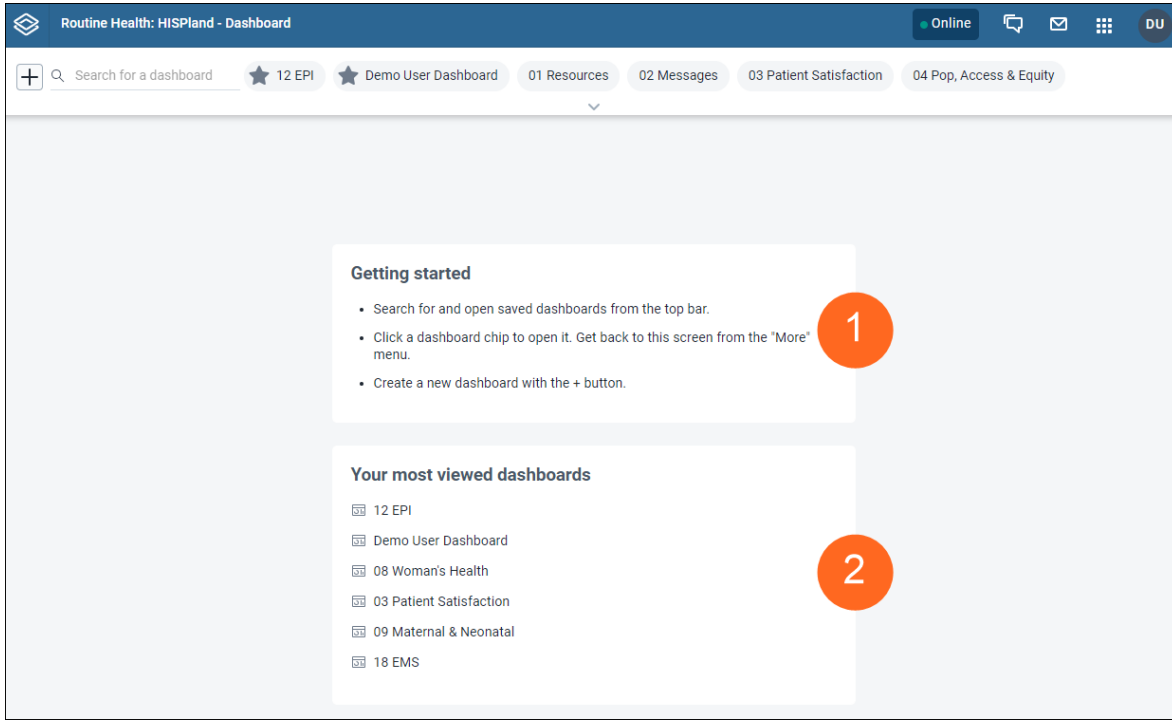
Print
1. Click on **Print** to trigger the browser print functionality. OR
 2. Click on **Exit print preview** to exit without printing.

TIP: Instead of printing, an easy way to “take a picture” of an item on the dashboard, or even the whole dashboard, is to use the Microsoft Snipping Tool or the “Print Screen” button on your keyboard. You can then paste the screenshot into a presentation or report. If you can’t see everything on your dashboard, you can zoom out by clicking on **Ctrl –** as many times as is necessary. You can zoom in again using **Ctrl +**.

9.6.7 Close a Dashboard



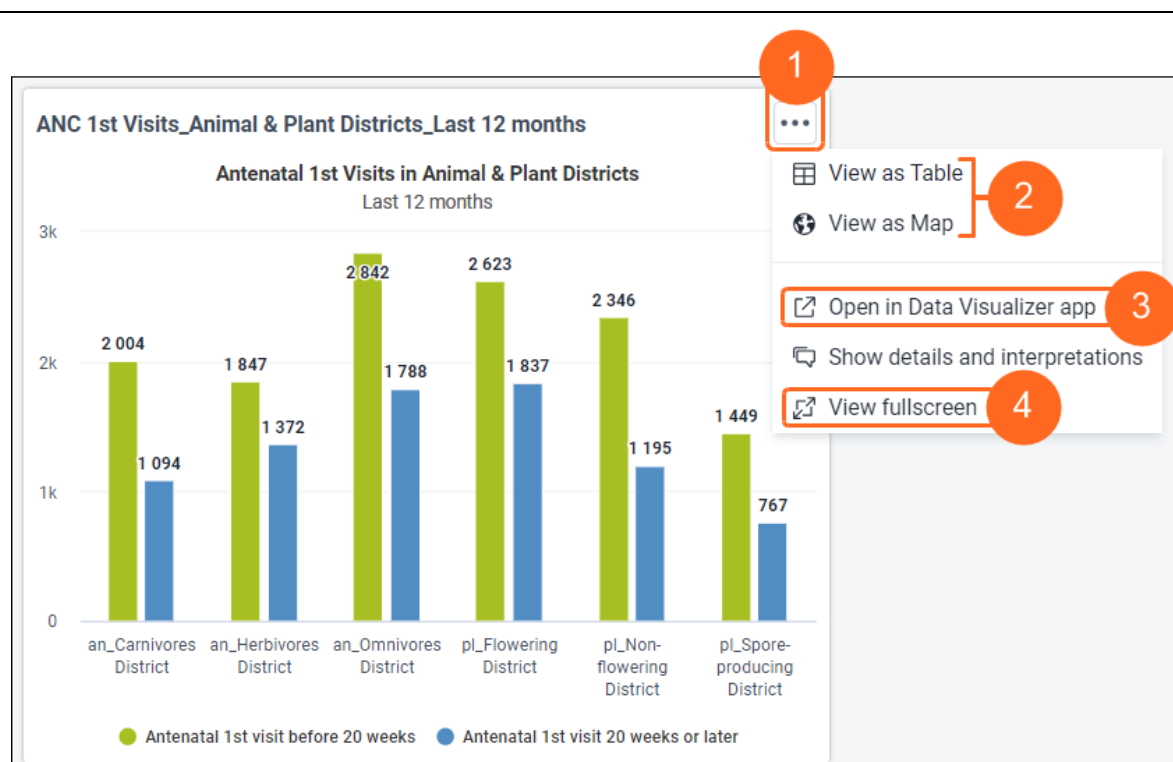
1. Click on the **...More** menu.
2. Click on **Close dashboard**.



To open a dashboard from here:

1. You can follow the instructions under “Getting started”. OR
2. You can click on one of the most viewed dashboards.

9.6.8 Dashboard Item Menu (3 dots)



1. Click on the **Item menu (3 dots)**.

2. Switch between visualisations

Dashboard items showing charts, pivot tables and maps can be toggled between these visualisations. We are going to toggle the above chart to a pivot table by clicking on **View as Table** in the “Item” menu.

ANC 1st Visits_Animal & Plant Districts_Last 12 months		
Antenatal 1st Visits in Animal & Plant Districts		
Last 12 months		
September 2021, October 2021, November 2021, December 2021, January 2022, February 2022, March 2022, April 2022, May 2022, June 2022, July 2022, August 2022		
	Antenatal 1st visit before 20 weeks ↕	Antenatal 1st visit 20 weeks or later ↕
an_Carnivores District	2 004	1 094
an_Herbivores District	1 847	1 372
an_Omnivores District	2 842	1 788
pl_Flowering District	2 623	1 837
pl_Non-flowering District	2 346	1 195
pl_Spore-producing District	1 449	767

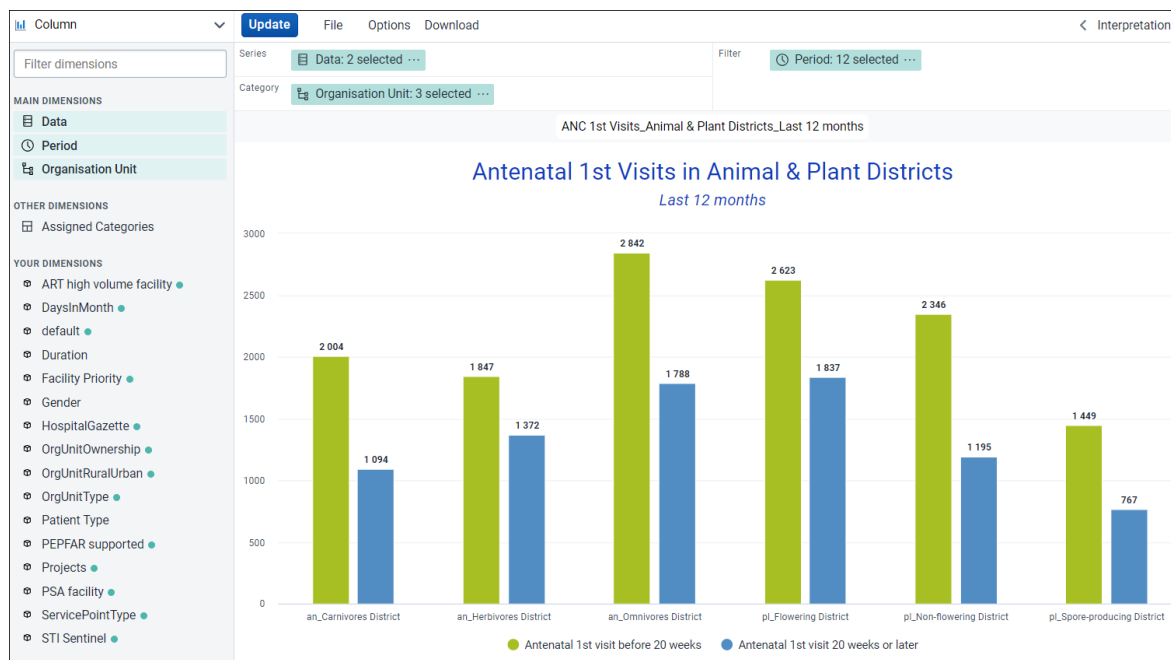
Note:

- The pivot table/map will always revert to the original chart type that was used.
- If the original item is saved as a map or pivot table, then switching visualisations to a chart will always show a bar chart by default.

- It is not realistic to change the visualisation of more complex pivot tables, charts, or maps as webDHIS v2.38 may not be able to process this.

3. Edit a dashboard item

Click on **Open in [app name] app** (In our example: **Open in Data Visualizer app**) in the “Item” menu to open the dashboard item in the app in which it was created.

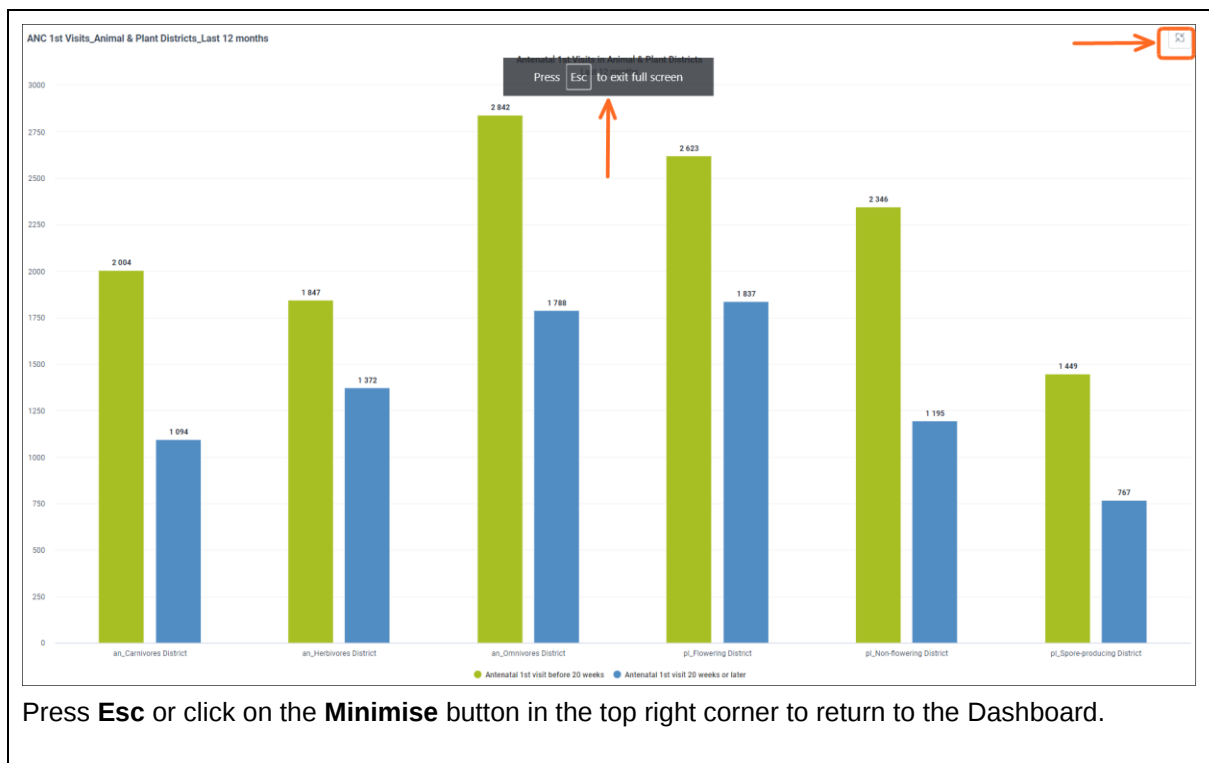


You can now make the changes you require e.g. select districts in one province, and then save this as your own chart. This way you don't have to create the chart from scratch, which can save a lot of time.

4. Full screen dashboard item presentation mode

You can expand any dashboard item (chart, map, or pivot table) to the size of the entire screen. This is great for presenting data directly from the dashboard in virtual or in-person meetings.

Click on **View fullscreen** in the “Item” menu.



This concludes Chapter 9 on creating and managing dashboards. Chapter 10 focuses on messaging in webDHIS.

Chapter 10. Messaging

After reading this chapter you will be able to:

- Send a message
- Reply to a message
- Add participants to a conversation
- Search for messages containing certain keywords
- Manage your messages

webDHIS users can send messages to other users, user groups and organisation units within the webDHIS database to which they have access. There are 2 types of message you can send from the Messaging app in webDHIS:

- **Private** messages – messages sent from a user to any other selected user, user group or orgunit.
- **Feedback** messages – messages sent from a user to a particular user group called the feedback recipient group, which is pre-defined.

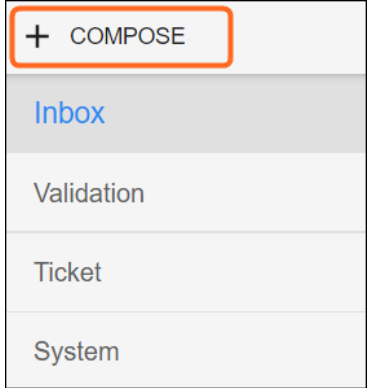
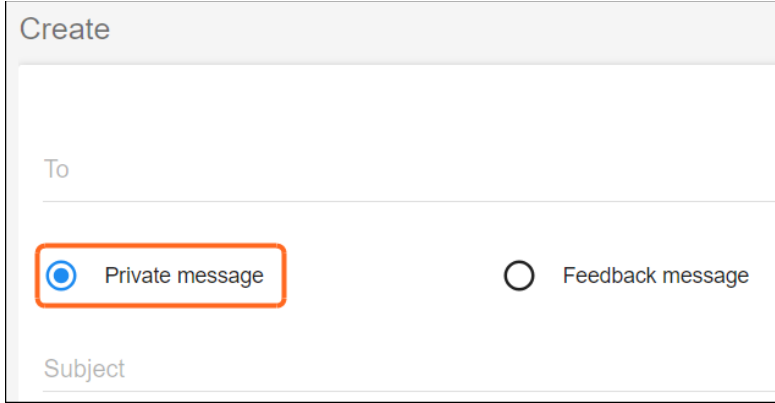
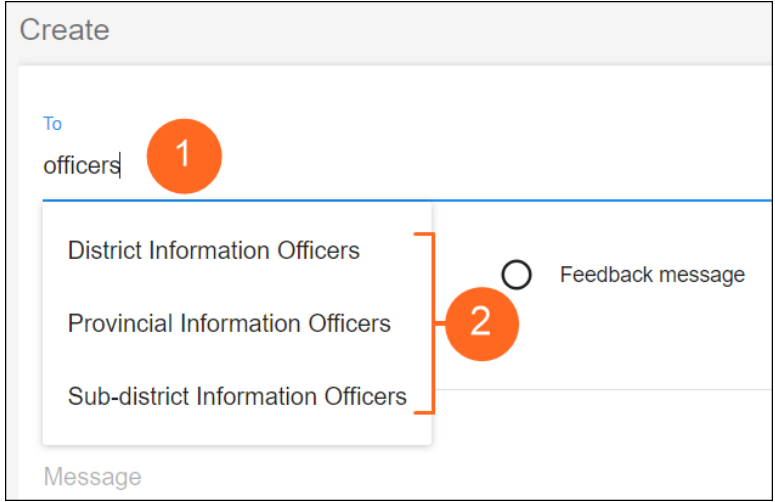
In addition to private and feedback messages, the webDHIS can also send you **validation notifications** and **system-generated** messages.

There are 4 folders in the Messaging App to cater for the different types of messages:

Folder	Message Type
Inbox	Private messages
Validation	Validation notifications. You will only receive these and have access to the message handling tools if you belong to a user group that has been set up to receive notifications when there are validation rule violations.
Ticket	Feedback messages. You'll only see feedback messages and have access to the message handling tools if you are a member of the user group that is set up to handle feedback messages.
System	System-generated messages

10.1 Send a private message

The process is the same, whether you send a message to a user, user group or organisation unit.

	Click the Message icon in the top menu.
	Click on Compose.
	Private message is selected by default.
	1. Start typing the name of the recipient of your message. 2. webDHIS will find all the users, user groups or organisation units that match your search. Click on the recipient you want from the list. Note: The screenshot shows several user groups.

Create To Provincial Information Officers ☒ Private message ☐ Feedback message Subject	Once you have clicked on the recipient you want, it will be added to the “To” box. Note: You can select multiple recipients by repeating the steps above.
If you send a message to a user, only that user will receive it. If you send a message to a user group, only those users who belong to that group will receive it.  If you send a message to an organisation unit, ALL users who are assigned to that organisation unit will receive it. Please don't select an organisation unit as your recipient unless it is absolutely necessary.	
Create To cre Create users fo_Full-cream Yogurt Clinic pl_Creepers Subdistrict pl_Creeping Fig Clinic ☐ Feedback message	An organisation unit is anything that starts with the provincial prefix.

Once you have selected your recipients you can complete your message.

1. **Subject:** Type your subject.
2. **Message:** Type your message.
3. Click on **Send**.
4. Click on **UPLOAD ATTACHMENT** if you want to attach a file.

There is no Outbox or Sent folder in webDHIS; all messages, both incoming and outgoing, are stored in the Inbox. More than one message is known as a **conversation**.

10.2 Read and reply to a private message

Simply click on a message to open it so that you can read it and reply to it if required.

1. The **Subject** is displayed at the top of the message.

2. The list of **recipients** comes next.
3. That is followed by the **message**.
4. For every message conversation, you can add participants to the conversation. This is very useful if you want input on that particular conversation or if someone should also see the information. **Note:** It is not possible to delete participants from a conversation.

Start typing the name of the participant you want to add.
5. The participant must be a user in the database you're working in. When their name comes up in the list, click on it to select it.
6. Click on **+ ADD**.
7. Click on the **left arrow** to return to the message list.

Message

Type your reply here 1

2
REPLY

3
DISCARD

4
 UPLOAD ATTACHMENT

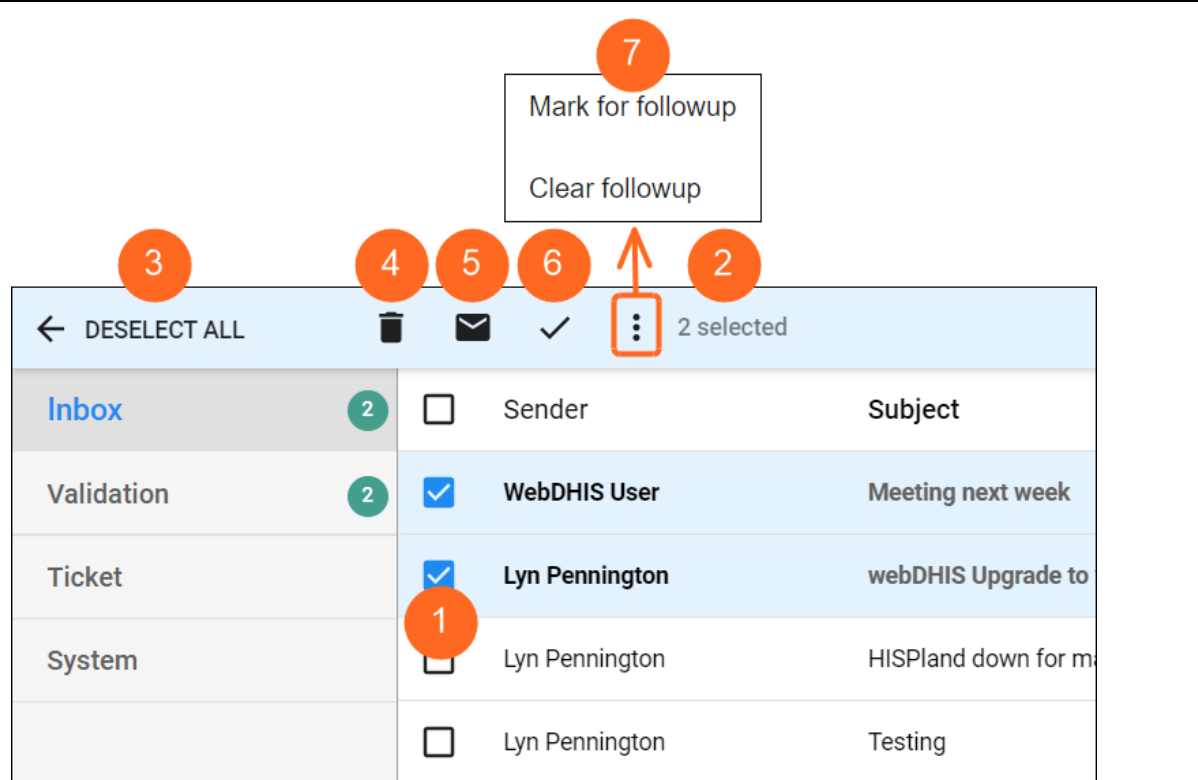
1. Scroll down to the bottom of the message until you come to the blank **Message** block. Type your message.
2. Click on **REPLY** to send your reply.
3. If you change your mind and you don't want to send your reply, click on **DISCARD**.
4. Click on **UPLOAD ATTACHMENT** to attach a file to your reply.

10.3 Manage Messages

+
COMPOSE

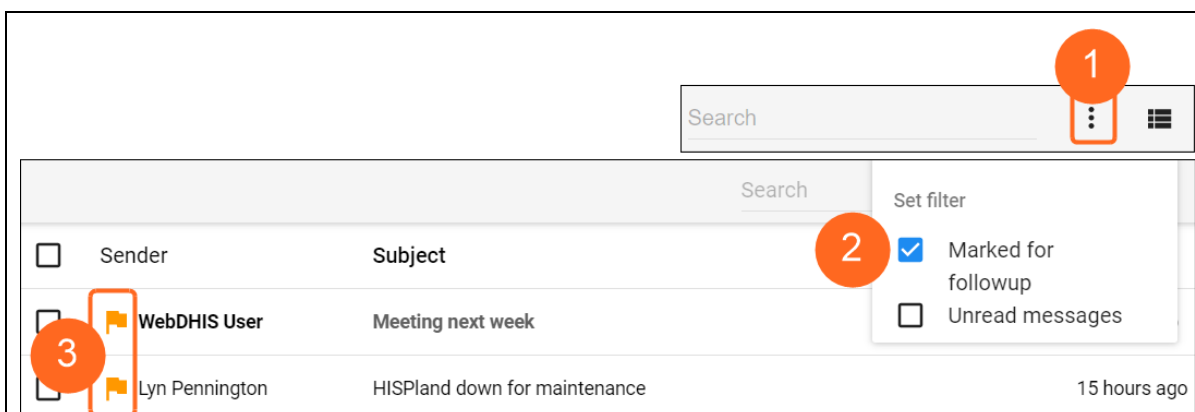
		Sender	Subject
Inbox	2		
Validation	2	WebDHIS User	Meeting next week
Ticket		Lyn Pennington	webDHIS Upgrade to v2.38
System		Lyn Pennington	HISPland down for maintenance
		Lyn Pennington	Testing

The number attached to the **Message** icon in the top menu indicates the number of unread messages. In the screenshot above, we can see that there are 4 unread messages – 2 in the Inbox and 2 in the Validation folder. Unread messages are shown in bold in the message list.



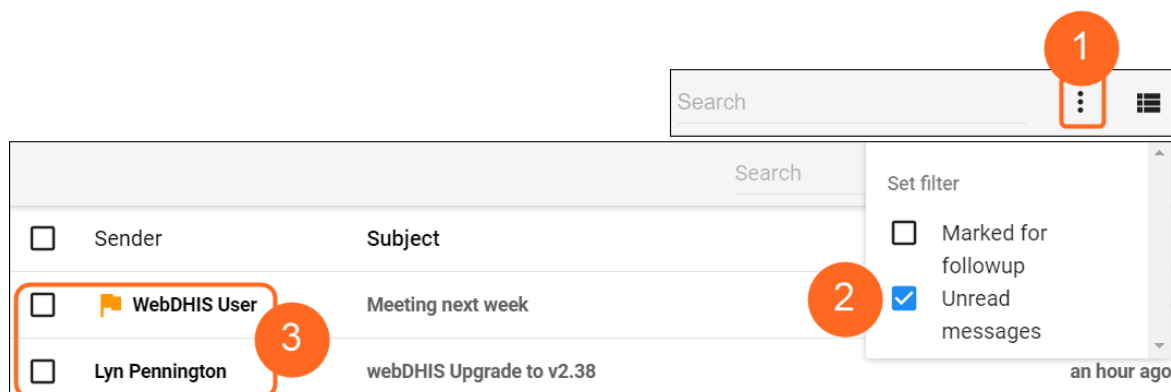
1. Click on a checkbox to select a message. If you want to select **all** the messages, click in the checkbox next to the column heading **Sender**.
2. The bar at the top shows how many messages are selected.
3. You can click on **DESELECT ALL** to deselect **all** the messages.
4. Click on the trash can icon to **delete the selected messages**.
5. Click on the envelope icon to **mark the selected messages as unread**.
6. Click on the tick icon to **mark the selected messages as read**.
7. Click on the three dots to show more options. Here you can choose to **Mark for followup** or to **Clear followup** from the selected messages.

☐ Sender	Messages that are marked for followup have a flag icon next to the Sender name.
☐  WebDHIS User	
☐ Lyn Pennington	
☐  Lyn Pennington	



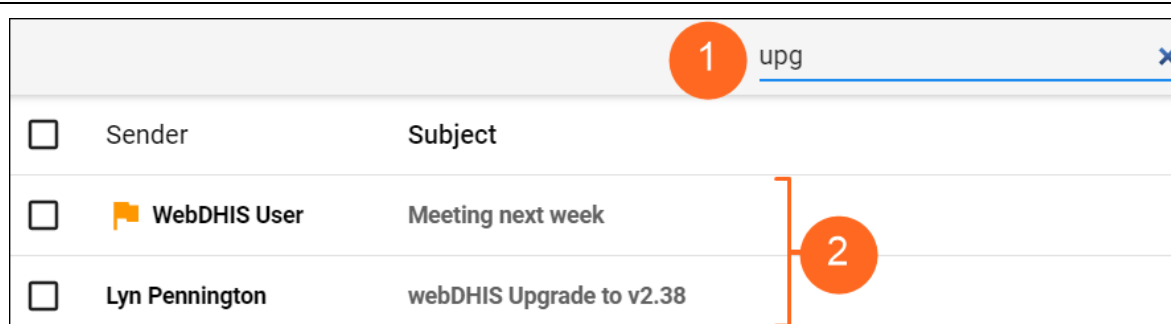
To see only those messages that have been marked for followup:

1. Click on the **3 dots** to the right of the Search bar.
2. Click in the **Marked for followup** checkbox.
3. Only messages marked for follow-up will be displayed in the list.



Similarly, you can filter the list for unread messages only:

1. Click on the **3 dots** to the right of the Search field.
2. Click in the **Unread messages** checkbox.
3. Only unread messages will display in the list.



The Search field enables you to search for messages. The search filters messages on different message attributes – subject, text and senders. This implies that you are able to narrow down the message conversation list by entering search criteria.

1. Click into the **Search** field and start typing what you are looking for.
2. In the example above, “upg” was sufficient to find “upgrade” in both the subject of one message and the body of another message.

You can view messages in 2 different views:

The **List** view is simplistic and gives a good overview of all messages. It is the default view.

Search ⋮ 			
☐	Sender	Subject	Date
☐	 WebDHIS User	Meeting next week	2 hours ago
☐	Lyn Pennington	webDHIS Upgrade to v2.38	2 hours ago
☐	 Lyn Pennington	HISPland down for maintenance	15 hours ago
☐	Lyn Pennington	Testing	Oct 12

The **Compact** view is a modern way of viewing messages where you have more information in one view, so viewing and replying to several messages is easier.

The screenshot displays a mobile application interface. On the left is a list of messages, each with a checkbox, a sender name, and a timestamp. The messages are: 'WebDHIS User' (2 hours ago), 'Meeting next week', 'Lyn Pennington' (2 hours ago), 'webDHIS Upgrade to v2.38', 'Lyn Pennington' (15 hours ago), 'HISPland down for maintenance', and 'Lyn Pennington' (Oct 12) with the subject 'Testing'. On the right is a detailed view of the 'webDHIS Upgrade to v2.38' message. It shows the title, a back arrow, the participant list ('me' and 'Lyn Pennington'), and an option to 'Add participants to conversation'. The message content is 'Message from Lyn Pennington' sent '2 hours ago, 11:15', with the text 'Please be aware that this upgrade has been carried out on HISPland'. An orange arrow points to a menu icon (three horizontal lines) in the top right corner of the detailed view.

Message List:

- ☐ WebDHIS User 2 hours a...
- Meeting next week
- ☐ Lyn Pennington 2 hours a...
- webDHIS Upgrade to v2.38
- ☐ Lyn Pennington 15 hours ...
- HISPland down for maintenance
- ☐ Lyn Pennington Oct 12
- Testing

Message Detail View:

webDHIS Upgrade to v2.38

Participants

me Lyn Pennington

Add participants to conversation + ADD

Message from Lyn Pennington 2 hours ago, 11:15

Please be aware that this upgrade has been carried out on HISPland

Auto refresh (05:00) 

If the **Auto refresh** is enabled, it fetches new messages every 5 minutes. It is disabled by default.