

SANAC

Focus for Impact

User Manual

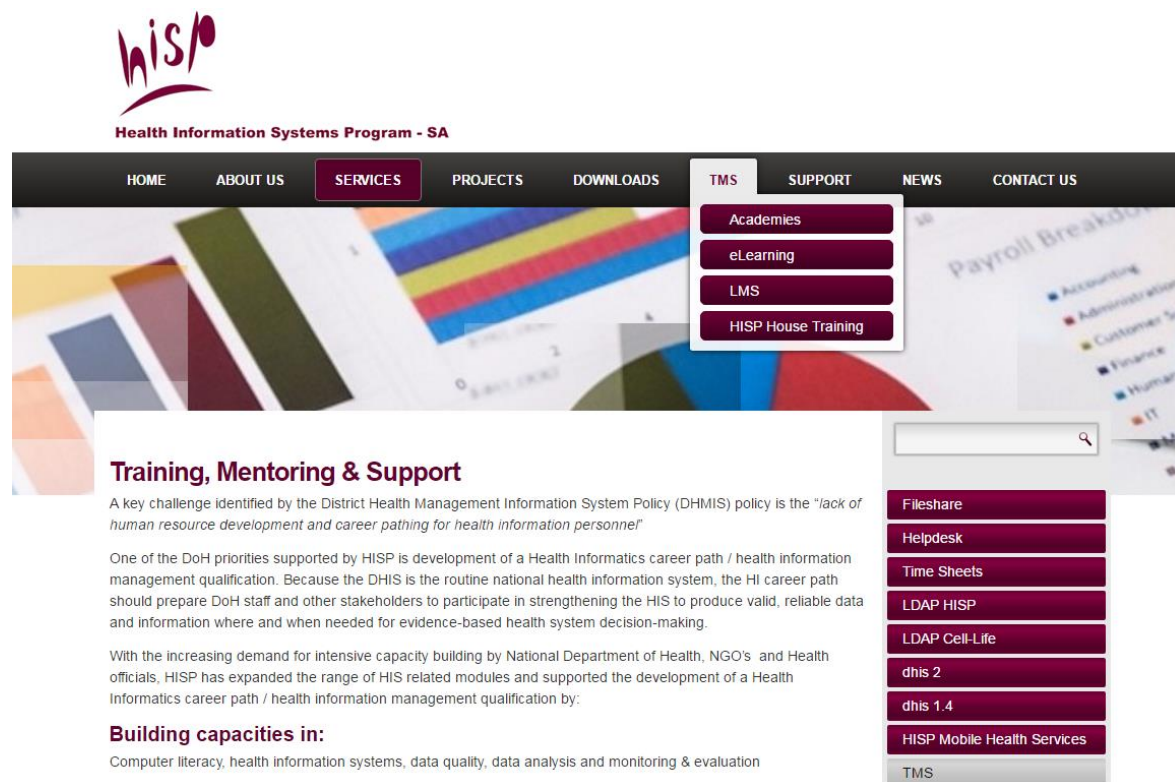


Health Information Systems Program (HISP) has been accredited as an Education and Training provider with the Health and Welfare SETA (HWSETA). The accreditation number is:

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This manual has been designed by the HISP Team. Suggestions and contributions are welcome.

For further information about HISP Courses please contact us at tmsmarketing@hisp.org or go to www.hisp.org :



The screenshot shows the HISP website interface. At the top, the HISP logo is displayed above the text "Health Information Systems Program - SA". Below this is a navigation bar with links: HOME, ABOUT US, SERVICES (highlighted), PROJECTS, DOWNLOADS, TMS (highlighted), SUPPORT, NEWS, and CONTACT US. A dropdown menu for TMS is open, showing options: Academies, eLearning, LMS, and HISP House Training. The main content area features a section titled "Training, Mentoring & Support" with a background image of colorful charts. The text in this section discusses the DHMIS policy, the development of a Health Informatics career path, and the expansion of HISP modules. A sidebar on the right contains a search bar and a list of links: Fileshare, Helpdesk, Time Sheets, LDAP HISP, LDAP Cell-Life, dhis 2, dhis 1.4, HISP Mobile Health Services, and TMS.

Health Information Systems Program - SA

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Academies
eLearning
LMS
HISP House Training

Training, Mentoring & Support

A key challenge identified by the District Health Management Information System Policy (DHMIS) policy is the "lack of human resource development and career pathing for health information personnel"

One of the DoH priorities supported by HISP is development of a Health Informatics career path / health information management qualification. Because the DHIS is the routine national health information system, the HI career path should prepare DoH staff and other stakeholders to participate in strengthening the HIS to produce valid, reliable data and information where and when needed for evidence-based health system decision-making.

With the increasing demand for intensive capacity building by National Department of Health, NGO's and Health officials, HISP has expanded the range of HIS related modules and supported the development of a Health Informatics career path / health information management qualification by:

Building capacities in:
Computer literacy, health information systems, data quality, data analysis and monitoring & evaluation

Fileshare
Helpdesk
Time Sheets
LDAP HISP
LDAP Cell-Life
dhis 2
dhis 1.4
HISP Mobile Health Services
TMS

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About this manual

Welcome to the SANAC Focus for Impact User Manual.

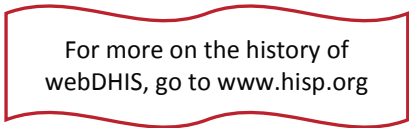
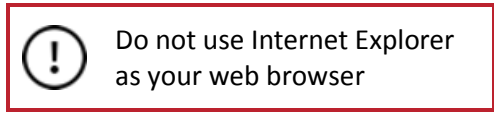

In this manual, we show you how to:

- Access, log in to, navigate in, and log out from the SANAC Focus for Impact instance
- Update your profile details and change your password
- Clear your browser cache
- Become familiar with metadata definitions
- Use the standard DHIS2 Pivot Table and Data Visualizer apps
- Create your own dashboard and add objects to it
- Access and use the Focus for Impact App

Getting the most out of the manual

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

The following formatting is used in this document:

Formatting	Description
	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: <ul style="list-style-type: none">• steps that must be followed or• labels
Note: Lastname is your Surname.	Notes give additional information.
TIP: Your password is CaSeSensitive.	Tips are in red 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 red font indicate terminology.
“Search apps”	Terms in “quotation marks” indicate name of a field, form, report etc.
<i>Pivot</i>	Text in italics indicates text that must be entered/typed into a field.

Chapter 1. Introduction

In order to ensure sustainability and interoperability of the SANAC Focus for Impact web-application, DHIS2 (an open source system (OSS)) is used as the platform for the solution. DHIS2 provides required security features which control user access and user permissions to this web-based system.

No patient level data is included in the SANAC Focus for Impact web-application and only provide a platform where various secondary and Application Programming Interface (API) linked datasets come together as the basis for this decision-making tool.

1.1 DHIS2 Background

DHIS2 is a tool for collection, validation, analysis, and presentation of aggregate and patient-based statistical data. It is tailored, but not limited, to integrated health information management activities.

DHIS2 is a modular web-based software package, in contrast to DHIS 1.4 which was a Microsoft Access-based application.

DHIS2 is developed by the Health Information Systems Programme (HISP) as an open and globally distributed process with developers currently in India, Vietnam, Tanzania, Ireland, and Norway. The development is coordinated by the University of Oslo with support from NORAD and other donors.

The DHIS2 software is used in more than 40 countries in Africa, Asia, and Latin America, and 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.

For more on the history of DHIS2,
go to www.hisp.org

DHIS2 is open source software released under the BSD license and can be obtained at no cost. It runs on any platform with a Java Runtime Environment (JRE 7 or higher) installed.

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.

Chapter 2. Getting started with SANAC Focus for Impact instance

After reading this chapter you will be able to:

- Request access to SANAC Focus for Impact instance
- Access the SANAC Focus for Impact instance, login and logout
- Navigate in the SANAC Focus for Impact instance
- Update your user details and change your password
- Clear the browser cache
- Explain the metadata/key concepts used in a DHIS2 instance like SANAC Focus for Impact

2.1 Request access to SANAC Focus for Impact instance

In the SANAC Focus for Impact instance, 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 is allocated to the user role/s
- Access to datasets and/programs which is 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 is also controlled by this allocation. If the user is not required to capture any data the lack of datasets and capturing roles will prohibit the user from actually capturing any data).

In order to gain access to the SANAC Focus for Impact instance, users are required to complete the prescribed “Focus for Impact web-application User Access Registration Form”. There are various ways to register users as described below.

1. Manual registration of users

A SANAC Focus for Impact user with permissions to add other users is able to manually complete the user creation form and add a user to SANAC Focus for Impact. The rights of a user to certain permissions need to be justified and approved so a “Request for Focus for Impact web-application registration form” must be completed by each user who has access to SANAC Focus for Impact. Although manual registration of users is possible it is not the most desirable method as the username and password entered by the creator of the username must be provided to the user (usually by email) and this does pose some degree of security risk.

2. Sending user invitations

A user who can create users in the system can set up email invitations to users. They need to pre-define the user-role and access for each user. The user will then receive an invitation to register and once registered will have the pre-defined access rights. The user will receive at least

2 emails with an invitation to register for security reasons. This is a viable option but is not ideal. It does require knowledge of the user roles and their related orgunits and can be time-consuming and very technical to set up.

3. Allowing users to self-register

By far the easiest way to add users to the Focus for Impact instance is to allow users to self-register based on a system-wide pre-defined user role granted to self-registered users. This method allows the user to add his/her own username and password which is then secure with the user only. The administrator for creating users can then subsequently edit the permissions granted to individual users. This is the preferred method proposed for South Africa.

In production systems the self-registered user role will have minimal user privileges. They will only be able to send an internal message requesting user rights and upload the required “Focus for Impact web-application User Access Registration Form”. The administrator with permissions to create users will then allocate access based on the approved form uploaded. The form will also be stored in the webDHIS system for future reference or auditing purposes. For training instances the self-registered user role will be changed to User_training with access to basic aggregated and Tracker capturing and reporting functions which is the permissions required by basic webDHIS users. This will allow users to register in Training instances and access these permissions on training databases without further permissions required.

4. Direct adding of users via webAPI

In certain scenarios it is possible and advisable to add users directly into the system for example when creating user access for a specific mobile device that will be used to post data to the Focus for Impact web-application. In this case the device is added to the system rather than the user since the device has to be referenced by e.g. sim card number in order to be able to post data to the Focus for Impact web-application. This is a technical solution requiring advanced coding expertise so is not preferable.

Registration is currently done manually. The “Focus for Impact web-application User Access Registration Form” needs to be filled in and submitted to SANAC. Note that this form needs to be signed and dated by the user and by the user’s manager before submission to SANAC.

See a copy of the form on the following page.



Focus for Impact web-application access - User Registration Form

New users that require access to the Focus for Impact web-application, OR existing users that want to change/edit their current details, will have to complete this registration form. Kindly complete the required user information and forward all completed forms to your next reporting level. ONLY after signoff and approval, will the user be created or edited. Emails containing your webDHIS Username and Password will be sent to the email address specified in the table below. Existing users will also receive an email with regard to their requested changes.

User Information:

For existing users, only specify/tick the changes/additions e.g. Orgunit, user role, data set. If Termination box is ticked, provide the termination date	<input type="checkbox"/> New User <input type="checkbox"/> Existing User <input type="checkbox"/> Change Passwords <input type="checkbox"/> Change/Addition of Data Set Access <input type="checkbox"/> Change of Organisational Units Access <input type="checkbox"/> Termination Date: ____/____/____
First name (in full)*	
Surname (in full)*	
Email Address*	
Position *	
ID Number	
PERSAL/Employee number	
Cell phone Number (e.g. +27 ...)*	
User Roles (Tick (✓) your options)	<input type="checkbox"/> Dashboard user Compulsory for all users to see the landing page and clean data cache
	<input type="checkbox"/> Data Capturer – Event data Users will have access to add/edit event data
	<input type="checkbox"/> Data User Aggregated users will have access to all the reporting aspects, pivot tables, and GIS functionality
	<input type="checkbox"/> Create User Users will have access to create/edit Users
	<input type="checkbox"/> Other (please specify)

Access to Tracker programme (provide detail of programme)		
User Groups (Tick (✓) your options)	<input type="checkbox"/> User Access Compulsory for all users	
	<input type="checkbox"/> Create users All users allocated with create users	
	<input type="checkbox"/> National level user All users allocated to South Africa as a Orgunit Parent for reporting	
	<input type="checkbox"/> Provincial level user All users allocated to province as a Orgunit Parent for reporting (specify province)	
	<input type="checkbox"/> EC	<input type="checkbox"/> FS
	<input type="checkbox"/> GP	<input type="checkbox"/> KZN
	<input type="checkbox"/> LP	<input type="checkbox"/> MP
	<input type="checkbox"/> NC	<input type="checkbox"/> NW
	<input type="checkbox"/> WC	
Comment:		

* Compulsory Information that must be completed

User's Signature:

Date:

____/____/____

Manager's Signature:

Date:

____/____/____

Managers Position:

Manager's Contact No

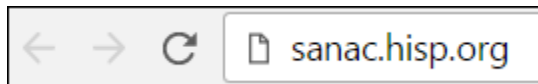
2.2 Access to SANAC Focus for Impact

SANAC Focus for Impact 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.

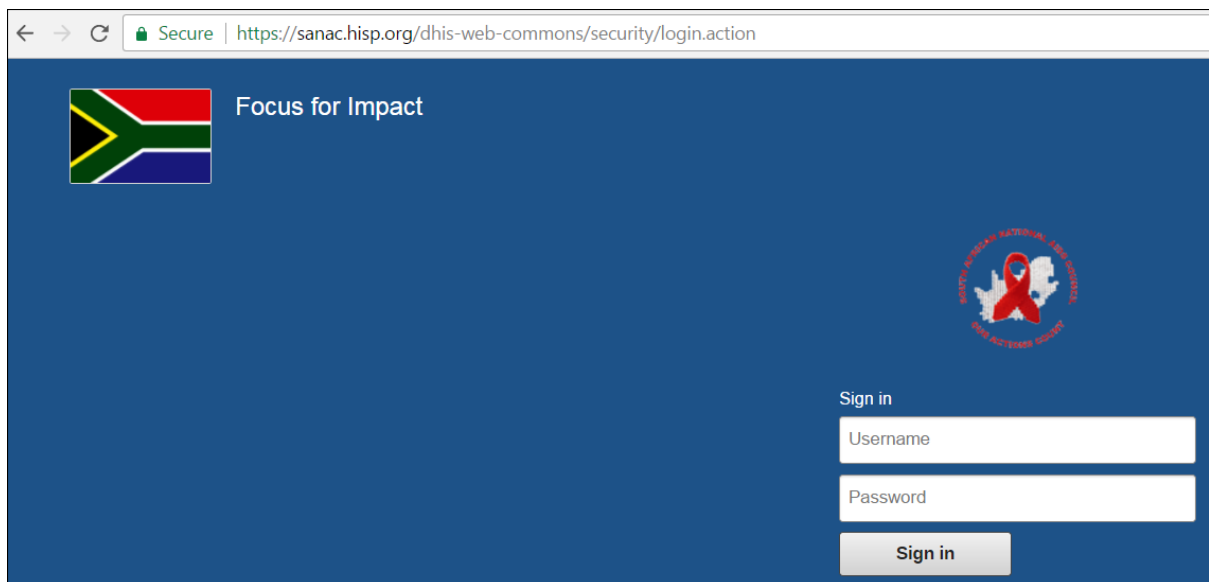
We recommend Google Chrome
Download the Google Chrome installer here:
[http:// www.google.com/chrome](http://www.google.com/chrome)



Open your browser and type in the web address for the Focus for Impact database.

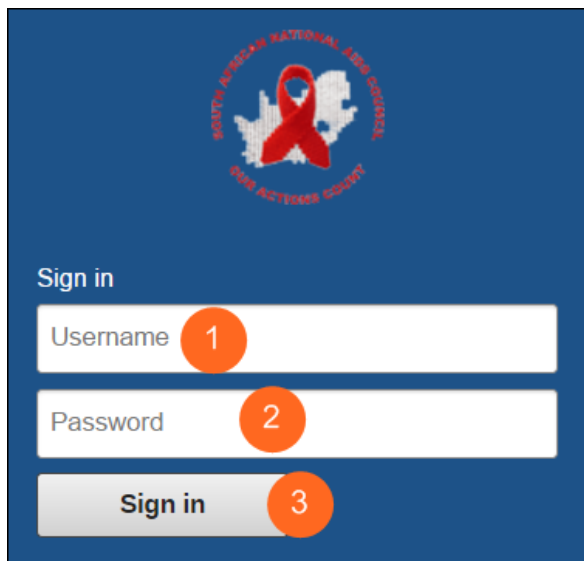
Note: You need to type *sanac.hisp.org*.

The login screen displays.



2.3 Log in to Focus for Impact

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



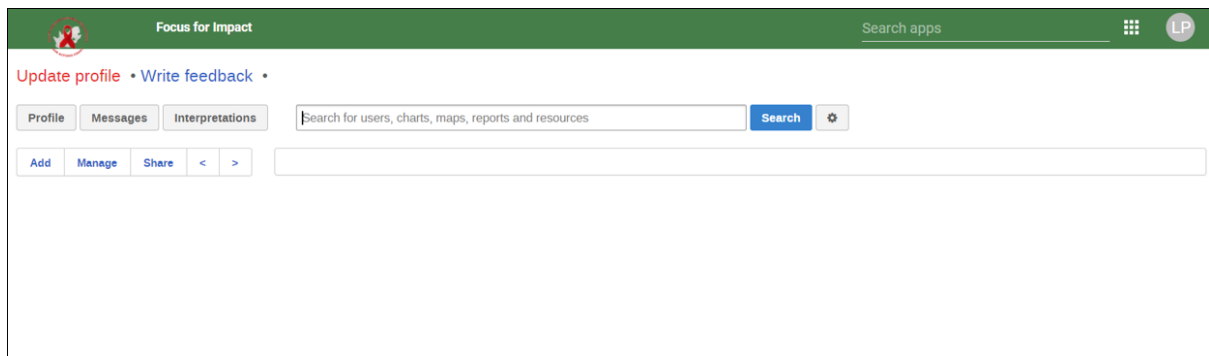
1. Enter your username.
2. Enter your password.

TIP: Your username and password are **CaSeSensitive**.

3. Click on **Sign in**.

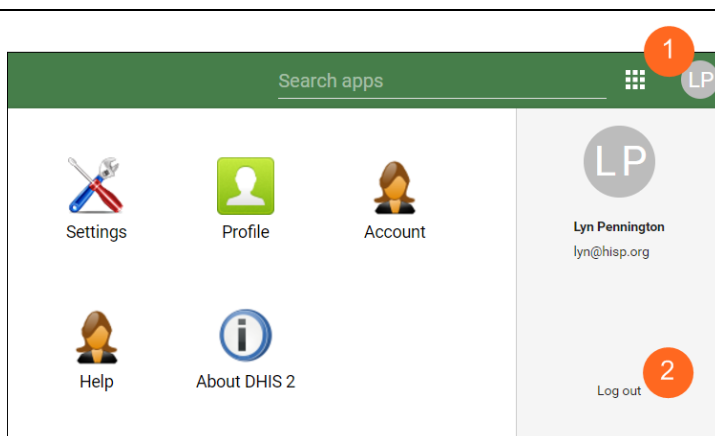
Note: If the login is not successful you will be notified that the username or password is incorrect and asked to re-enter these credentials.

Once you have successfully logged in you will see the Focus for Impact Dashboard.



2.4 Log out of Focus for Impact

When you have finished your Focus for Impact 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 **Log out**. You will be returned to the login screen.

2.5 Navigating Focus for Impact

DHIS2 instances have two menu systems; the top menu, which houses areas for apps (modules) and the user profile, and the left side menu inside most apps to navigate between features inside each app. In Focus for Impact, most of the apps that are being used are not utilising the left side menu.

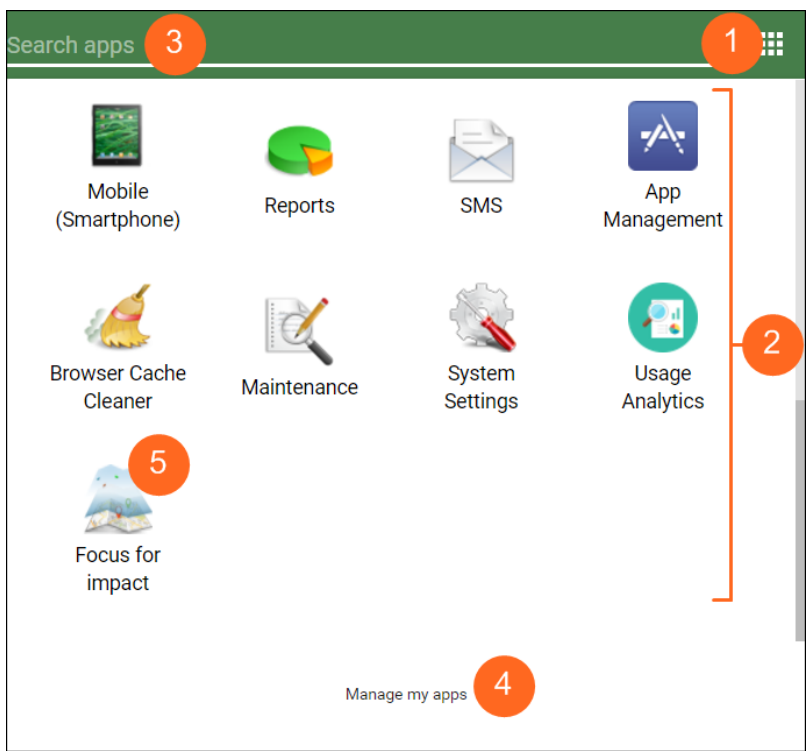
The SANAC Logo in the top left corner is a fast link to the home page, the Dashboard.

2.5.1 Top Menu

The top menu consists of 2 menu items:

1. **Apps:** Focus for Impact consists of various *apps* (major components) which each have specific features, such as Pivot Table, Data Visualizer, Dashboard, Focus for Impact.
2. **Profile:** This contains details relating to your user account, general user settings and information about this instance of DHIS2.

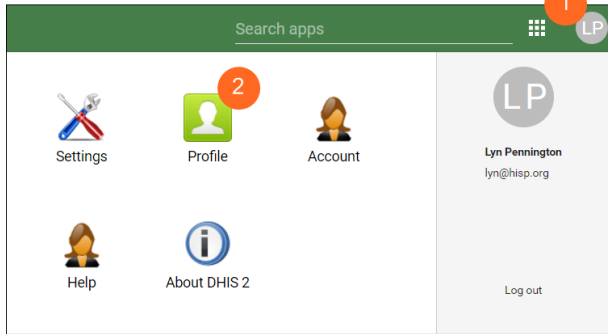
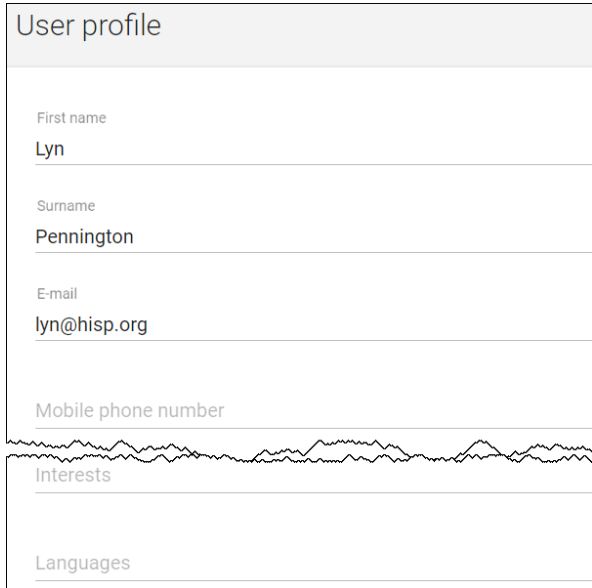
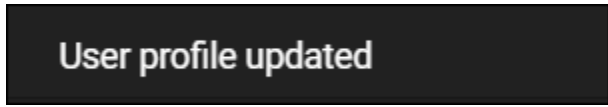
ACCESS APPS



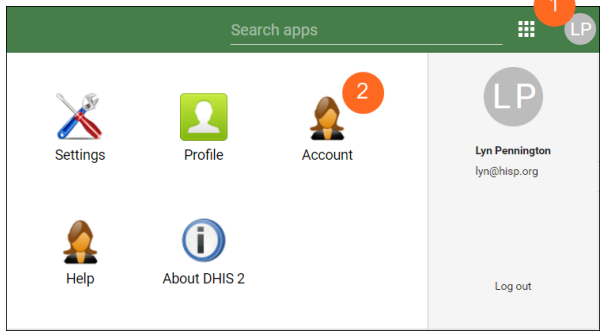
The screenshot shows the 'Apps' menu interface. At the top is a green header bar with a search input field labeled 'Search apps' (callout 3) and a grid icon (callout 1). Below the header, a grid of app icons is displayed: Mobile (Smartphone), Reports, SMS, App Management, Browser Cache Cleaner, Maintenance, System Settings, Usage Analytics, and Focus for impact (callout 5). At the bottom of the grid is a 'Manage my apps' link (callout 4). A vertical orange line with a bracket (callout 2) groups the app icons.

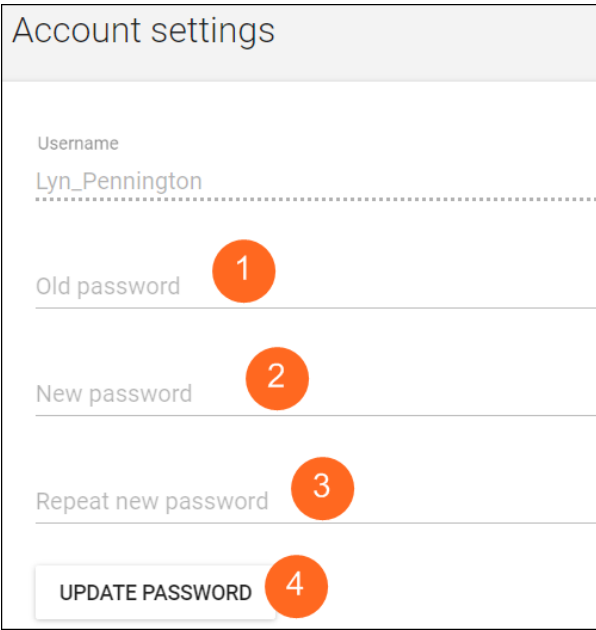
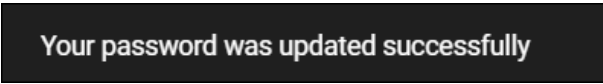
1. Click on the **Apps** button.
2. The Apps window displays showing only those apps that have been allocated to you as a specific user.
3. **TIP:** If you can't see the app that you want, you can click on **Search apps** and starting typing its name. It will pop up so that you can click on it.
4. **TIP:** You can click on **Manage my apps** to change the order of the apps displayed so that you can always see the ones you use most.
5. Click on an app to access it e.g. Focus for Impact.

UPDATE USER PROFILE

	<ol style="list-style-type: none"> 1. Click on the Profile button. 2. Click on Profile.
	<p>Add or edit your details.</p> <p>You can press Tab to go from one field to the next, or you can simply click into the desired field.</p>
	<p>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.</p>

CHANGE YOUR PASSWORD

	<ol style="list-style-type: none"> 1. Click on the Profile button. 2. Click on Account.
---	---

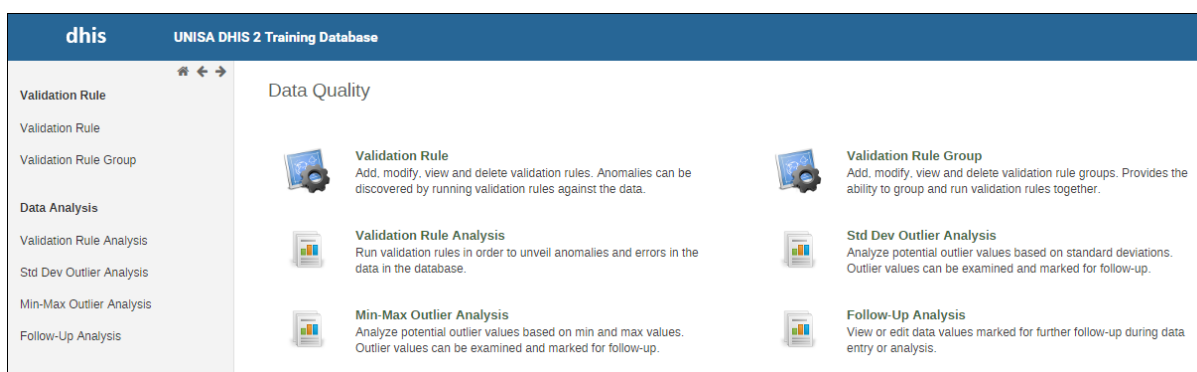
	<ol style="list-style-type: none"> 1. Enter your old password. 2. Type your new password. 3. Type your new password again. 4. Click on UPDATE PASSWORD.
	<p>A message pops up from the bottom of the screen confirming that your password was successfully updated.</p>

2.5.2 Menu inside apps/modules

When you open some of the apps you will see the app main page which lists the major features in the middle of the screen with a short description. 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 particular useful for navigation within the app.

The data entry and dashboard modules do not have a menu system as they only contain one feature, everything is in one page, so there is no need for a menu there.



2.6 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 DHIS2 instances it also allows us to store data that has been captured offline. However, changes may have been made to DHIS2 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 DHIS2 instance 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!

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

1. Clear the cache from within the DHIS2 database using the Browser Cache Cleaner app.
2. Clear your Google Chrome cache using the Chrome Clear Cache app.

2.6.1 Use the Browser Cache Cleaner App

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

<div data-bbox="199 208 778 1070"> <h3>DHIS 2 browser cache cleaner</h3> <h4>Local Storage</h4> <table border="1"> <tr><td>dhis2.dashboard.current.Lyn_Pennington</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>dhis2.menu.ui.headerBar.title</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>dhis2.menu.ui.headerBar.userStyle</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>formversions</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>ouRoots</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>ouUsername</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>ouVersion</td><td><input checked="" type="checkbox"/></td></tr> </table> <h4>IndexedDB</h4> <table border="1"> <tr><td>dhis2ou</td><td><input checked="" type="checkbox"/></td></tr> <tr><td>dhis2de</td><td><input checked="" type="checkbox"/></td></tr> </table> <div> 3 Clear 1 Select all </div> </div>	dhis2.dashboard.current.Lyn_Pennington	<input checked="" type="checkbox"/>	dhis2.menu.ui.headerBar.title	<input checked="" type="checkbox"/>	dhis2.menu.ui.headerBar.userStyle	<input checked="" type="checkbox"/>	formversions	<input checked="" type="checkbox"/>	ouRoots	<input checked="" type="checkbox"/>	ouUsername	<input checked="" type="checkbox"/>	ouVersion	<input checked="" type="checkbox"/>	dhis2ou	<input checked="" type="checkbox"/>	dhis2de	<input checked="" type="checkbox"/>	<p>Any number of items may display.</p> <ol style="list-style-type: none"> 1. Click on Select all. 2. All the items will be ticked. 3. Click on Clear.
dhis2.dashboard.current.Lyn_Pennington	<input checked="" type="checkbox"/>																		
dhis2.menu.ui.headerBar.title	<input checked="" type="checkbox"/>																		
dhis2.menu.ui.headerBar.userStyle	<input checked="" type="checkbox"/>																		
formversions	<input checked="" type="checkbox"/>																		
ouRoots	<input checked="" type="checkbox"/>																		
ouUsername	<input checked="" type="checkbox"/>																		
ouVersion	<input checked="" type="checkbox"/>																		
dhis2ou	<input checked="" type="checkbox"/>																		
dhis2de	<input checked="" type="checkbox"/>																		
<div data-bbox="199 1124 778 1361"> <h3>Clearing cache</h3> <p>Are you sure you want to proceed with the cleaning?</p> <div> Cancel Proceed </div> </div>	<p>Click on Proceed.</p>																		
<div data-bbox="199 1415 778 1585"> <h3>DHIS 2 browser cache cleaner</h3> <div>Browser cache is cleared.</div> </div>	<p>Keep selecting and clearing until no more items display and you receive this message that the browser cache is cleared.</p>																		

2.6.2 Use the Chrome Clear Cache App

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

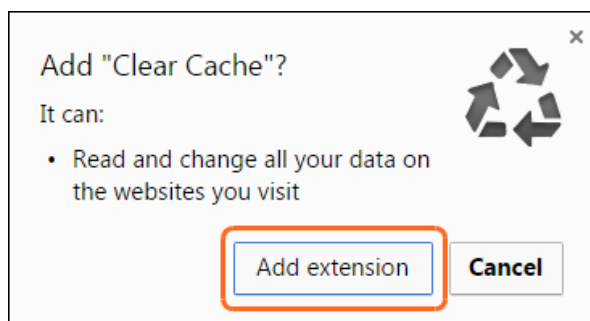
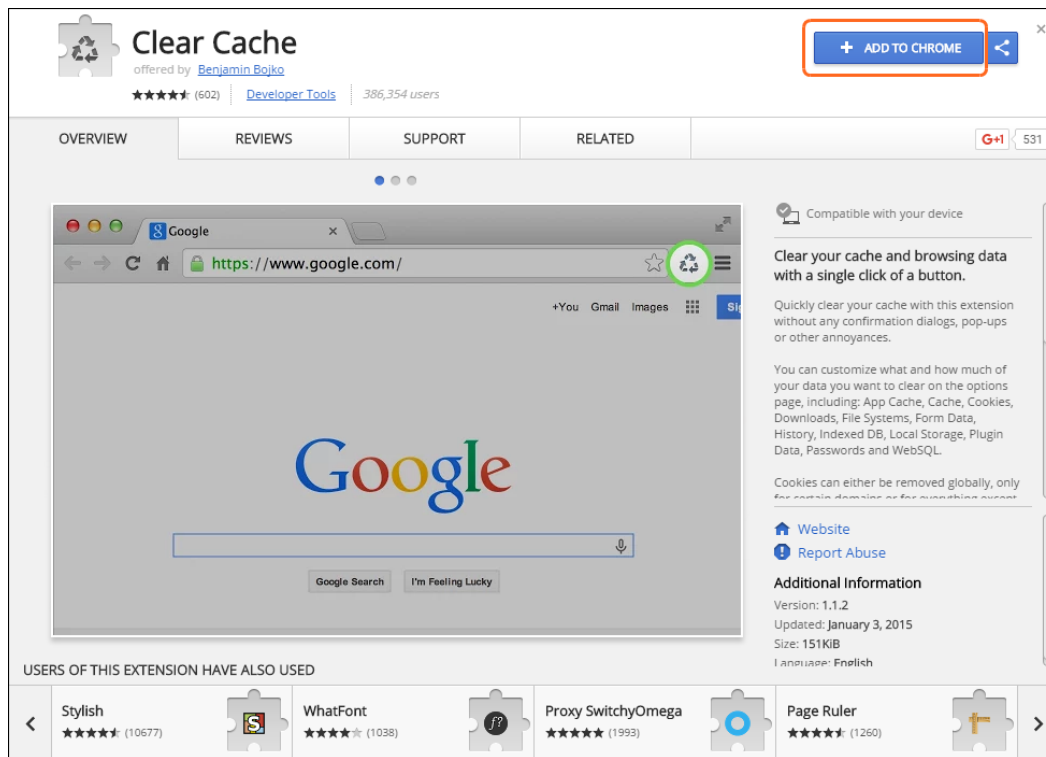


If you don't have the app installed, then follow the instructions below.

Copy this URL into your browser address bar:

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

This window will display. Click on **+ ADD TO CHROME**.



Click on **Add extension**.

<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p style="text-align: center;">1</p> <h3 style="text-align: center;">Data to Remove</h3> <hr/> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> App Cache i <input checked="" type="checkbox"/> Cache i <input type="checkbox"/> Cookies (options) i <input checked="" type="checkbox"/> Downloads i <input checked="" type="checkbox"/> File Systems i <input checked="" type="checkbox"/> Form Data i <input checked="" type="checkbox"/> History i <input checked="" type="checkbox"/> Indexed DB i <input checked="" type="checkbox"/> Local Storage i <input checked="" type="checkbox"/> Plugin Data i <input checked="" type="checkbox"/> Passwords i <input checked="" type="checkbox"/> WebSQL i </div> <div style="width: 48%;"> <p style="text-align: center;">2</p> <h3 style="text-align: center;">Time Period</h3> <hr/> <ul style="list-style-type: none"> <input type="radio"/> Last Hour <input type="radio"/> Last Day <input type="radio"/> Last Week <input type="radio"/> Last Month <input checked="" type="radio"/> Everything </div> </div>	<ol style="list-style-type: none"> 1. Under Data to Remove, select everything except Cookies. 2. Under Time Period, select Everything. <p>When you've done this, you can close the browser tab.</p>
---	--

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

<div style="border: 1px solid #ccc; padding: 5px;"> <p>Clear Cache</p> <hr/> <div style="border: 2px solid orange; padding: 2px; display: inline-block;">Options</div> <p>Remove from Chrome...</p> <p>Hide in Chrome menu</p> <hr/> <p>Manage extensions</p> </div>	<p>Right-click on the Clear Cache icon and click Options.</p> <p>Then select under Data to Remove and Time Period as shown above.</p> <p>Close the browser tab.</p>
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2.7 Metadata / Key Terms

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

This section describes the DHIS2 metadata.

2.7.1 Organisational Hierarchy

The organisational hierarchy defines the organisation structure of the DHIS2 instance, such as how the health facilities, administrative areas and other geographical areas are arranged with respect to each other. DHIS2 is structured so that the organisational hierarchy is a geographical hierarchy, and the GIS module depends on this.

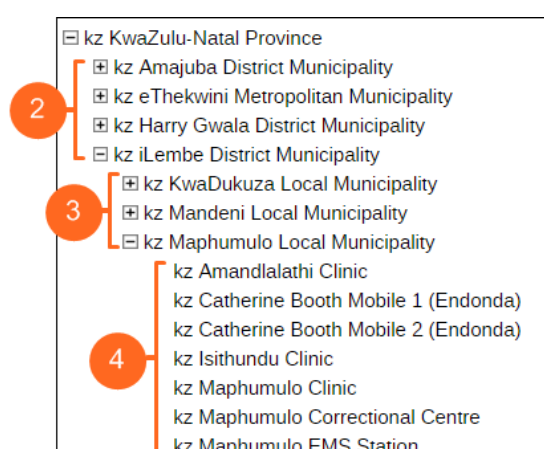
The design of this hierarchy will determine the geographical units of analysis available to the users as data is collected and aggregated in this structure. There can only be one organisational hierarchy.

Normally data is collected at the lowest level, at 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 a number of provinces as its children. (This Focus for Impact instance starts at the provincial level).
2. Each province (now the parent) might have a number of districts as its children.
3. Each district (now the parent) might have a number of sub-districts as its children.
4. Normally the health facilities (from which data is typically collected) will be located at the lowest level.



2.7.2 Organisation Unit (Orgunit)

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

2.7.3 Organisation Unit Level (OU Level)

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 DHIS2, health facilities are typically at the lowest orgunit level. Data is aggregated upwards from the lowest orgunit level to the highest.

2.7.4 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 through the use of the 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.

In order 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".

2.7.5 Data Elements

The data element is perhaps the most important building block of a DHIS2 database. It explains what is being collected or analysed. In some contexts this is referred to an indicator, but in DHIS2 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:

- Integer: Any whole number (positive and negative), including zero
- Positive integer: Any whole number greater than (but not including) zero
- Negative integer: Any whole number less than (but not including) zero
- Positive of zero integer: Any positive whole number, 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
- Coordinate: A point coordinate specified as longitude/latitude in decimal degrees
- Text: Textual value. The maximum number of allowed characters per value is 50,000
- Long text: Textual value. Renders as text area in forms
- Date: Dates, will render as calendar widget in data entry
- Yes/No: Boolean values, will render as drop-down lists in data entry
- Yes only: True values, will render as check-boxes 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:

- Sum: Sum of data values in the period and organisation unit dimension
- Average: Average the values in both the period as well as the orgunit dimensions.
- Count: Count of data values
- Min: Minimum of data values
- Max: Maximum of data values
- None: No aggregation is performed in any dimension

2.7.6 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 "Child Immunisation".

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

2.7.7 Data sets

All data entry in DHIS2 is organised through the use of 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 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.

2.7.8 Periods

A period is a specific time interval which consists of a start date and end date. For instance "October 2016" would refer to the time interval of October 1st 2016-October 31st 2016.

FIXED PERIODS

In DHIS2 instances, periods are organised according to a set of fixed period types described below.

- Daily
- Weekly: Begins on Monday and ends on Sunday
- Monthly: Refers to standard calendar months.
- BiMonthly: Two-month periods beginning in January.
- Quarterly: Standard ISO quarters, beginning in January.
- SixMonthly: Six-month periods beginning in January
- Yearly: This refers to a calendar year.
- Financial April: Financial year period beginning on April 1st and ending on March 31st of the calendar next year
- Financial July: Financial year period beginning on July 1st and ending on June 31st of the calendar next year
- Financial Oct: Financial year period beginning on October 1st and ending on September 30th of the calendar next year
- Six-monthly April: Six-month periods beginning on April 1st with a duration of six calendar months.

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, DHIS2 also supports relative periods for use in the analysis modules.

Relative periods allow you to design reports that can be reused every month without having to make changes to the report template to accommodate for the changes in period. Relative periods are grouped into:

- 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

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 on a monthly basis. The defined period type for a data entry form (data set) defines the lowest level of period detail possible in a report.

2.7.9 Indicators

Indicators represent perhaps the most powerful data analysis feature of DHIS2. 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 DHIS2 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 DHIS2 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, a numerator ("BCG dose") and a denominator ("Population under 1 year"). The indicator "DPT1 to DPT3 drop out rate" is a formula of $100 \% \times ("DPT1 \text{ doses given}" - "DPT3 \text{ doses given}") / ("DPT1 \text{ doses given}")$.

INDICATOR TYPE

This field will determine a factor that will automatically be applied during the calculation of the indicator. For instance, a "Percent" indicator will automatically be multiplied by a factor of 100 when exported to the data mart, so that it will display as a percentage.

2.7.10 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.

Chapter 3. Pivot Tables

After reading this chapter you will be able to:

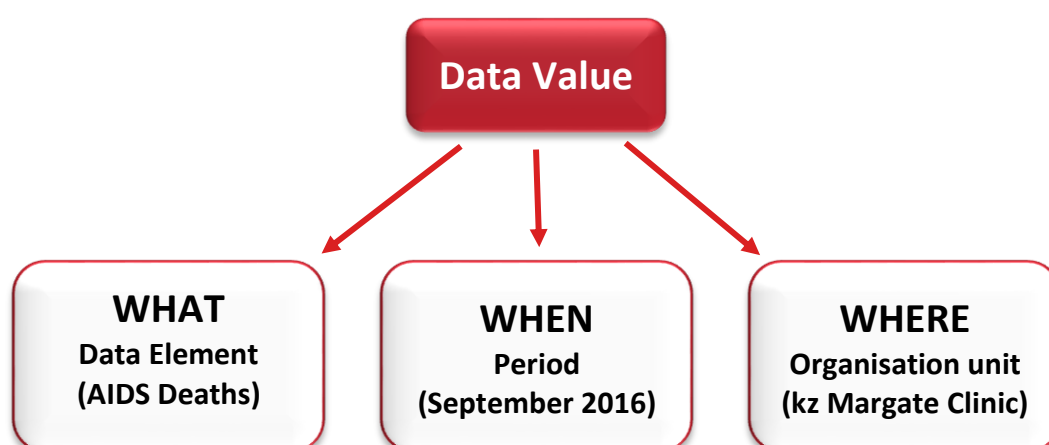
- Select data dimension items to create a table
- Arrange the table layout
- Use options to fine-tune the table
- Create a favourite
- Convert a table to a chart or map
- Download a table

3.1 About the Pivot Table app

With the Pivot Table app, you can create pivot tables based on all available data dimensions in SANAC Focus for Impact. A pivot table is a dynamic tool for data analysis which lets you quickly summarise and arrange data according to its dimensions. Examples of data dimensions are:

1. **Data**: Represents the phenomenon for which data has been captured. Includes data elements, indicators, datasets (reporting rates), events (also known as the **What** dimension)
2. **Periods**: Representing the time period for which the data represents(also known as the **When** dimension)
3. **Organisation units**: Representing the geographical location of the data (also known as the **Where** dimension)

As an example, if you want to know how many AIDS deaths there were in Margate Clinic in September 2016, the three dimensions which describe that value are the data element "AIDS Deaths", the organisation unit "Margate Clinic", and the period "September 2016".



A pivot table can arrange data dimensions on columns, rows, and as filters. When you place a data dimension on columns, the pivot table will display one column per dimension item. If you place multiple data dimensions on columns, the pivot table will display one column for all combinations of

the items in the selected dimensions. When you place a data dimension on rows, the pivot table will display one row per dimension item in a similar fashion. 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 of these constraints are validated and the pivot table module will provide feedback if any constraint is violated.



- At least one dimension must be selected on columns or rows
- At least one period must be selected.

3.2 Access the Pivot Table app

1. Click on **Apps** in the top menu.
2. Click on **Pivot Table**.

If you can't find it, you can:

- Type *Pivot* in the "Search apps" field Or
- Use the scroll bar on the right of the window Or
- Click on **Manage my apps** and locate it there

3.3 Select dimensions

The left menu will list sections for all available data dimensions. From each section you can select any number of dimension items. Before you can use a data dimension in your pivot table you must at least select one dimension item. You can select an item by marking it and clicking on the arrow in the section header or simply double-clicking on the item.

3.3.1 Select data element and indicator dimension items

You must choose at least one data dimension type to create a pivot table. The available types are described in the table below.

Data dimension type	Definition	Examples
Indicators	An indicator is a calculated formula based on data elements.	Coverage of immunization across a specific district.
Data elements	Represents the phenomenon for which	Number of malaria cases;

Data dimension type	Definition	Examples
	data has been captured.	number of BCG doses given.
Data sets	A collection of data elements grouped for data collection.	Reporting rates for immunization and morbidity forms.
Event data items	A data element that is part of a program representing events that have been captured.	Average weight and height for children in a nutrition program.
Program indicators	A calculated formula based on data elements in a program representing events.	Average BMI score for children in a nutrition program.

In our example, we will use data elements.

- Under “Data”, click on the **Indicator** dropdown arrow and click on **Data Elements**.
- Click on the **Select data element group** dropdown arrow and click on a data element group in the displayed list.
- A list of **Available** data elements display. Highlight the data elements you want and
- use the **right arrow** options to move them
- to the **Selected** window.

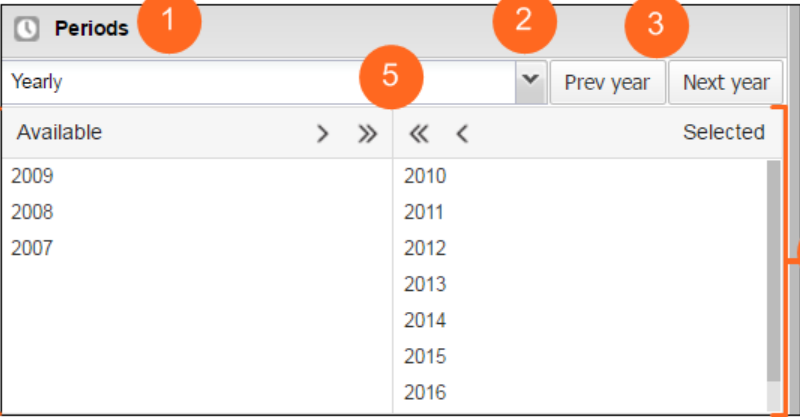
TIP: You can double-click items in the **Available** window to move them to the **Selected** window.

3.3.2 Select period dimension items

For the period dimension you can choose between using **fixed** periods or **relative** periods. (see Metadata section for more information on fixed and relative periods).

FIXED PERIOD:

An example of a fixed period is “December 2016” or “January – March 2017” or “2017”.



The screenshot shows a 'Periods' dialog box. At the top, there is a title bar with a clock icon and the word 'Periods' (callout 1). Below this is a dropdown menu for 'Yearly' (callout 5) with a downward arrow. To the right of the dropdown are two buttons: 'Prev year' (callout 2) and 'Next year' (callout 3). Below these are two columns: 'Available' (callout 4) and 'Selected' (callout 6). The 'Available' column contains the years 2009, 2008, and 2007. The 'Selected' column contains the years 2010, 2011, 2012, 2013, 2014, 2015, and 2016. Between the columns are four arrow buttons: a single right arrow (>), a double right arrow (>>), a double left arrow (<<), and a single left arrow (<). A vertical scrollbar is on the right side of the 'Selected' column.

1. Click on **Periods**
2. Click on the **Select period type** dropdown arrow to select a period type.
3. Use the **Prev year** and **Next year** buttons to choose the year you want
4. A list of **Available** periods displays according to the period type selected. Highlight the periods you want and
5. use the **right arrow** options to move them
6. to the **Selected** window


TIP: You can double-click items in the **Available** window to move them to the **Selected** window.

RELATIVE PERIOD:

Relative periods are periods relative to the current date. Examples of relative periods are “Last month”, “Last 3 months”, “Last 5 years”. Note that “Last 12 months” is ticked by default.

The main advantage of using relative periods is that when you save a pivot table favourite it will stay updated with the latest data as time goes by without the need for constantly updating it!

<p>Weeks</p> <p><input type="checkbox"/> This week</p> <p><input type="checkbox"/> Last week</p> <p><input type="checkbox"/> Last 4 weeks</p> <p><input type="checkbox"/> Last 12 weeks</p> <p><input type="checkbox"/> Last 52 weeks</p> <p>Quarters</p> <p><input checked="" type="checkbox"/> This quarter</p> <p><input type="checkbox"/> Last quarter</p> <p><input type="checkbox"/> Last 4 quarters</p> <p>Years</p> <p><input type="checkbox"/> This year</p> <p><input type="checkbox"/> Last year</p> <p><input type="checkbox"/> Last 5 years</p>	<p>Months</p> <p><input type="checkbox"/> This month</p> <p><input type="checkbox"/> Last month</p> <p><input type="checkbox"/> Last 3 months</p> <p><input type="checkbox"/> Last 6 months</p> <p><input checked="" type="checkbox"/> Last 12 months</p> <p>Six-months</p> <p><input type="checkbox"/> This six-month</p> <p><input type="checkbox"/> Last six-month</p> <p><input type="checkbox"/> Last 2 six-months</p>	<p>Bi-months</p> <p><input type="checkbox"/> This bi-month</p> <p><input type="checkbox"/> Last bi-month</p> <p><input type="checkbox"/> Last 6 bi-months</p> <p>Financial years</p> <p><input type="checkbox"/> This financial year</p> <p><input type="checkbox"/> Last financial year</p> <p><input type="checkbox"/> Last 5 financial years</p>	<p>Tick the checkboxes next to each period that you would like to view – you can tick multiple boxes.</p>
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 You can use a relative and fixed periods together, but remember to untick “Last 12 months” if you are only wanting fixed periods.

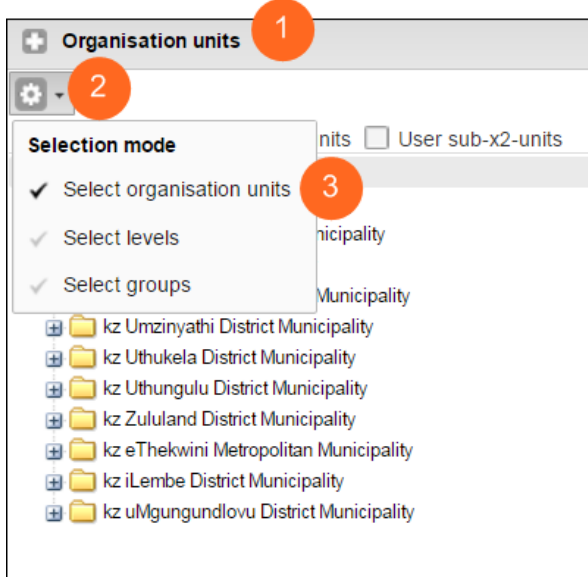
3.3.3 Select the organisation unit dimension

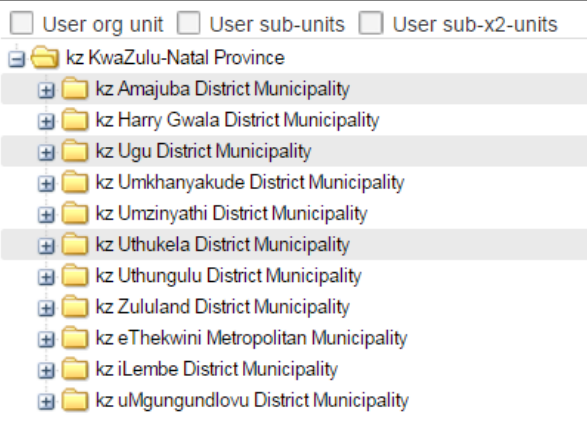
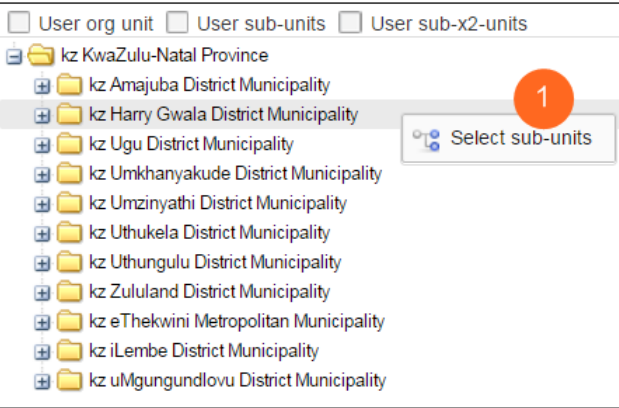
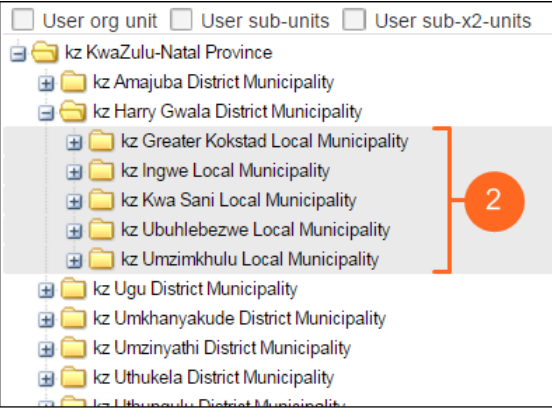
For the organisation unit dimension you can select any number of organisation units from the hierarchy.

There are 3 modes of selecting organisation units:

SELECT ORGANISATION UNITS (THIS IS THE DEFAULT)

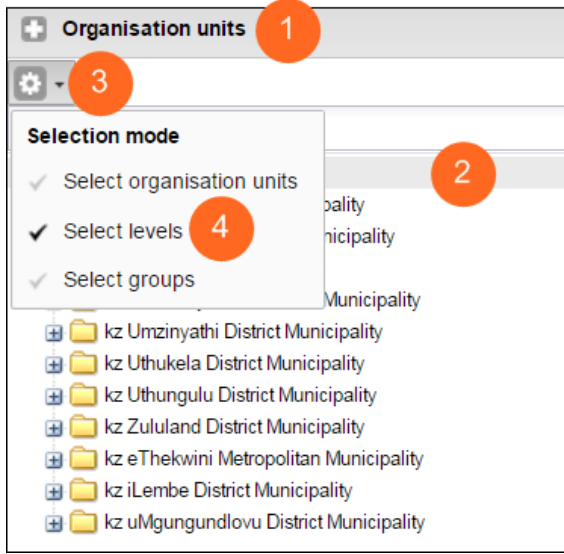
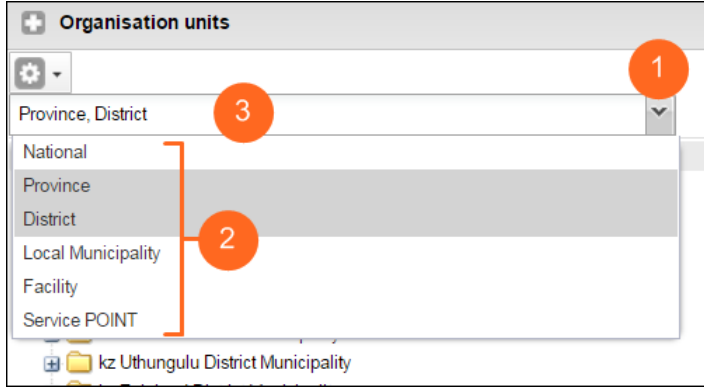
This mode lets you select the organisation units you want to appear in the chart from the organisation hierarchy (tree).

	<ol style="list-style-type: none"> 1. Click on Organisation units. 2. Click on the gearbox icon. 3. Click on Select organisation units. <p>Note: If you are creating a pivot table from scratch, this mode will already be ticked as it is the default, and the root orgunit will also be selected by default.</p>
---	---

	<p>To manually select multiple organisation units:</p> <p>Press and hold the Ctrl button while clicking on organisation units.</p>
<p>To select all organisation units below a specific parent organisation unit:</p>	
	
<ol style="list-style-type: none"> 1. Right click on the selected parent organisation unit and click Select sub-units. 2. All the children of that parent will now be selected. 	
<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <input type="checkbox"/> User org unit <input type="checkbox"/> User sub-units <input type="checkbox"/> User sub-x2-units </div> <p>You can tick User org unit, User sub-units or User sub-x2-units in order to dynamically insert the organisation unit or units associated with your user account. This is useful when you save a pivot table favourite and want to share it with other users, as the organisation units linked with the other user's account will be used when viewing the favourite.</p>	

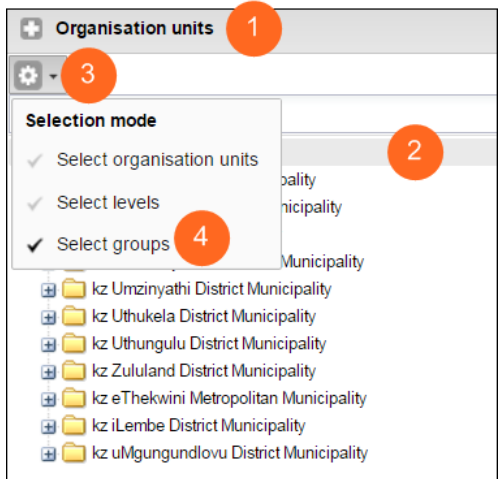
SELECT LEVELS

The second mode is called **Select levels**. Here you can select all organisation units at one or more levels. However, at the same time you also have the option to select parent organisation units in the tree, which makes it easy to select e.g. all facilities inside one or more districts.

	<ol style="list-style-type: none"> 1. Click on Organisation units. 2. Select the organisation unit(s) in the organisation hierarchy for which you want to select levels. 3. Click on the gearbox icon. 4. Click on Select levels.
	<ol style="list-style-type: none"> 1. Click on the Select organisation unit levels dropdown arrow. 2. Click on the levels that you require in your pivot table for the selected orgunit. Note: You can select multiple levels without using the Ctrl key. To deselect a level, just click on it again. 3. The selected levels will be shown in the selection box.

SELECT GROUPS

The third mode called **Select groups**. Here you can select all organisation units inside one or more orgunit groups. However, at the same time you also have the option to select parent organisation units in the tree, which makes it easy to select e.g. all clinics inside one or more districts.

	<ol style="list-style-type: none"> 1. Click on Organisation units. 2. Select the organisation unit(s) in the organisation hierarchy for which you want to select groups. 3. Click on the gearbox icon. 4. Click on Select groups.
---	--

1. Click on the **Select organisation unit groups** dropdown arrow.
2. Click on the groups that you require in your pivot table for the selected orgunit. **Note:** You can select multiple groups without using the Ctrl key. To deselect a group, just click on it again.
3. The selected groups will be shown in the selection box.

3.4 Update

kz KwaZulu-Natal Province			
Period / Data	AIDS deaths ↕	AIDS deaths in children ↕	Total ↕
2010	47 314	9 331	56 645
2011	40 550	7 493	48 043
2012	36 621	6 210	42 831
2013	33 165	5 303	38 468
2014	30 240	4 687	34 927
2015	28 480	4 203	32 683
2016	26 445	3 714	30 159
Total	242 815	40 941	283 756

Once you have selected your dimensions, you need to click on **Update** to see your pivot table.

Note that in our example, the data is shown in the columns, and the periods are shown in the rows.



Any time you make changes to your table, don't forget to click on **Update**

3.5 Arrange the table layout

After selecting data dimensions it is time to arrange your pivot table.

<<<
Update ▾
Favorites ▾
Layout ▾
Options ▾
Download ▾
Embed ▾

TABLE LAYOUT		
Excluded dimensions Assigned categories	Report filter Organisation units	Column dimensions Periods
Row dimensions Data		

1
2
3

Hide
Update

Click on **Layout** to open the Table Layout window.

1. Click and drag your data dimensions to the **Report filter**, **Column dimensions** and **Row dimensions** areas.
2. Click **Update** to render your pivot table with its changes.
3. Click **Hide** to close the Table Layout window without any changes taking effect.

Indicators, data elements and data set reporting rates are all part of the common “Data” dimension and can be displayed together in the pivot table

So in the example shown above, our pivot table will now look like this, with periods in the columns, and data elements in the rows:

kz KwaZulu-Natal Province								
Data / Period	2010 ↕	2011 ↕	2012 ↕	2013 ↕	2014 ↕	2015 ↕	2016 ↕	2017 ↕
AIDS deaths	47 314	40 550	36 621	33 165	30 240	28 480	26 445	24 469
AIDS deaths in children	9 331	7 493	6 210	5 303	4 687	4 203	3 714	3 237

3.6 Use table options

Several table options are available when working with a pivot table.

<<<
Update ▾
Favorites ▾
Layout ▾
Options ▾
Download ▾
Embed ▾

Click on **Options** in the top menu.

1. Select your table options (see the table below for details).
2. Click on **Update** to render your pivot table.
3. Click on **Hide** to close the Table Options window without any changes taking effect.


Table option	Description
Data	
Show column/row totals	Displays total values in the table for each row and column, as well as a grand total for all values in the table.
Show column/row sub-totals	Display subtotals in the table for each dimension. Note that subtotals will be hidden for columns or rows if there is only one selected dimension, as the values in that case are equal to the subtotals.
Show dimension labels	Shows the dimension names as part of the pivot table.
Hide empty rows	Hides empty rows from the table, which is useful when looking at large tables where a big part of the dimension items do not have data, in order to keep the table more readable.
Skip rounding	Skips the rounding of data values, offering the full precision of data values. Can be useful for finance data where the full currency amount is required.
Aggregation type	The default aggregation operator can be overwritten here by

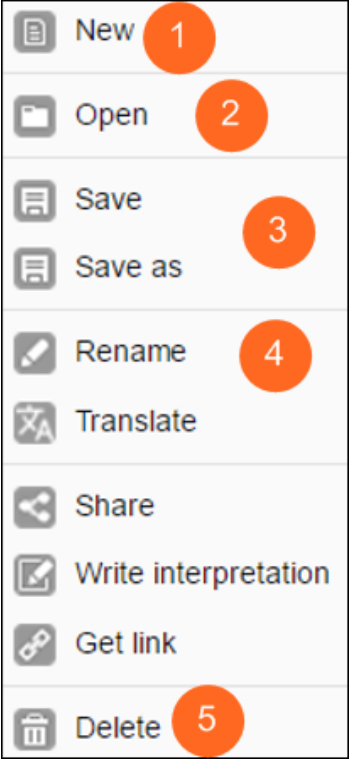
Table option	Description
	selecting a different aggregation operator. Some of the aggregation types are Count, Min and Max.
Organisation units	
Show hierarchy	Shows the name of all ancestors for organisation units, e.g. kz Amajuba District Municipality / kz Newcastle Local Municipality. The organisation units are then sorted alphabetically which will order the organisation units perfectly according to the hierarchy.
Events	
Include only completed events	Includes only completed events in the aggregation process. This is useful, for example, to exclude partial events in indicator calculations.
Style	
Display density	Controls the size of the cells in the table. Can be set to "comfortable", "normal" and "compact". The "compact" option is handy in order to fit large tables into the browser screen.
Font size	Controls the size of the table text font. Can be set to "large", "normal" and "small".
Digit group separator	Controls which character to separate groups of digits or "thousands". Can be set to "comma", "space" and "none".
Legend set	Shows a colour indicator next to the values. Currently the GIS legend sets are being used.
General	
Table title	Enter a title for your pivot table.

3.7 Manage favourites

Saving your charts as favourites makes it easy to find them later. You can also choose to share them with other users as an interpretation or display them on the dashboard.


You can view the details and interpretations of your favourites when you open the Pivot Table or Data Visualization app.

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

	<p>Create a new favourite:</p> <ol style="list-style-type: none"> 1. Click on New. A fresh Pivot Table window opens for you to create your favourite. <p>Open a favourite:</p> <ol style="list-style-type: none"> 2. Click on Open. <ol style="list-style-type: none"> a) Enter the name of a favourite in the search field or use the Prev and Next buttons to look through the favourites. b) Click on the selected favourite to open it. <p>Save a favourite:</p> <ol style="list-style-type: none"> 3. Click on Save to save changes to an existing favourite. Click on Save As to save your favourite for the first time, or to save a favourite that you or somebody created as a favourite with a different name. <ol style="list-style-type: none"> a) Enter a name, and if you wish to a description. b) Click on Save. <p>Rename a favourite:</p> <ol style="list-style-type: none"> 4. Click on Rename. <ol style="list-style-type: none"> a) Enter the new name for your favourite. b) Click on Update. <p>Delete a favourite:</p> <ol style="list-style-type: none"> 5. Click on Delete. You will be asked to confirm the deletion. Click on OK.
--	---

3.8 Download data from a pivot table

Data can be downloaded to your computer in various formats.

	<p>Click on Download in the top menu.</p>
--	--

<div data-bbox="193 208 469 719"> <p>Table layout</p> <ul style="list-style-type: none"> Microsoft Excel (.xls) CSV (.csv) HTML (.html) <p>Plain data source</p> <ul style="list-style-type: none"> JSON XML Microsoft Excel CSV Advanced </div> <div data-bbox="491 293 555 360">1</div> <div data-bbox="491 562 555 629">2</div>	<ol style="list-style-type: none"> Table layout options are for users. Select Microsoft Excel (.xls), CSV (.csv) or HTML (.html) format. The data table will have one column per dimension and contain names of the dimension items. You can easily create a pivot table in Microsoft Excel from the downloaded Excel file. Plain data source options are really for developers.
--	--

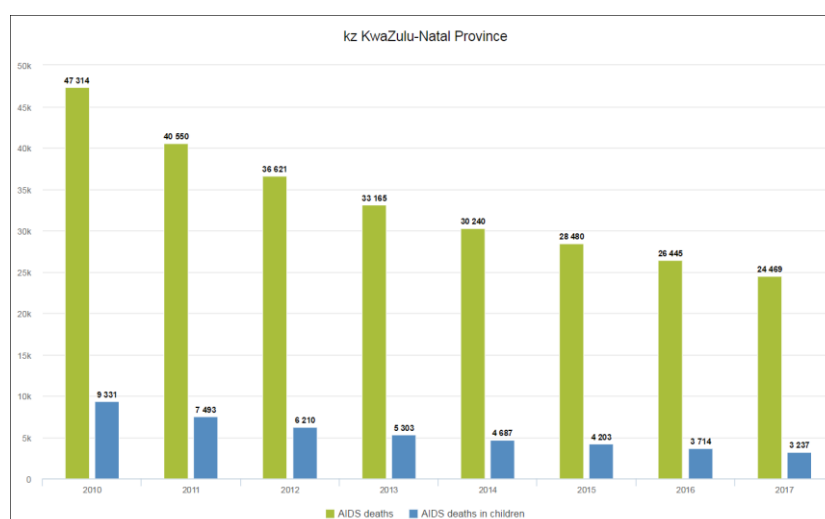
3.9 Visualise a pivot table as a chart or map

When you have made a pivot table, you can view your pivot table as a chart or a map.

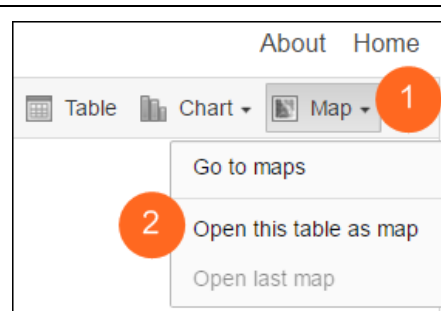
3.9.1 Visualise as a chart

<div data-bbox="193 1064 616 1368"> <p>About Home</p> <p>Table Chart Map <<<</p> <p>Go to charts</p> <p>Open this table as chart</p> <p>Open last chart</p> </div> <div data-bbox="341 1086 405 1153">1</div> <div data-bbox="261 1243 325 1310">2</div>	<ol style="list-style-type: none"> Click on Chart in the top right menu. Click on Open this table as chart.
---	---

In the example we've been using, the pivot table would open as this chart:

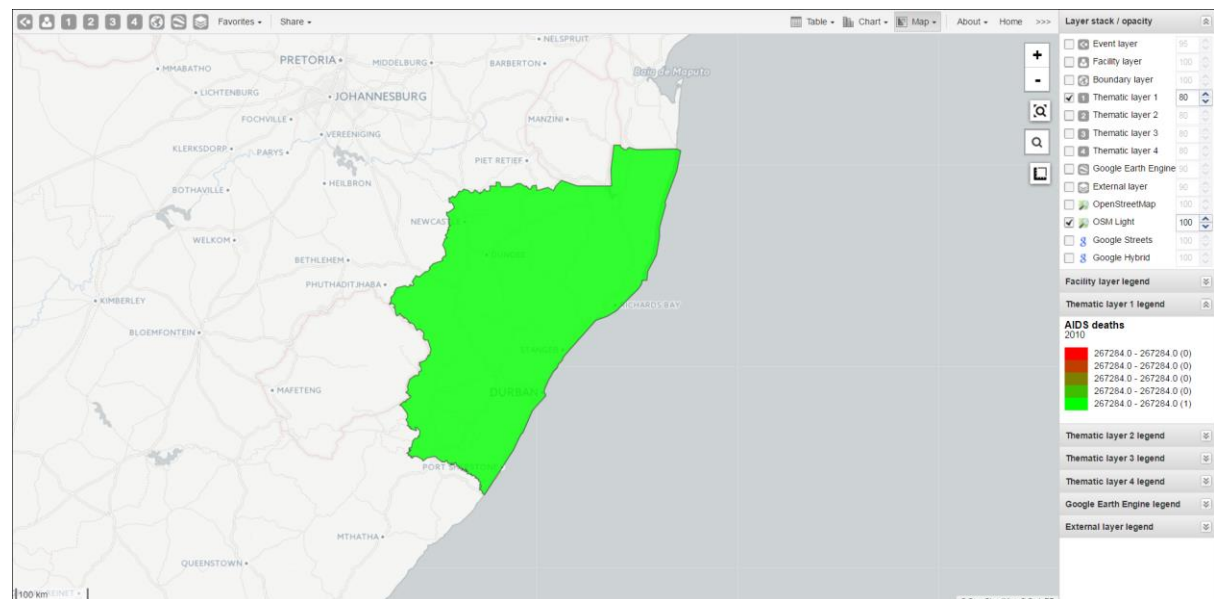


3.9.2 Visualise as a map



1. Click on **Map** in the top right menu.
2. Click on **Open this table as map**.

In the example we've been using, the pivot table would open as this map:



Chapter 4. Data Visualizer

After reading this chapter you will be able to:

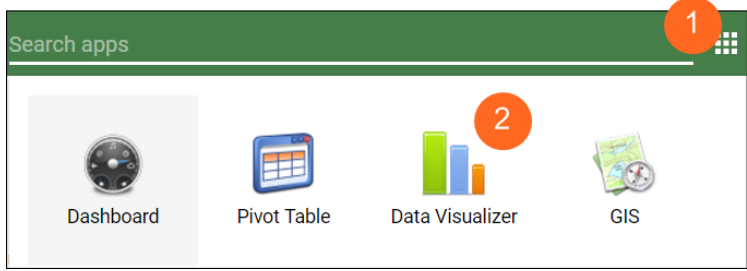
- Select data dimension items to create a chart
- Choose your chart type and arrange your chart layout
- Use options to fine-tune the chart
- Create a favourite
- Download a chart
- Convert a chart to a table or map

4.1 About the Data Visualizer app

The Data Visualizer app enables users to easily create dynamic data analysis and visualizations through charts and data tables. You can freely select content (like indicators, periods and organisation units) for your analysis.

The Data Visualizer is designed firstly to be easy-to-use. Secondly it is designed to be fast and work well over poor Internet connections - charts are generated in the web browser and very little data is transferred over the Internet.

4.2 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" field Or
- Use the scroll bar on the right of the window Or
- Click on **Manage my apps** and locate it there

4.3 Create a chart

4.3.1 Select chart type

The Data Visualizer app has nine different chart types, each with different characteristics.

You can select the type of your chart by clicking on one of the icons in top left bar titled **Type**.

No	Chart type	Description
1	Column chart	Displays information as vertical rectangular columns with lengths proportional to the values they represent. Useful, for example, for comparing performance of different districts.
2	Stacked column chart	Displays information as vertical rectangular columns, where bars representing multiple categories are stacked on top of each other. Useful, for example, for displaying trends or sums of related data elements.
3	Bar chart	Same as column chart, only with horizontal bars.
4	Stacked bar chart	Same as stacked column chart, only with horizontal bars.
5	Line chart	Displays information as a series of points connected by straight lines. Also referred to as time series. Useful, for example, for visualising trends in indicator data over multiple time periods.
6	Area chart	Is based on line chart, with the space between the axis and the line filled with colours and the lines stacked on top of each other. Useful for comparing the trends of related indicators.
7	Pie chart	Circular chart divided into sectors (or slices). Useful, for example, for visualising the proportion of data for individual data elements compared to the total sum of all data elements in the chart.
8	Radar chart	Displaying multivariate data on axes starting from the same point. Also known as spider chart.
9	Speedometer chart	Semi-circle chart which displays values out of 100%. Also referred to as a gauge chart.

4.3.2 Select indicators and data elements

The Data Visualizer app can display any number of indicators and data elements in a chart and data table. You can select both indicators and data elements to appear together in the same chart, with their order of appearance the same as the order in which they are selected.

The Data Visualizer app can display reporting rates in a chart, by itself or together with indicators and data elements. Reporting rates are defined by data sets.

You select data dimension items in exactly the same way as for a pivot table. Please see the section under Pivot Tables for more details.

4.3.3 Select fixed and relative periods

You select periods in exactly the same way as for a pivot table. Please see the section under Pivot Tables for more details.

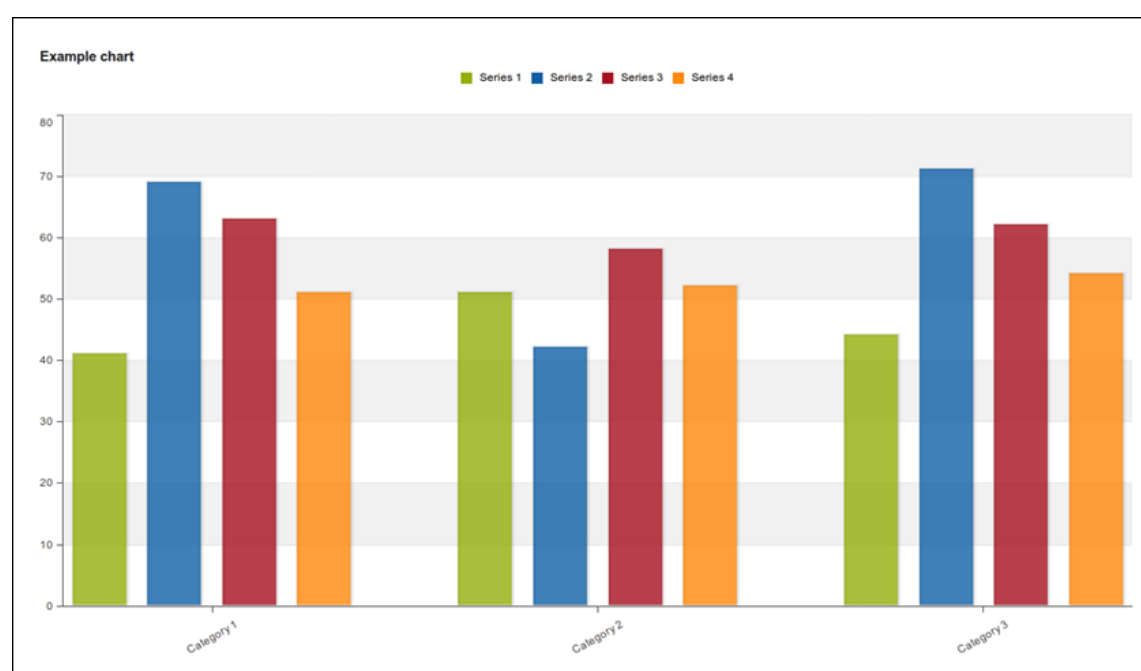
You are also free to combine fixed periods and relative periods in the same chart. Overlapping periods will be filtered so that they only appear once.

4.3.4 Select organisation units

You select organisation units in exactly the same way as for a pivot table. Please see the section under Pivot Tables for more details.

4.3.5 Arrange chart layout

In order to arrange your chart layout, you must define which dimension items you want to appear as **series**, **category** and **filter**. Understanding these concepts is most easily done by looking at the screenshot below:



- **Series:** A series is a set of continuous, related elements (e.g. periods or data elements) which you want to visualize in order to emphasise trends or relations in its data.
- **Categories:** A category is a set of elements (e.g. indicators or organisation units) for which you want to compare its data.
- **Filter:** Since most charts are two-dimensional, a filter must be used on the third dimension in order to use only a single element for the chart to become meaningful.

<<< Update
Favorites
Layout
Options
Download
Embed

Click **Layout** in the top menu to open the Chart Layout window.

CHART LAYOUT

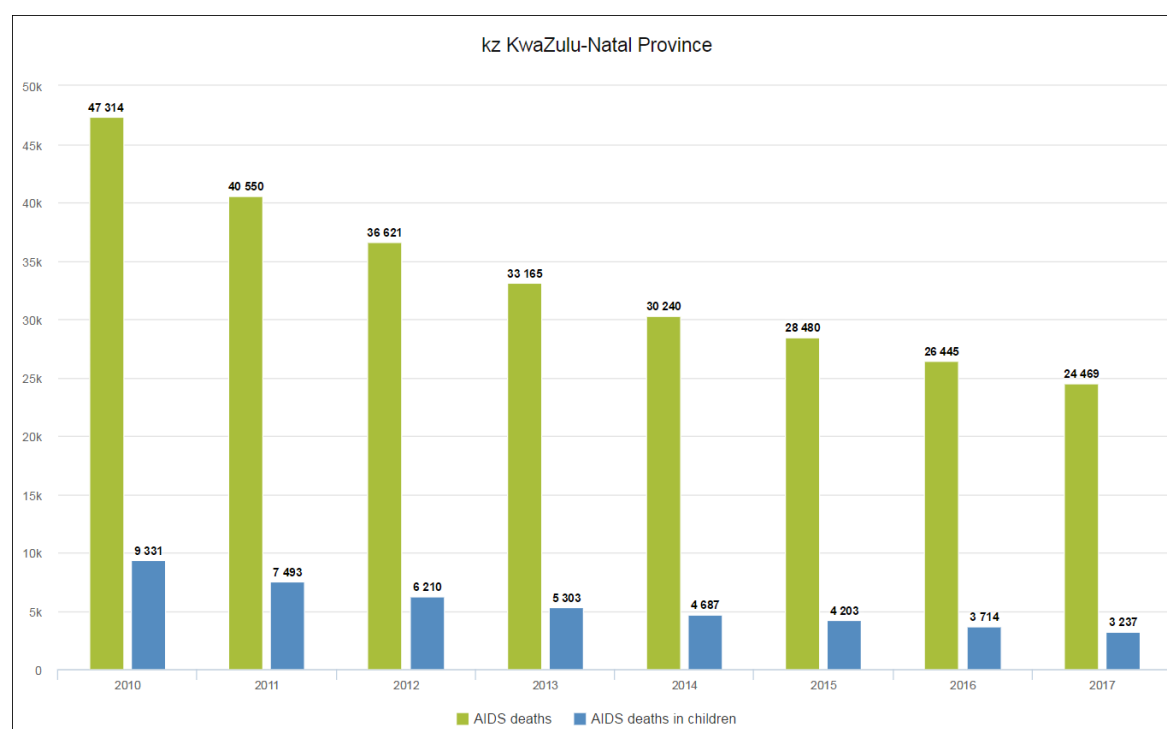
Excluded dimensions	Report filter	Series dimensions
Assigned categories	Organisation units	Data
<div style="border: 1px solid #ccc; padding: 5px; background-color: #fff;"> Category dimensions </div>		
Periods		

1
2
3

1. Click and drag your data dimensions to the **Report filter**, **Series dimensions** and **Category dimensions** areas. In this
2. Click **Update** to render your chart with its changes.
3. Click **Hide** to close the Chart Layout window without any changes taking effect.

Indicators, data elements and data set reporting rates are all part of the common “Data” dimension and can be displayed together in the chart

So using the same data dimensions from the Pivot Table section, our chart will now look like this, with organisation units in the filter, periods in the category, and data elements in the series:



Note: You can hide and show individual data series in the chart by clicking directly on the series label in the chart legend.

4.4 Select chart options

Several options are available when working with a chart.

<<< Update Favorites Layout Options Download Embed

Click on **Options** in the top menu.

CHART OPTIONS

Data
☒ Show values
☐ Hide empty categories
Trend line: None
Target value / title:
Base value / title:
Sort order: None
Aggregation type: By data element

Events
☐ Include only completed events

Axes
Range axis min/max:
Range axis tick steps:
Range axis decimals:
Range axis title:
Domain axis title:

General
☐ Hide chart legend
☐ Hide chart title
Chart title:

Hide Update

1. Select your chart options (see the table below for details).
2. Click on **Update** to render your chart.
3. Click on **Hide** to hide the layout screen without any changes taking effect.

Chart option	Description
Data	
Show values	Shows the values above the series in the chart.
Hide empty categories	Hides category items with no data from the chart.
Trend line	The trend line will visualize how your data evolves over time - e.g. if performance improving or deteriorating. Makes sense when periods are selected as category.
Target line value/title	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 value/title	Displays a horizontal line at the given domain value. Useful e.g. when

Chart option	Description
	you want to visualize how your performance has evolved since the beginning of a process.
Sort order	Allows you to sort the values on your chart from either low to high or high to low.
Aggregation type	Defines how the data elements or indicators will be aggregated within the chart.
Events	
Include only completed events	Includes only completed events in the aggregation process. This is useful when you want for example to exclude partial events in indicator calculations.
Axes	
Range axis max/min	Defines the maximum and minimum value which will be visible on the range axis.
Range axis tick steps	Defines the number of ticks which will be visible on the range axis.
Range axis decimals	Defines the number of decimals which will be used for range axis values.
Range axis title	Displays a label next to the range axis (also referred to as the Y axis). Can give context information to the chart, e.g. the unit of measure being used.
Domain axis title	Displays a label below the domain axis (also referred to as the X axis). Can give context information to the chart, e.g. the type of periods being listed.
General	
Hide chart legend	Hides the legend and leaves more room for the chart itself.
Hide chart title	Hides the title of your chart.
Chart title	Type your title and it will appear above the chart. Titles should include the Where, What and When being shown on the chart.

4.5 Manage favourites

Once you have rendered a chart you can save it as a favourite to able to access it easily at a later point. The process is exactly the same as for Pivot Table favourites. Please see the section under Pivot Tables for more details.

4.6 Download a chart

After you have created a chart you can download it to your local computer as an image or PDF file.

<div>⏪ Update ▾ Favorites ▾ Layout ▾ Options ▾ Download ▾ Embed ▾</div>		Click on Download in the top menu.
<div>Graphics<ul style="list-style-type: none">Image (.png)PDF (.pdf)Plain data source<ul style="list-style-type: none">JSONXMLMicrosoft ExcelCSVAdvanced</div>	<ol style="list-style-type: none">Graphics options are for users. Select either Image (.png) or PDF (.pdf).Plain data source options are really for developers.	

4.7 Visualise a chart as a pivot table or map

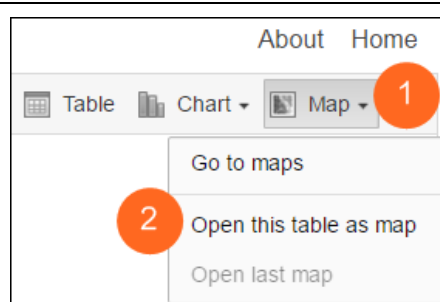
When you have made a pivot table, you can view your pivot table as a chart or a map.

4.7.1 Visualise as a pivot table

<div><div>1</div><div>About Home</div><div>Table ▾ Chart Map ▾ ⏪</div><div><div>Go to pivot tables</div><div>Open this chart as table</div><div>Open last table</div></div><div>2</div></div>	<ol style="list-style-type: none">Click on Table in the top right menu.Click on Open this chart as table.
In the example we've been using, the chart would open as this pivot table:	

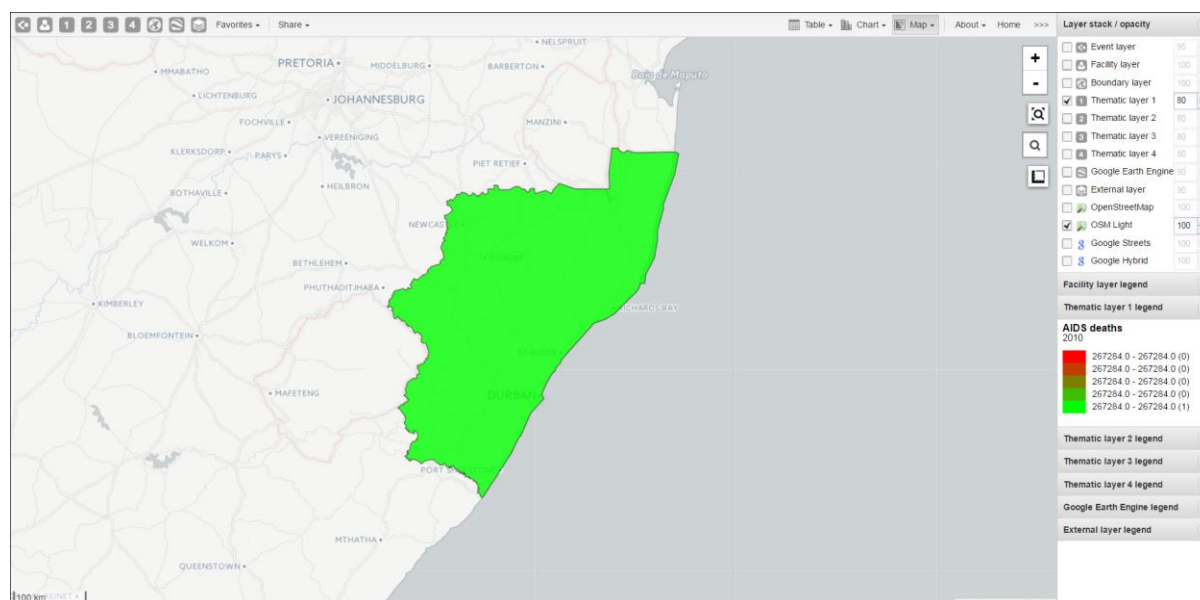
Kz KwaZulu-Natal Province			
Period / Data	AIDS deaths ↕	AIDS deaths in children ↕	Total ↕
2010	47 314	9 331	56 645
2011	40 550	7 493	48 043
2012	36 621	6 210	42 831
2013	33 165	5 303	38 468
2015	28 480	4 203	32 683
2016	26 445	3 714	30 159
2017	24 469	3 237	27 706
Total	237 044	39 491	276 535

4.7.2 Visualise as a map



1. Click on **Map** in the top right menu.
2. Click on **Open this table as map**.

In the example we've been using, the pivot table would open as this map:



Chapter 5. The Dashboard

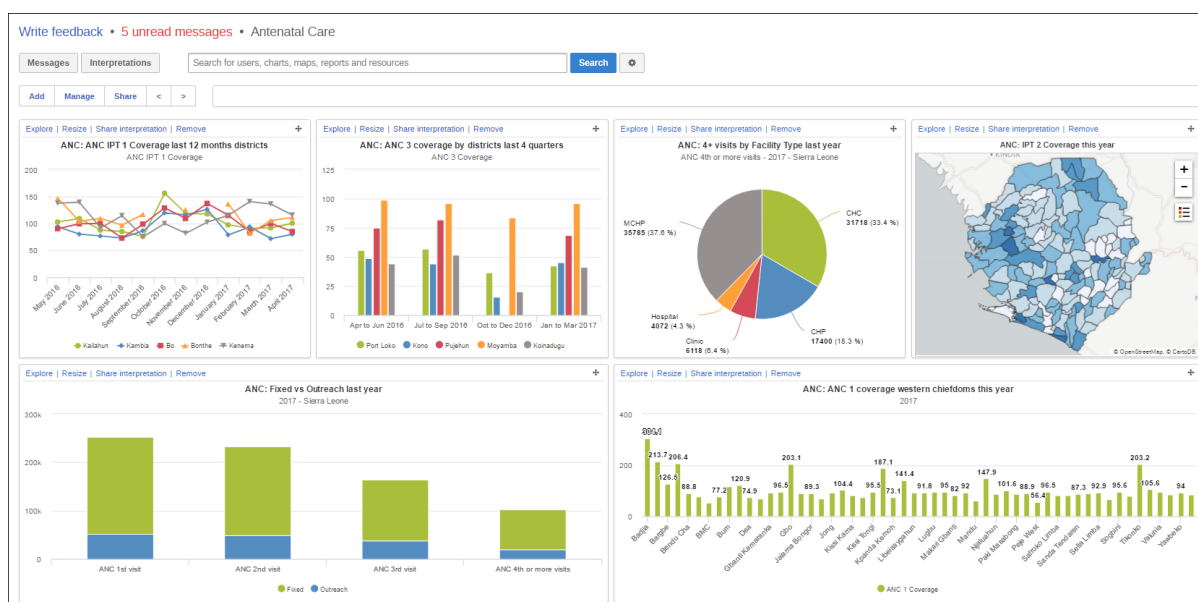
After reading this chapter you will be able to:

- Access the Dashboard
- Create a private dashboard
- Add charts and tables to your private dashboard

Dashboards are intended to provide quick access to different analytical objects (maps, charts, reports, tables, etc.) to an individual user.

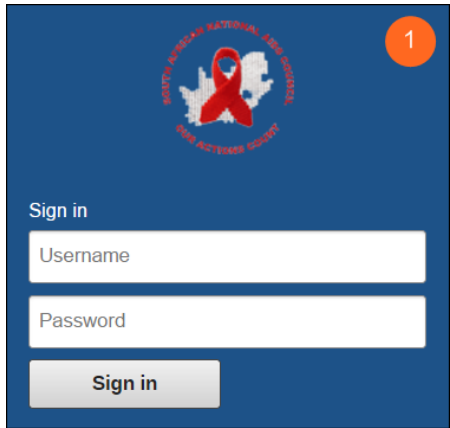
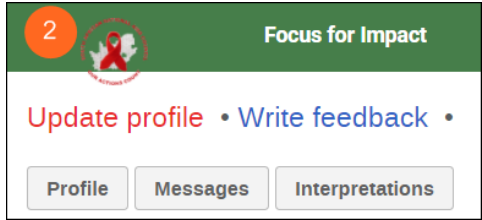
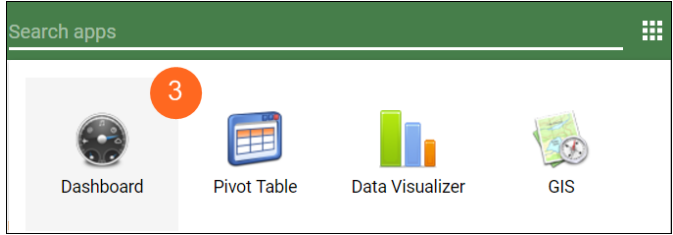
Dashboards can also be shared with user groups. For instance, a user or administrator could create a dashboard called "TB" which might contain all relevant information on TB. This dashboard could then be shared with the user group called "TB control", which might consist of all users of the TB control programme. All users within this group would then be able to view the same dashboard.

The SANAC Focus for Impact dashboard is currently empty, but a dashboard could look something like this:



5.1 Access the Dashboard

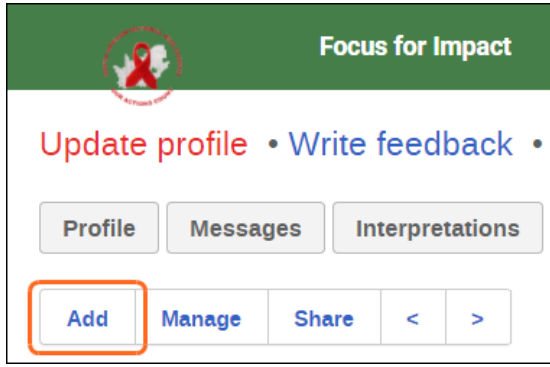
You can access the Dashboard in one of 3 ways:

	<ol style="list-style-type: none"> 1. Sign in, using your username and password - the home page is usually the Dashboard.
	<ol style="list-style-type: none"> 2. Click on the SANAC logo and it will take you to your home page.
	<ol style="list-style-type: none"> 3. Go to the Apps Menu and select the Dashboard App

5.2 Create a dashboard

You may want to create your own dashboard, so that you can add your own objects (charts, tables, maps etc.) to them. So the first step is to create the dashboard, and the second step is to add objects to it.

5.2.1 Add a dashboard

	<p>On the Dashboard, click on Add.</p>
---	---

Add new dashboard
✕

Name
Create

1. Type in a name for your dashboard.
2. Click on **Create**.



Best practice: If you are creating a dashboard that is going to be shared with other SANAC Focus for Impact users, we recommend that you follow a strict naming convention.

5.2.2 Add objects to your dashboard

Search
⚙️

1. Type your search criteria in the **Search** box.
2. Click on **Search**.

The list that displays is divided into the different object types i.e. Charts, Pivot tables etc.

Locate the object that you want from this list.

Click on **Add**.

aids

Charts [See more hits »](#)

AIDS Deaths (All VS Children)
Add

KZ AIDS deaths (Female + Male >= 15 VS children, past 5 years)
Add

KZ AIDS deaths (Female vs Male, past 5 years)
Add

KZ Total AIDS deaths (non-AIDS vs AIDS, past 5 years)
Add

thembisa - Aids Death in children
Add

Pivot tables [See more hits »](#)

AIDS deaths (All VS Children)
Add

Add
Add
Add
Add
Add
Add
Add

You can reorder your dashboard objects by simply dragging-and-dropping them to a new position.

Unless your use role has permissions to share dashboards, you will be the only one to see the dashboards that you create.

SANAC Focus for Impact

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Focus for Impact

2017/04

The SANAC Secretariat has developed a rights-based, evidence-informed, and community-owned HIV response that uses a mix of biomedical, behavioural, and structural interventions for a geographically focused strategy prioritised to have a sustained impact on the reduction of new HIV infections in South Africa.



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Introduction

The approach for geospatial mapping and risk profiling was developed that allow users to drill down and better understand geospatial patterns and variations in HIV burden within high-burden areas (although the starting point was the HIV burden, this is currently expanded to include TB and STI). The approach was developed to provide answers to the following questions:

1. Where in a district are area(s) with the highest HIV burden? (Place)
2. Why does a specific area have a higher HIV burden/what contributes to increased HIV risk in this area? (Population and Profile)
3. Which multi-sectoral interventions can be deployed in the high burden area to reduce and manage the existing HIV risk? (Package)



Geographic targeting is an important strategy in the HIV response as the HIV epidemic is not uniformly distributed and changes over time. Geographical prioritisation for resource allocation to significantly reduce number of new HIV infections



Insufficient resources for blanket interventions, therefore a need to understand contextual socio-economic characteristics of the population in the area, poverty, employment and unemployment (by race, age and gender), type of settlements lived in and conditions of living, education and literacy, highest educational attainment (especially young women), school enrolments (by gender), cultural and religious norms, gender norms and gender-based violence, stigma, available services, accessibility of services for various groups, linkage to care etc



Understanding HIV associated risk profile for a given high burden area will inform targeted multi-sectoral packages to optimise where resources and interventions will rolled out. Associated risk profiles are required for the catchment area of the facility to understand what influences HIV risks in these areas.

1. Health Information background and walk-through

The following section deals with conceptual structures as utilised and operationalised by the functioning Focus for Impact application. Some of these items are essential for understanding how data from health is structured, designed and managed.

1.1 Health system structures & data sets

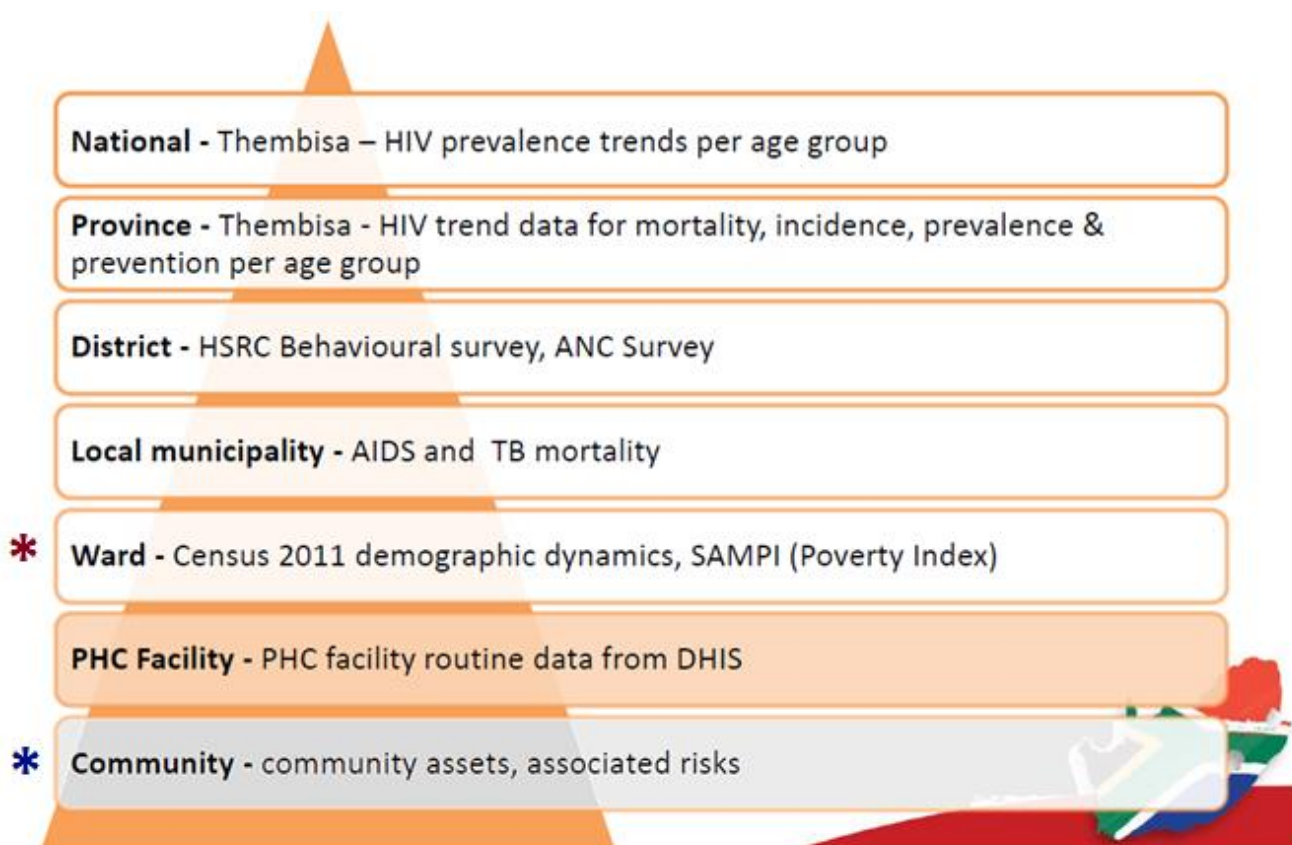


Figure 1. Hierarchical structures used for aggregation of health outcomes & profile data

At present the Focus for Impact tool utilises health and non-health system structures to integrate data in GIS maps and reports. These structures are obtained from health systems (e.g. DHIS) and from outside (i.e. demarcation board for wards, 2011). In “health” these levels are often referred to as “orgunit levels” (short for organisation unit levels). Ward is an “artificial” level while Community level does not exist in our databases (to be reviewed in phase II of Focus for Impact’s development).

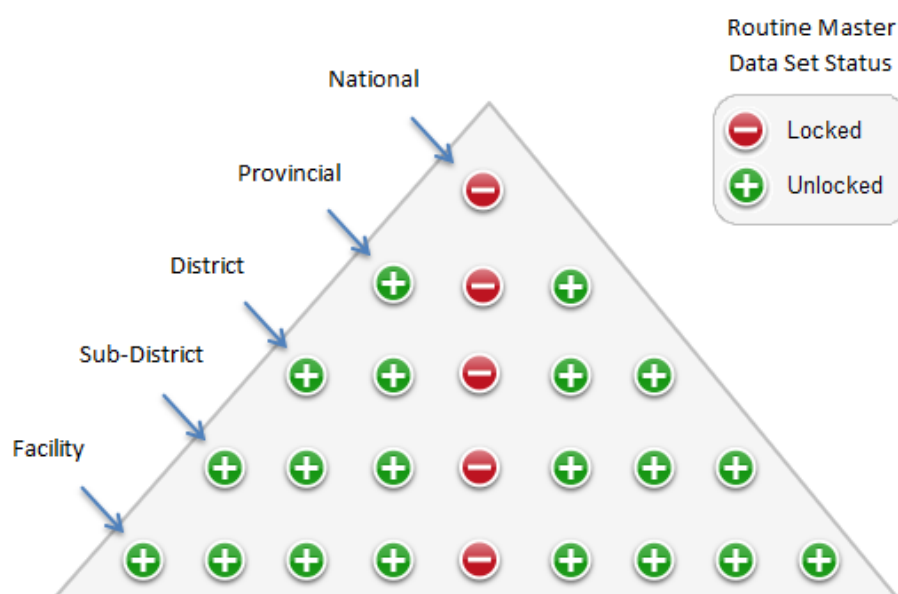


Figure 2. National Indicator Data Set (NIDS) containing essential national level indicators

The National Data Dictionary (NDD) meta-data portal is available to the public on website <http://dd.dhmis.org>. It contains the National Indicator Data Set (NIDS) and associated metadata which are locked down (see Figure 2).

At present no provincial indicators are being used in Focus for Impact. The process of selecting which indicators to be utilized in Focus for Impact was dependent on data quality assessments per indicator. Due to the scale of the district health management information system (DHMIS) rolling out new data definitions may incur delays which affect the completeness of a national/provincial view.

An extract of these indicators and data definitions is used in the Focus for Impact tool can be seen in table 1 below. Each indicator can be looked up on the NDD site for definition clarity.

<div> <div>OUTCOMES</div> <div> <div>HIV Positivity</div> <div> <input type="checkbox"/> All (Combined) <input type="checkbox"/> 6 weeks <input type="checkbox"/> 18 months <input type="checkbox"/> 1 - 4 years <input type="checkbox"/> 5 - 14 years <input checked="" type="checkbox"/> 15 - 49 years <input type="checkbox"/> Antenatal 1st Visit <input type="checkbox"/> Antenatal Re-test </div> </div> <div> <div>STI</div> <div> <input type="checkbox"/> Male Urethritis Syndrome rate </div> </div> <div> <div>Condom Distribution</div> <div> <input type="checkbox"/> Female Condoms <input type="checkbox"/> Male Condoms </div> </div> <div> <div>Teenage Pregnancy</div> <div> <input type="checkbox"/> Delivery < 18 </div> </div> <div> <div>TB</div> <div> <input type="checkbox"/> Identified <input type="checkbox"/> Sputum Test Rate <input type="checkbox"/> Tested Positive <input type="checkbox"/> Treatment Initiation </div> </div> </div>	<div>HIV Positivity</div> <ul style="list-style-type: none"> ANC client HIV 1st test positive rate Infant 1st PCR test positive around 6 weeks rate Infant rapid HIV test around 18 months positive rate HIV test positive child 12-59 months rate HIV test positive child 5-14 years rate HIV prevalence amongst client tested 15-49 years rate ❖ ALL (Combined): artificial composite index no available on NIDS <div>TB</div> <ul style="list-style-type: none"> TB (pulmonary) case finding index TB suspect sputum test rate TB suspect smear positive rate TB suspect treatment initiation rate <div>STI</div> <ul style="list-style-type: none"> Male urethritis syndrome rate <div>Other</div> <ul style="list-style-type: none"> Female condom distribution coverage Male condom distribution coverage Delivery in facility under 18 years rate
--	--

Table 1. DHIS indicators and Focus for Impact menu with criteria used for assessing HIV, TB, STI and other outcomes

1.2 Indicator Outcomes VS Numerators

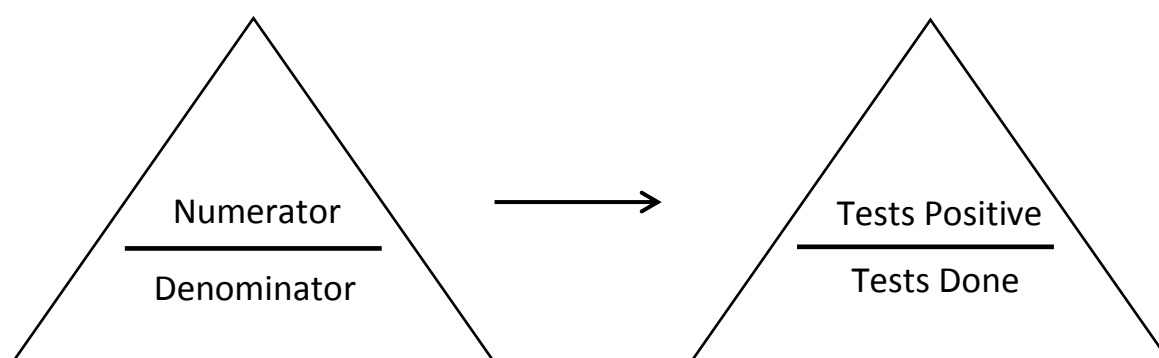


Figure 3. National Indicator Data Set (NIDS) containing essential national level indicators

Indicators test morbidity among a sample (sub) population of those seeking services at health facilities. The numeric variables used for these calculations are simply: numerators divided by denominators. For HIV indicators the “health outcome” is a positivity percentage score for any one of the hierarchical structures listed in figure 1.

Due to the nature of routine health information systems (i.e. collecting anonymous data aggregated into periods, e.g. weekly, monthly, quarterly, etc.) at present it is unreasonable to expect the tracking of individual patients across time but this does provide use with comprehensive summaries of regional outcome assessments.

** Elusive List: prevalence, incidence due to nature of routine data (sampling of population)*

HIV numerators provide us with opportunity to assess density or percentage-shares of all “Positive Tests” which will be discussed under reports.

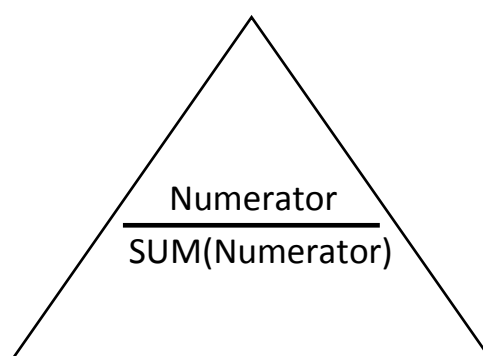


Figure 4. Indicator numerators allow us to consider “density” of cases

1.3 GIS and Custom Visualisations

The Focus for Impact web application was developed to be sustainable which naturally lent itself to the use of open source software. Leaflet is a popular, light weight and mobile-friendly open source GIS framework and has been utilised for this application.



Various leaflet plugins are used to improve the user experience, some of which include regular choropleth maps and isopleth maps (e.g. heat layers). D3 (data driven documents) is used to calculate Voronoi/Thiessen polygons while other plugins are used for charts and geospatial calculations. Custom charts have also been developed specifically with Focus for Impact in mind.

Partnering with SANAC on this project is the national department of health (NDoH) who has provided access to their enterprise ARCGIS software solution. This powerful enterprise GIS software package has been used to run the kriging model which runs interpolation calculations generating layers that are used inside the Focus for Impact application.

Focus for Impact is a custom-designed web application contained inside the DHIS2 application which is accessible under the application-drawer:

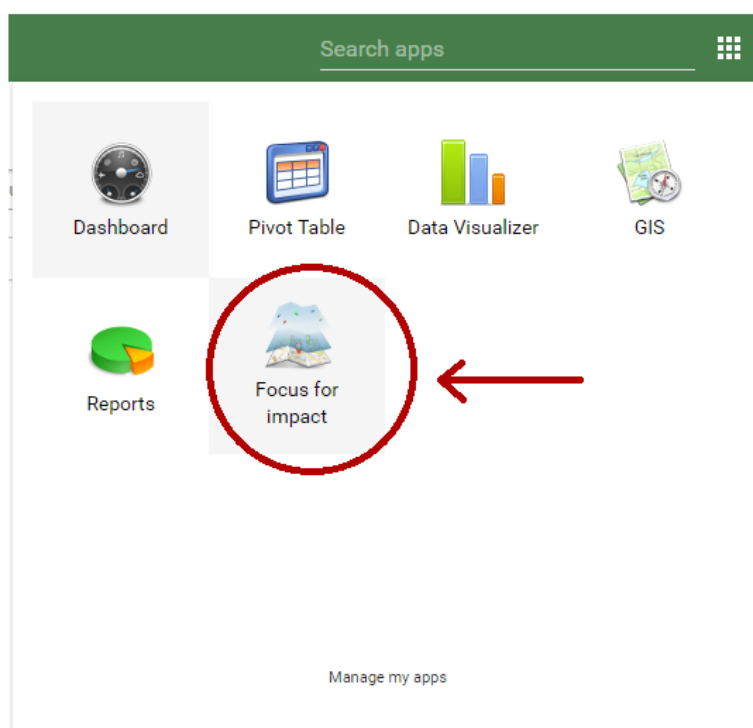


Figure 5. Focus for Impact shortcut inside DHIS2 application drawer

Clicking the application shortcut opens the landing page with a comprehensive summary introduction and identifies the current (logged in) user. The application immediately launches into analysis mode and generates (behind the popup welcome tab) a choropleth map for the default indicator (HIV positivity 15 – 49 years, excluding antenatal visits).

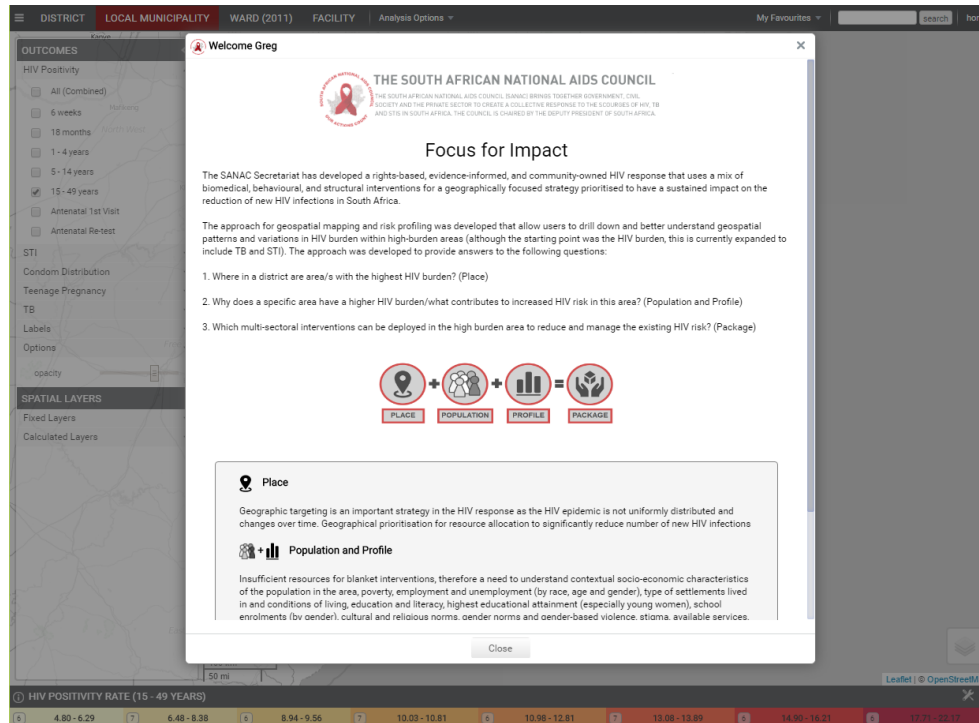


Figure 6. Focus for Impact landing page with welcome popup tab

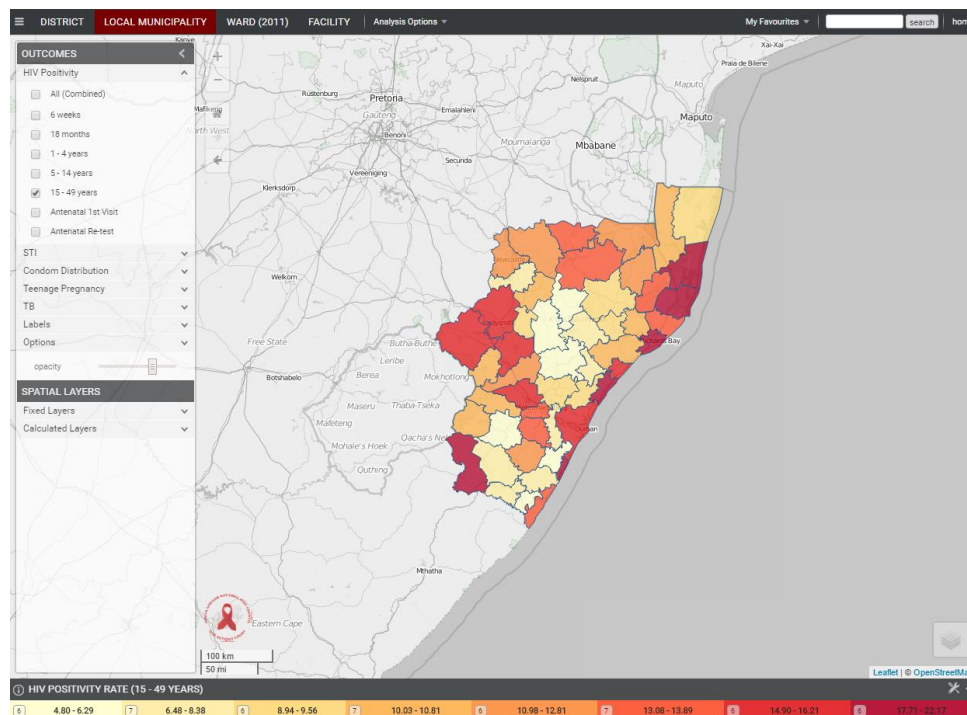


Figure 7. Default indicator analysed for user's registered region/province

1.4 Analysis and Reporting Tools

Focus for Impact makes use of quantile grading and z-score grading of indicators. The default method is quantile grading (using 7-8 groups) and the process can be described simply as follows:

1. Indicator data (e.g. HIV Positivity Rate [15-49 years]) is extracted from the database per administrative level (e.g. local municipality) into memory
2. The resulting values are arranged from lowest to highest
3. Data is segmented into *equal groups of 7 - 8 which are associated with the SANAC predefined colour scheme

This method is reapplied per indicator per administrative level (i.e. district, local municipality, ward, facility). However different indicators are assigned different colour schemes, e.g. SAMPI index appears in shades of purple:

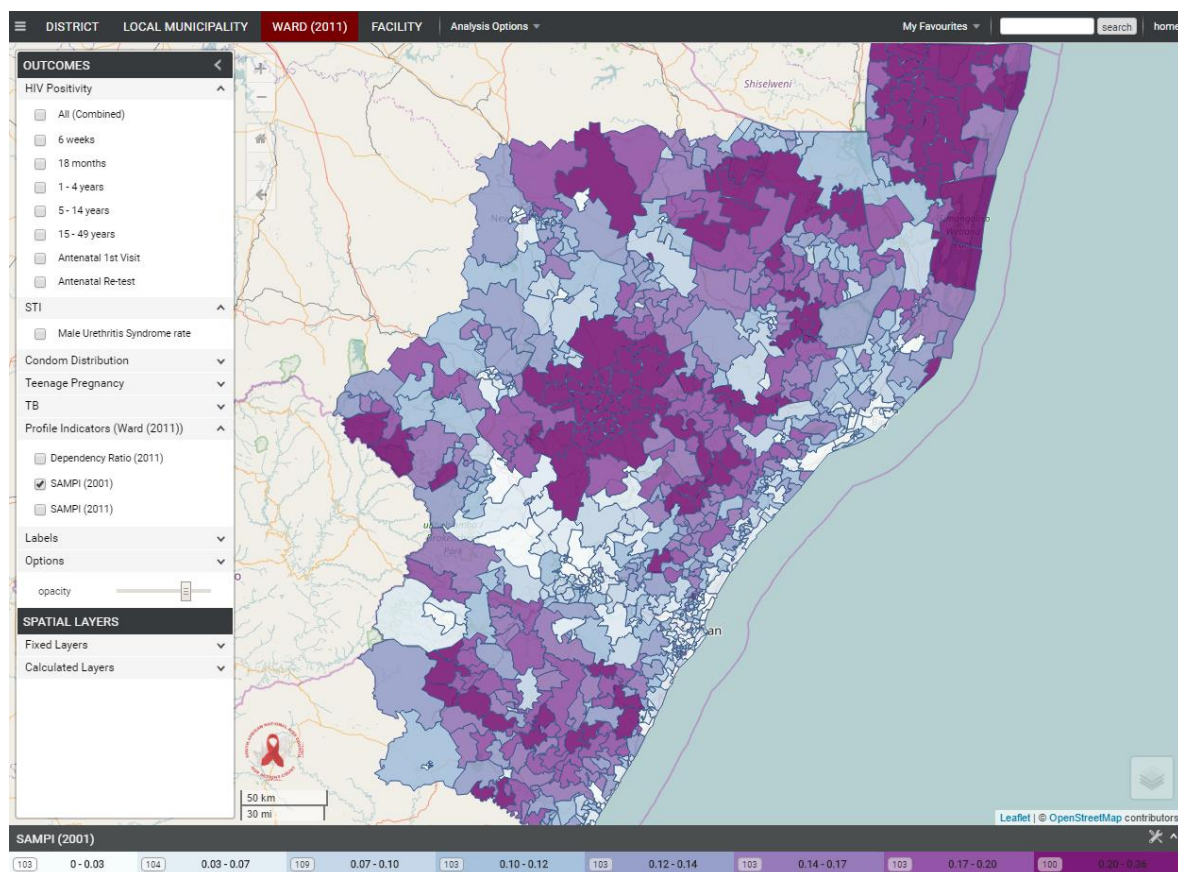


Figure 8. SAMPI index intensity graded in shades of purple

1.5 Working with the Application

1.5.1. Switching administrative levels



The top menu bar contains a list of buttons associated to available “orgunit” levels. The current (selected) orgunit level. Clicking any of these options will rebuild the map for the current indicator/criteria.

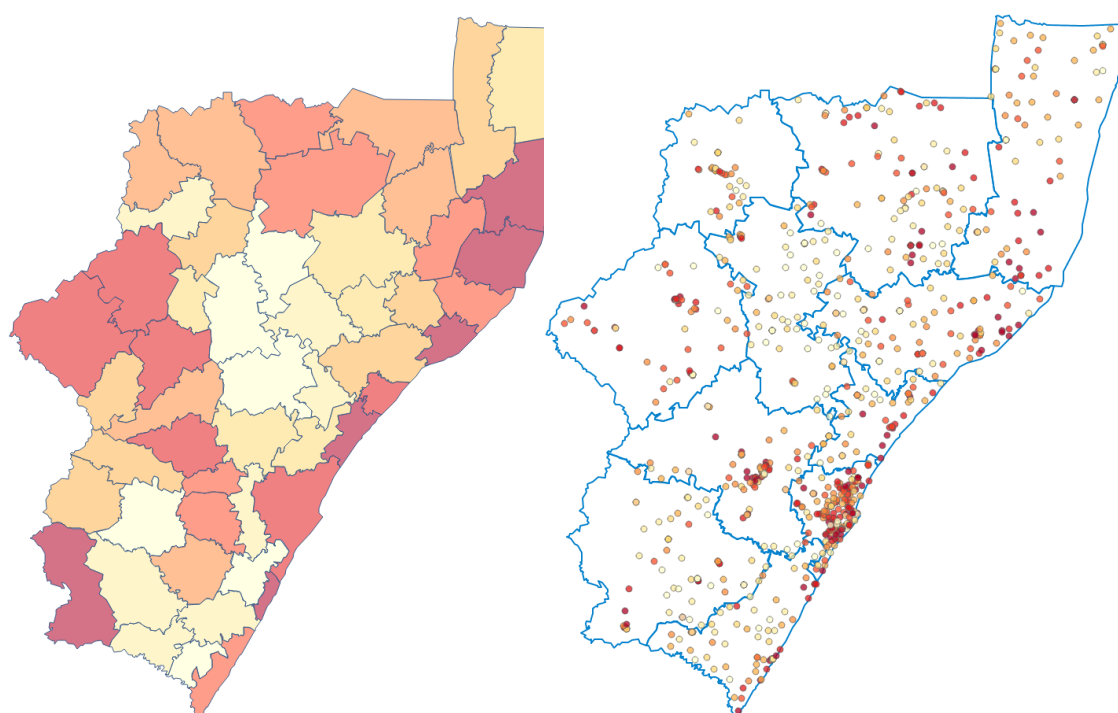
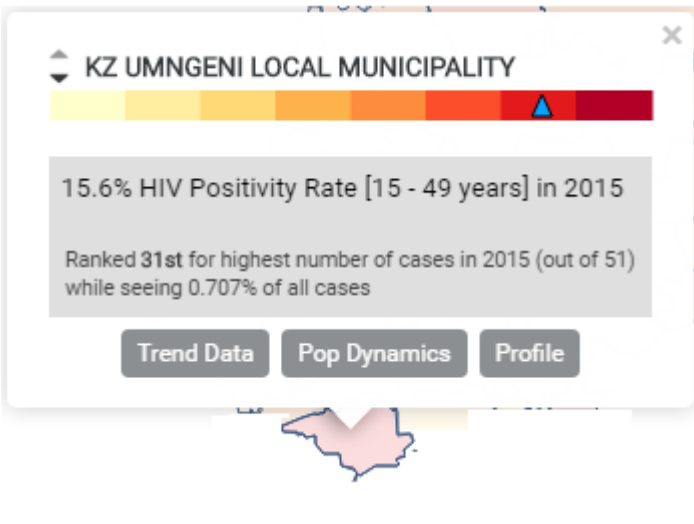


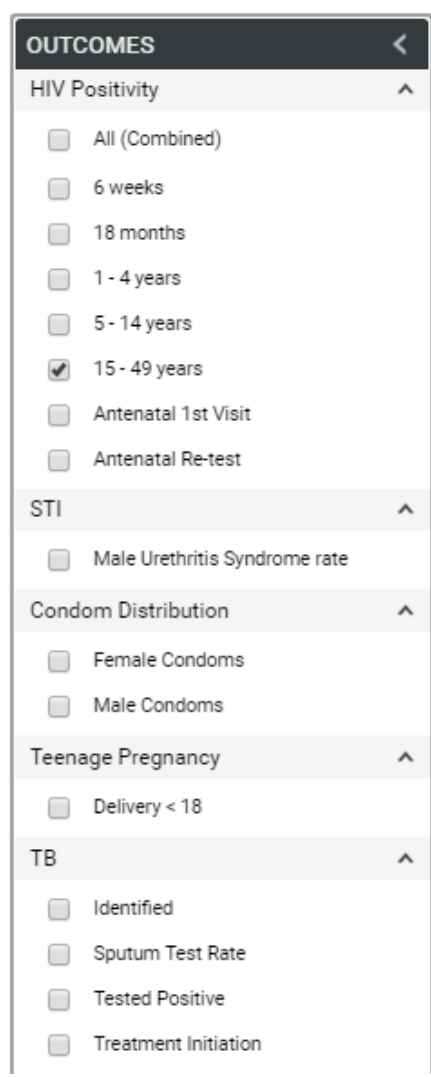
Figure 9. Example switching from Local Municipality to Facility level

1.5.2. Identifying features


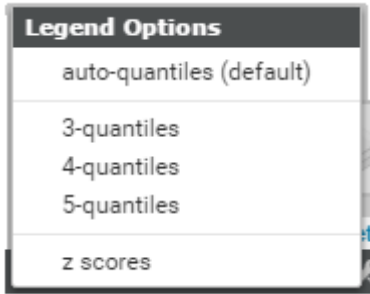
	<ol style="list-style-type: none">1. Place cursor over any polygon or point feature to see mouse-over popup information dialog (top right corner of map)
--	--

	<p>2. Click on selected feature inside on map to view performance/outcome overview for current indicator/criteria.</p>
---	--


1.5.3. Switching indicator/criteria

	<p>The Left menu contains indicators as can be seen for groups:</p> <ul style="list-style-type: none"> • HIV Positivity • STI • Condom Distribution • Teenage Pregnancy • TB <p>Indicators can only be selected individually;</p> <p>Ticking a different indicator runs a new analysis.</p>
--	--

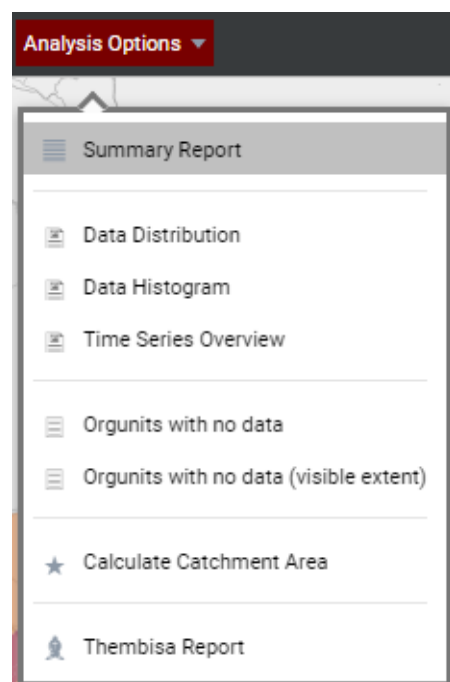
1.5.4. Switching between grading methods

	<p>Click “toolbox” icon in bottom-right corner above legend to view popup “Legend Options” dialog.</p>
	<p>The user can switch between default quantiles or any other options.</p> <p>Please note when switching indicators the default grading method will resume.</p>

1.5.5. Displaying Labels

	<p>Labels menu group under Outcomes provides a variety of options.</p> <p>Labels will be left-aligned at the calculated centre point of polygons.</p> <p>To switch off label option “none” must be selected.</p>
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1.5.6. Run a report



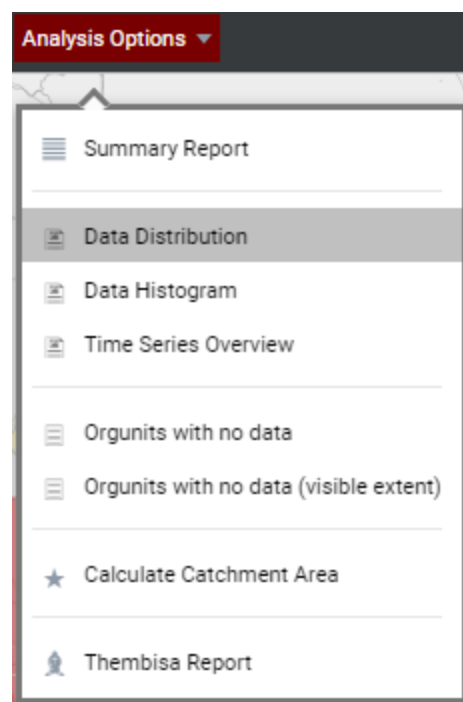
Select “Analysis Options” from top menu.

Click “Summary Report” to see report result according data grading groups with advanced details of each orgunit under the current administrative level (numerator and denominator summary).

The report popup also allows for export to XLS.

Summary Report					
PERIOD: 2015					
WC WESTERN CAPE PROVINCE: 4.6 %					
Group [1.13 - 1.71] percentile (0 - 13)					
Local Municipality	2015 : HIV Positivity Rate (15 - 49 years)		Z-Score ↓	NUM %	DEN %
1 wc Laingsburg Local Municipality	1.13 %	(22 / 1950)	-2.09	0.04 %	0.17 %
2 wc Kannaland Local Municipality	1.51 %	(82 / 5433)	-1.86	0.16 %	0.48 %
3 wc Cape Agulhas Local Municipality	1.56 %	(147 / 9394)	-1.83	0.28 %	0.83 %
4 wc Hessequa Local Municipality	1.71 %	(160 / 9343)	-1.74	0.31 %	0.83 %
Group Average:	1.6 %			0.78 %	2.32 %
Group [1.94 - 2.90] percentile (13 - 25)					
Local Municipality	2015 : HIV Positivity Rate (15 - 49 years)		Z-Score ↓	NUM %	DEN %
5 wc Beaufort West Local Municipality	1.94 %	(349 / 17967)	-1.61	0.67 %	1.59 %
6 wc Oudtshoorn Local Municipality	2.20 %	(409 / 18594)	-1.45	0.78 %	1.65 %
7 wc Prince Albert Local Municipality	2.23 %	(55 / 2470)	-1.44	0.10 %	0.22 %
8 wc Langeberg Local Municipality	2.90 %	(425 / 14635)	-1.03	0.81 %	1.30 %
Group Average:	2.3 %			2.36 %	4.76 %
Group [2.91 - 3.16] percentile (25 - 38)					
Local Municipality	2015 : HIV Positivity Rate (15 - 49 years)		Z-Score ↓	NUM %	DEN %
9 wc Swellendam Local Municipality	2.91 %	(306 / 10514)	-1.03	0.58 %	0.93 %
10 wc Saldanha Bay Local Municipality	3.04 %	(618 / 20357)	-0.96	1.18 %	1.80 %
11 wc Swartland Local Municipality	3.08 %	(842 / 27316)	-0.93	1.61 %	2.42 %
12 wc Bergervier Local Municipality	3.16 %	(432 / 13678)	-0.88	0.82 %	1.21 %
Group Average:	3.1 %			4.20 %	6.37 %

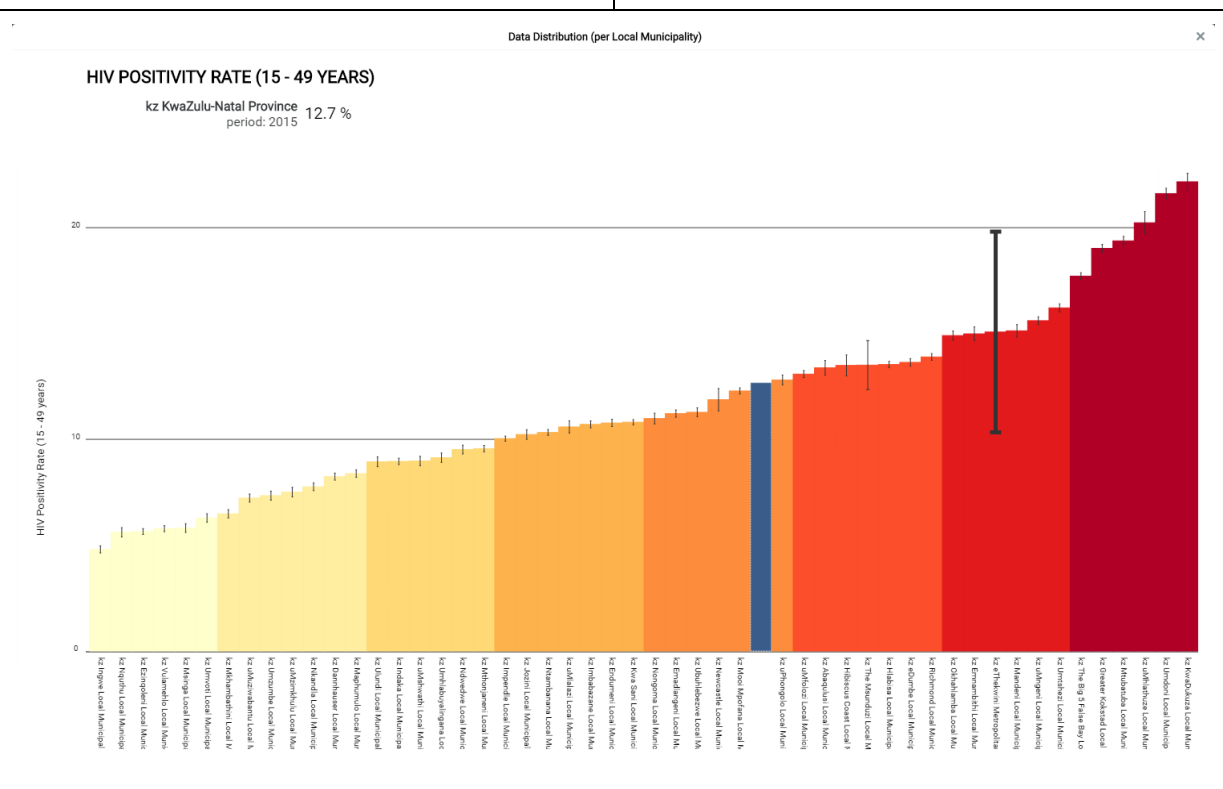
1.5.7. Display general charts

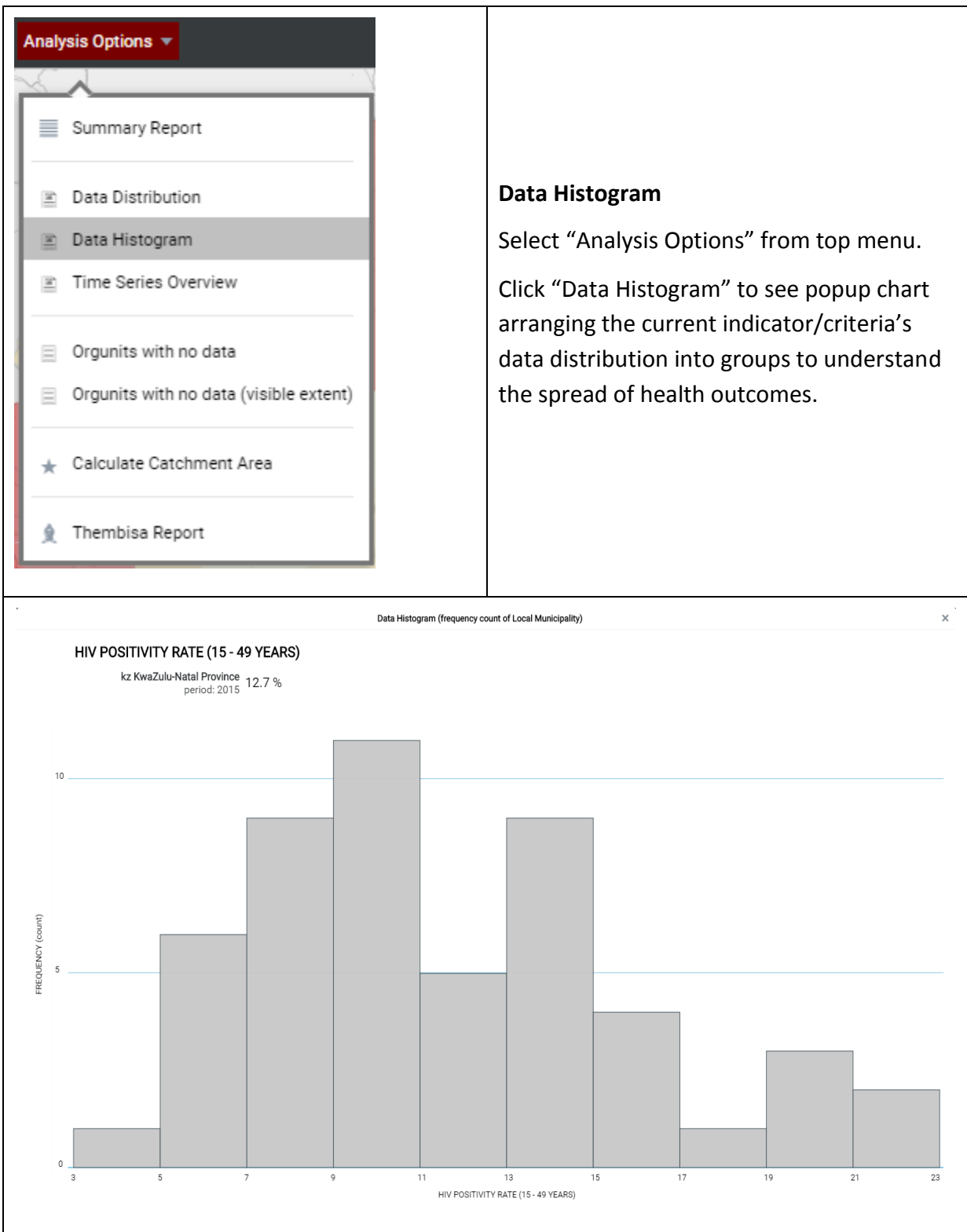


Data Distribution

Select "Analysis Options" from top menu.

Click “Data Distribution” to see popup chart arranging orgunits into data grading groups (based on box-plot but with vertical line plots based on numerator proportion).





Analysis Options

Summary Report

Data Distribution

Data Histogram

Time Series Overview

Orgunits with no data

Orgunits with no data (visible extent)

★ Calculate Catchment Area

Thembisa Report

Time Series Overview

Select “Analysis Options” from top menu.

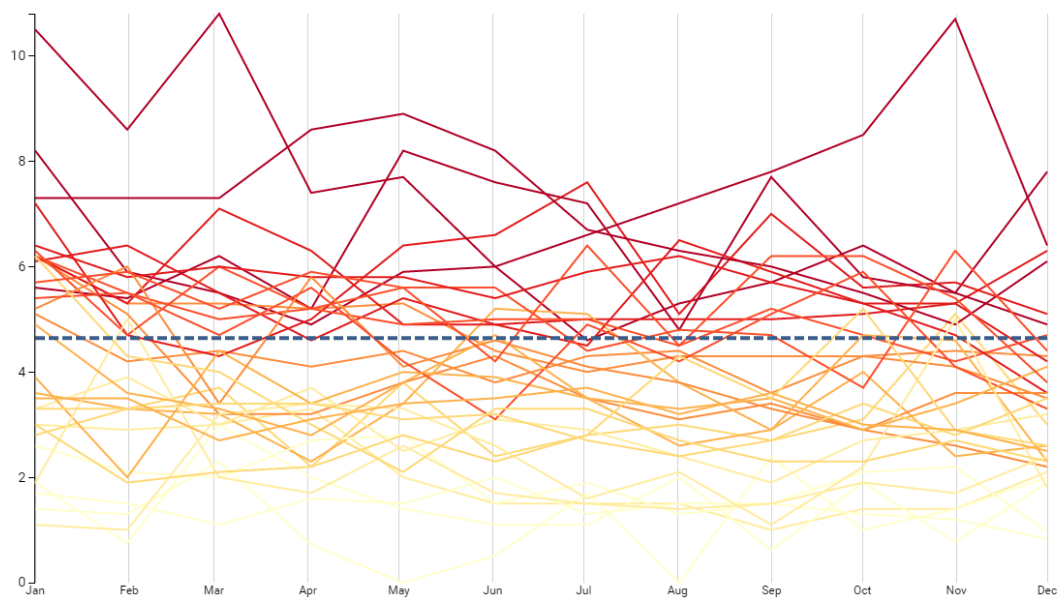
Click “Time Series Overview” to see popup chart of all orgunits in the map (with data) displaying their indicator/criteria’s values for the last 12 months (for the chosen year).

Regional average is displayed as horizontal dotted line.

Time Series Overview

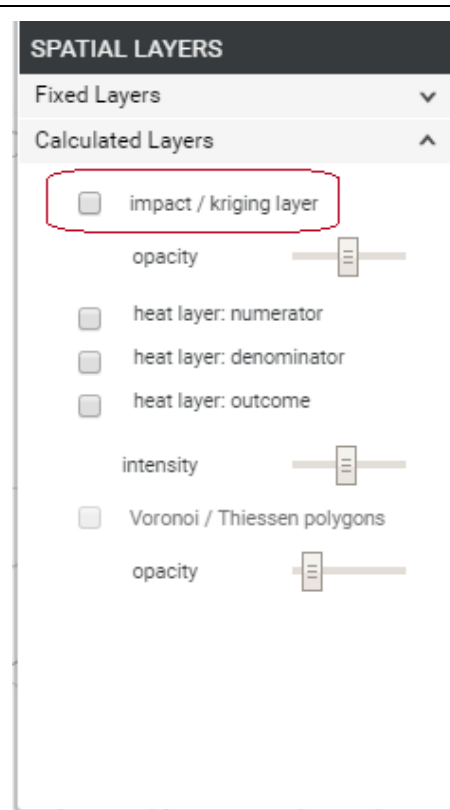
HIV POSITIVITY RATE (15 - 49 YEARS)

wc Western Cape Province 4.6 %
period: 2015



Proportion of clients on whom an HIV test was done who tested positive for the first time

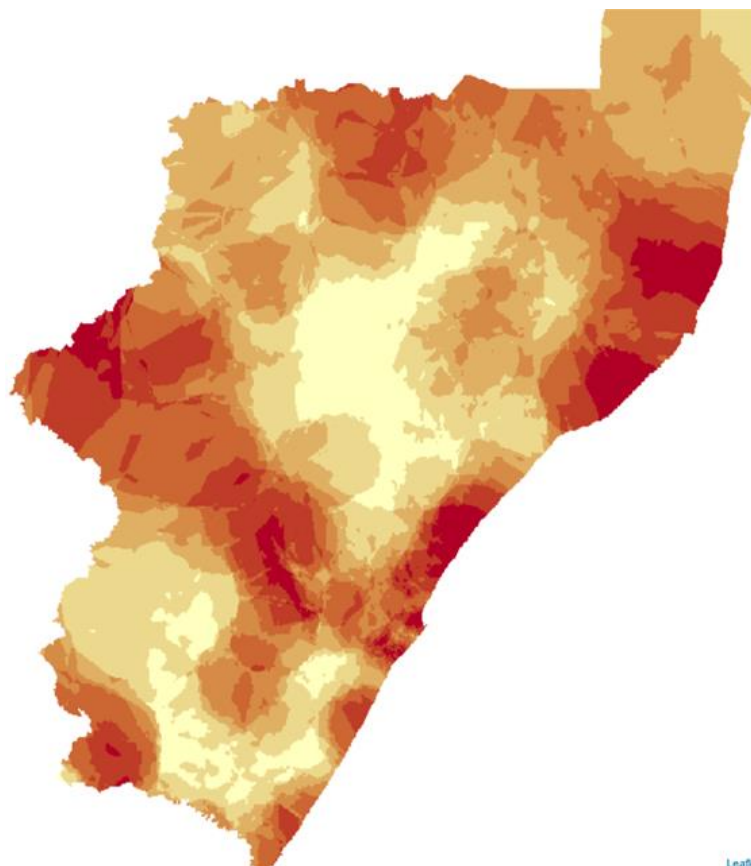
1.5.8. Show Kriging Layer



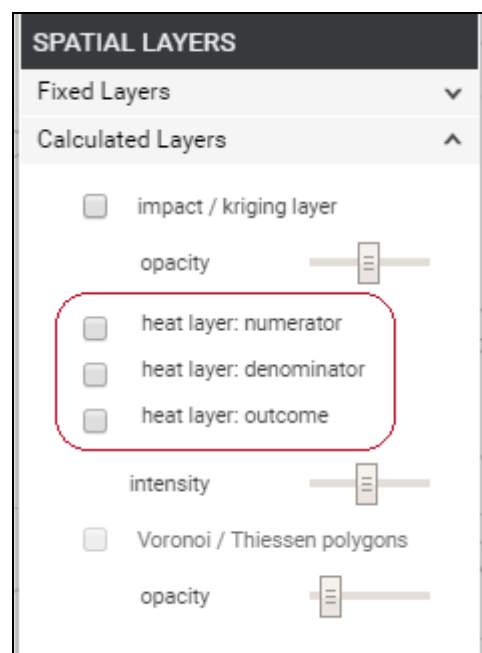
Left menu contains groups for “Calculated Layers”, first of which is “impact / kriging layer”.

Ticking this option retrieves the ArcGIS spatial image Layer for the current User’s region, displaying it behind the current layer.

Special note: At present kriging layer is limited to HIV indicators only.



1.5.9. Show Heat map/layer

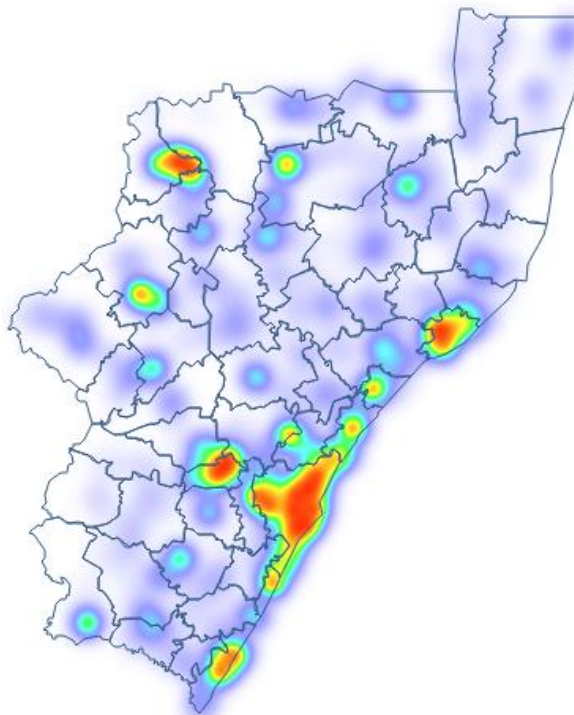


Left menu contains groups for “Calculated Layers”; the second grouping of options are for selecting which heat layer variable to use for rendering.

Option “numerator” is equivalent to a case load density (where most HIV positive tests were found).

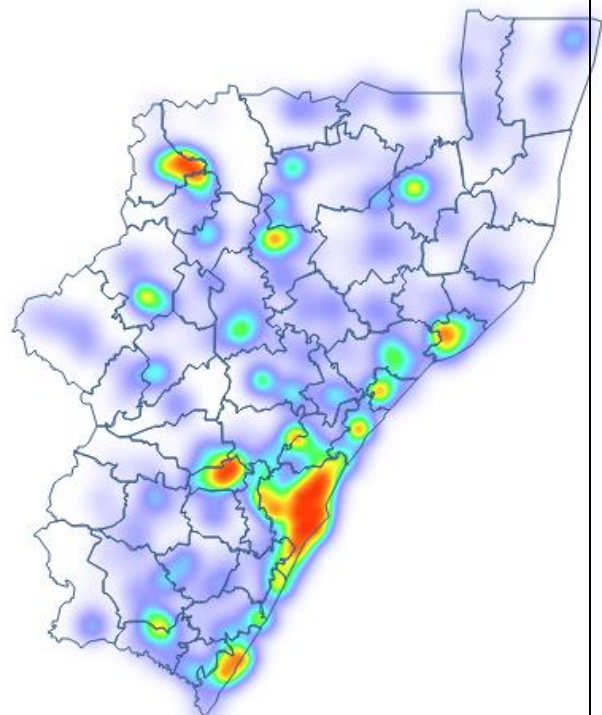
Option “denominator” is equivalent to a testing coverage density (where most HIV tests were conducted).

heat layer option: numerator



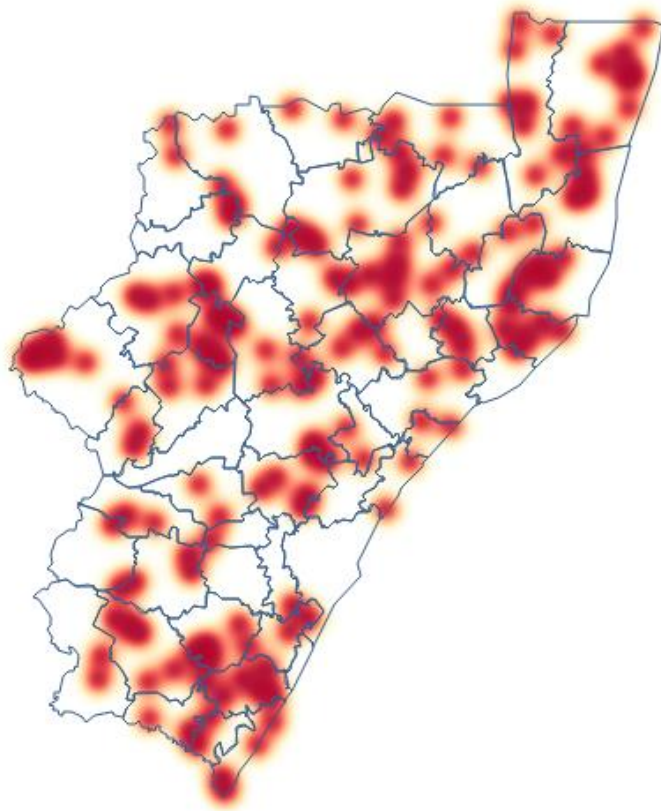
HIV Positive Case (density)

heat layer option: denominator



HIV Testing (density)

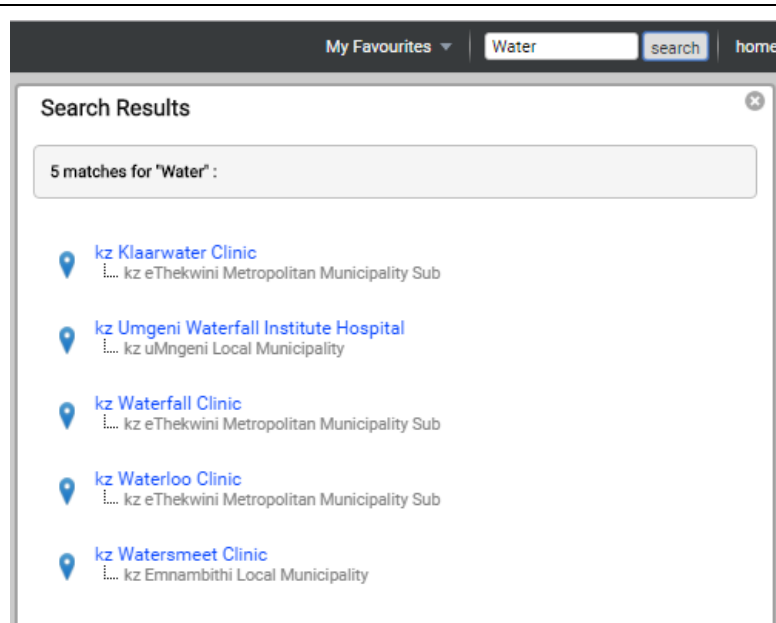
heat layer option: outcome



HIV Positivity (outcome) heat layer

Areas with high levels of HIV positivity are cancelled out by areas with low. This method ignores the number of cases which may skew the true “depth” of the HIV problem.

1.5.10. Search for an OrgUnit



1. Enter search text in top right search field followed by clicking “search”.
2. This search function is limited to the current layer only (and region should the user have filtered below the natural orgunit level).
3. Search results appear as hyperlinks which are clickable to jump to found locations.

1.5.11. Display onscreen legend

It may become necessary to produce reports based on visual configurations. For this purpose it is recommended that on-screen legend be activated:

	<p>Left menu contains group “Options” under Outcomes, with tick box option “on-screen legend”.</p> <p>Selecting this option switches out the base Layer control for the on-screen legend container.</p>
	

1.5.12. Spatial Join: facility to ward

DHIS data is collected at facility level and while wards are not naturally part of its aggregation processing it is possible to “assign” facility level data to wards using a spatial join; this process requires the user to decide how the join should work (exclude facilities with no data or include them). The latter option may result in visual gaps.

Confirmation

Join Wards to Facilities

Please select a join method. Not all health Facilities provide HIV services, this will affect which facilities are considered for this allocation process

YES

- All Facilities regardless of services offered (may result in gaps)

NO

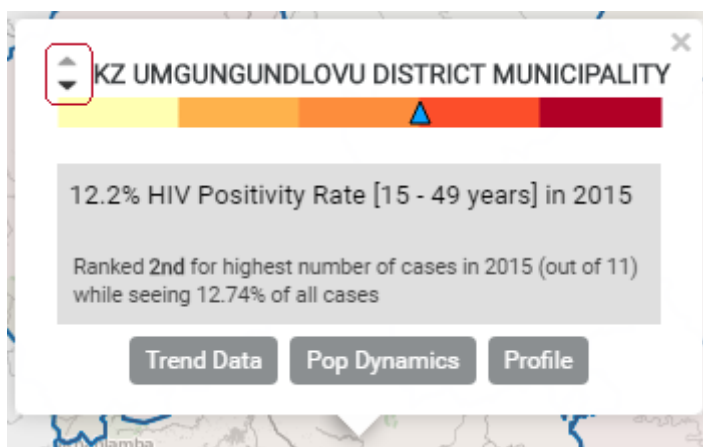
- Only Facilities with recorded health services (no gaps)

Yes

No

1.5.13. Drill down or up

When viewing maps at higher levels it's possible to drill down into an area and view lower level data for that region only. An example would be drilling down into a district and analysing its local municipalities or facilities within that district only. This is done by firstly clicking on the area to drill down into:



Note the down and up arrows left of the feature's name. These are used to navigate up or down.

Focus for Impact Training Agenda

Session 1: Health Information background and walk-through

(2 hours)

- 1.1 Health system structures & data sets
- 1.2 Concepts: Indicator Outcomes vs Numerators
- 1.3 GIS and Custom Visualizations
- 1.4 Analysis & Reporting Tools

Session 2: Group Work

(2 hour)

- 2.1 Reports Development
- 2.2 Visualizing HIV Areas
- 2.3 Profiling HIV Areas
- 2.4 Presenting Reports