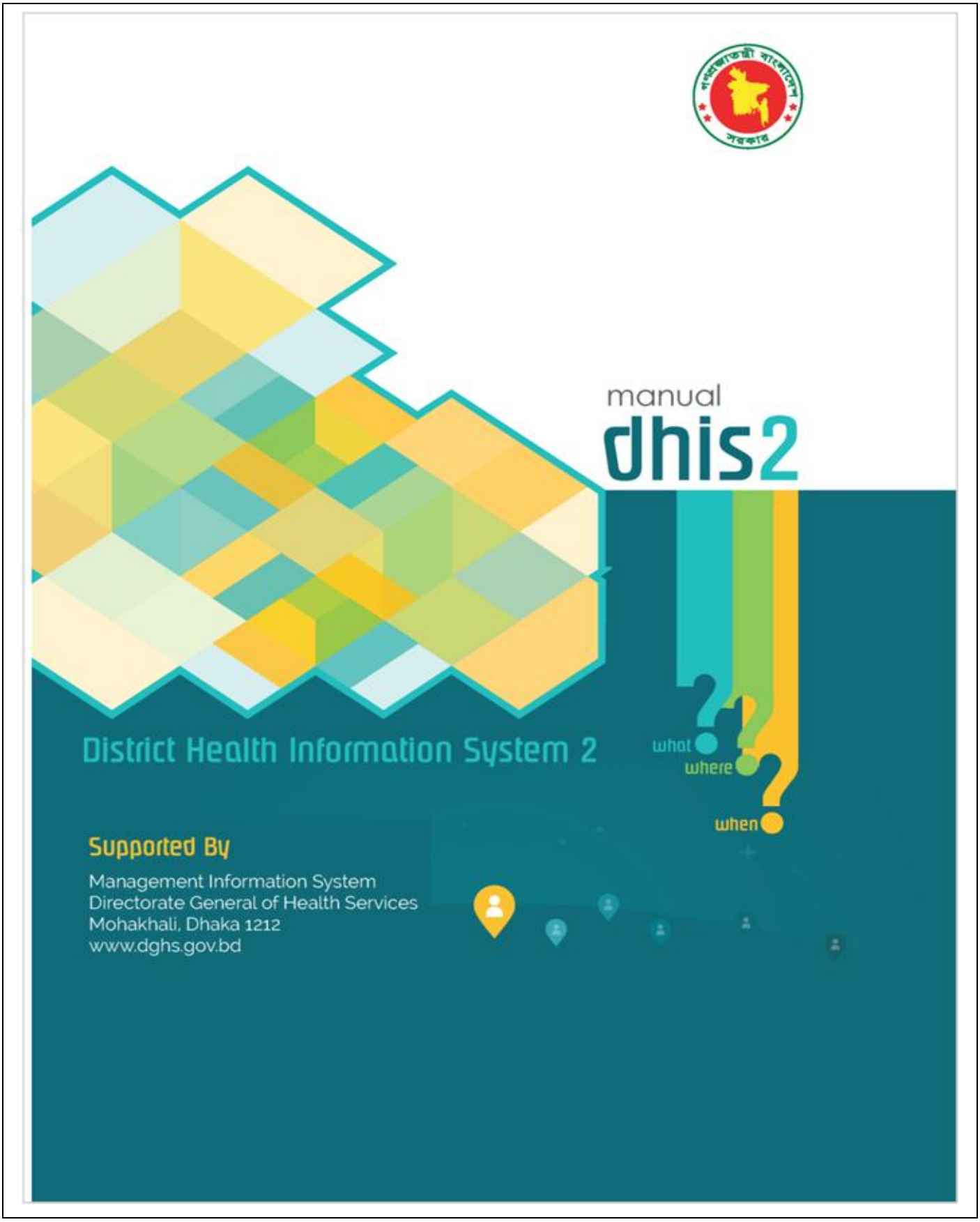
manual
dhis2
District Health Information System 2
what
where
when
Supported By
Management Information System
Directorate General of Health Services
Mohakhali, Dhaka 1212
www.dghs.gov.bd

Preface

The electronic –Health Information System (e-HIS) revolution of Bangladesh started quietly in 2009 and was fully in line with the Honorable Prime Minister's election manifesto 'Digital Bangladesh'. Director General of Health Services (DGHS) under MoH&FW started with introduction of 'District Health Information System 2 (DHIS2)', with a whole new approach to build cost effective and sustainable national health information system. Gradually, it incorporates almost every system and subsystems of this very pluralistic health system of Bangladesh. This HIS initiative of MOHFW also introduced and incorporated other key systems like online Human Resource system, attendance system, grievance systems. These initiatives give the Health Mangers a new approach to monitor measure and plan health interventions as a part of routine activity to achieve health related SDG. Since the beginning of 2016, EU funded SHARE project at icddr,b aimed at strengthening the capacity of health managers for enhancing skills on District Health Information System 2 and other software used for management of health information, and, conducted several rounds of trainings on use of information for decision making and program reviews. Recently, SHARE project along with Director DGHS, and, also in collaboration with other development partners, such as UNICEF, HISP Bangladesh has developed real time health information dashboards for visualizing data for all. This aims to increase the accountability of health mangers for data driven decision making. Now, SHARE project is keen to document the changes that those interventions might influence. With a view to help health mangers, doctors, nurses and statisticians to learn DHIS2, EU funded SHARE (Strengthening Health Applying Research Evidence) project with the support from UNICEF and HISP Bangladesh has developed a guideline which will be very helpful to acquire skills on DHIS2.

Contributions

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Special Thanks To

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Table of Abbreviations & Acronyms

Abbreviation	Description
DHIS2	District Health Information System
UHC	Upazila Health Complex
USC	Upazila Sub-Center
IMCI	Integrated Management of Childhood Illness
EmOC	Emergency Obstetric Care
ANC	Antenatal care
PNC	Postnatal care

Table of Content

Chapter 1

Introduction

Before getting started with DHIS2 you need to know access to information: Recording and Reporting of Health Information and concept of MIS

SUMMARY

1.1 Overview

Management Information Systems (MIS) provides information that organizations require to manage themselves efficiently and effectively. This term is commonly used to refer how individuals, groups, and organizations evaluate, design, implement, manage and utilize systems to generate information to improve efficiency. Development of MIS was given due importance since inception by the sector-wide program approach undertaken by the MOHFW in 1998. HIS is a component of MIS, The major components of the HIS include: 1) Service based HIS; 2) Human resource based HIS; 3) Institute based HIS covering also logistics and financial HIS; 4) Program based HIS.

After complete this chapter you will learn about the history of MIS and DHIS2 in Bangladesh and What management information system (MIS) is and its utility in management; Issues in MIS of the Ministry of Health & Family Welfare The software used in MIS: DHIS2 for Analysis and presentation of routine MIS data.

History of MIS in Bangladesh

There are five health related routine Management Information Systems (MIS) at different levels of development. Four of these belong to the Ministry of Health & Family Welfare:

- MIS Health (DGHS) and its subsystems;
- MIS Family Planning (DGFP) and its subsystems;
- Directorate General of Drug Administration;
- MIS National Nutrition Program (NNP); and
- MIS of the 2nd Urban Primary Health-care Project of the Ministry of Local Government Rural Development & Cooperatives (UPHCSDP).

Before 2009 the collection of routine health information in the public sector in Bangladesh was done manually, using paper forms which would be completed by health workers at a decentralized level and submitted upwards, through the administrative hierarchy and would take, on average, two months from the lowest level health facilities to reach the MIS department at DGHS and DGFP, Dhaka. The main features of the MIS system in the health sector include:

Parallel systems: The MOHFW has two main MIS units – one in the DGHS and one in the DGFP – each responsible for collecting routine data about the health and family planning services, as well as information about logistics and personnel.

Overlapping reporting requirements: Facilities and field workers collect certain types of routine data using different reporting formats, which were not harmonized to prevent duplicated information.

Insufficient human resources for MIS: The MIS units both in the Health Services Directorate and Family Planning Directorate are understaffed (160 out of 660 sanctioned posts were vacant in 2009)

Starting in 2009 a virtual explosion of e-Health projects within the MOHFW got enunciated: from ***telemedicine centers, electronic attendance systems to monitor staff punctuality at health facilities, and mobile phone-based medical consultations for patients at district and sub-district health facilities, to a nationwide patient complaint system using text messaging***. Beyond this, efforts also began in earnest to build a digital infrastructure within the Ministry, extending from the national to the peripheral levels. The offices of the MIS unit at the Health Services directorate were renovated; a ***MIS Data Center – a modern, air-conditioned space with a backup generator – was established to host a new web-based server***. An IT lab was also set up to facilitate staff training. MIS unit of DGHS has provided internet connectivity in the entire public sectors of Bangladesh across all health-points down to the community clinic level (about 14,000 places) by April 2014. The community clinics were given laptops, and community health workers were given handheld tablet devices.

Section 1.2

What is DHIS2

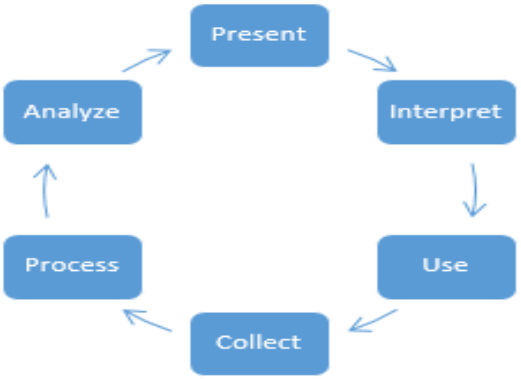
In 2010, MIS unit of DGHS installed DHIS2 on its servers and Bangladesh joined the ranks of countries utilizing the product.

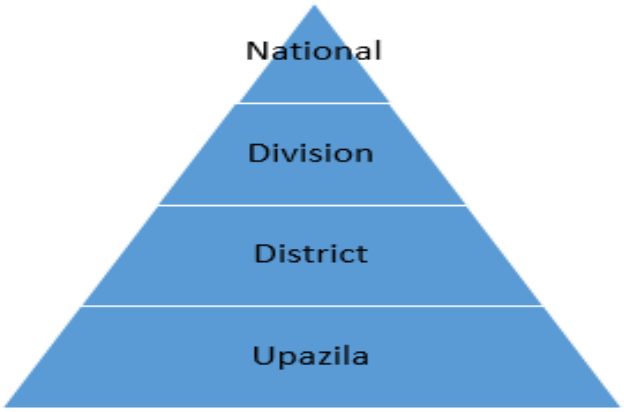
DHIS 2 is a tool for collection, validation, analysis, and presentation of aggregate statistical data, tailored (but not limited) to integrated health information management activities. It is a generic tool rather than a pre-configured database application, with an open meta-data model and a flexible user interface that allows the user to design the contents of a specific information system without the need for programming. DHIS2 is a modular web-based software package built with free and open source Java frameworks with interoperability between users and programs.

DHIS 2 Benefits:

- DHIS 2 is a flexible, easy, system to adapt for local data collection tools
- DHIS 2 has been adapted in numerous countries around the world and there are several online communities and resources for additional information exchange and interoperability
- Can run as a web-based or as an offline application.
- Relatively easy to learn and adapt (does not require high level of programming knowledge)
- Allows multiple levels of organization units to enter into the system and data can be aggregated accordingly (dept. →Site → District → Division → National level)
- Incorporates data checks during data entry and after data collection
- Maintains Security through defining user levels
- Allows user to tailor indicators
- Streamlines data and site census management because all program areas data are kept in one place
- Facilitates data use because all staff can access data at any time from office

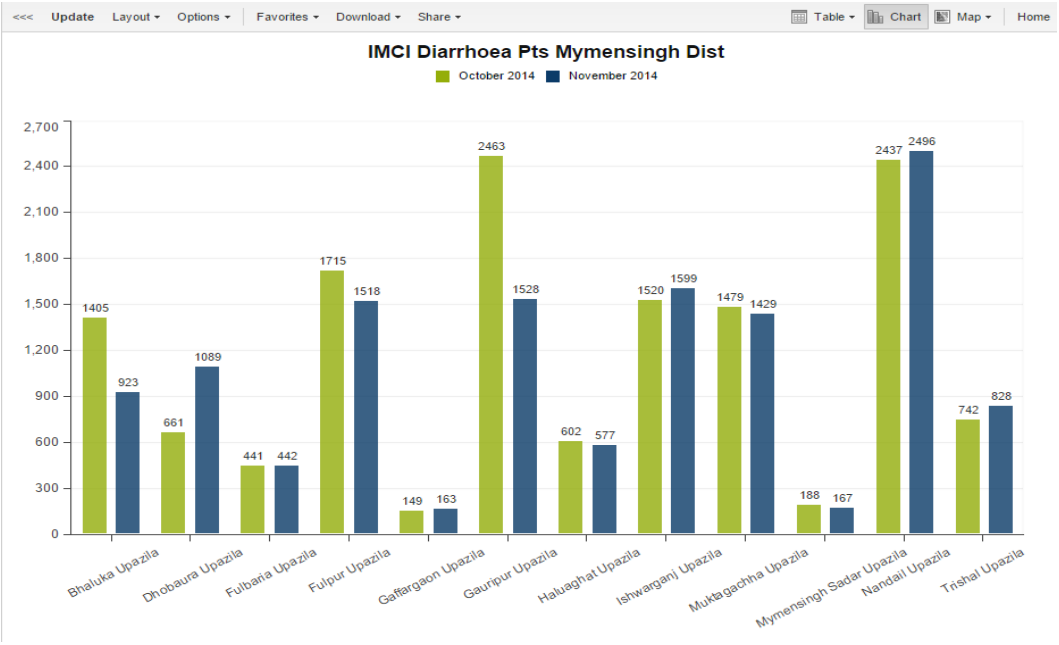
The Information Cycle





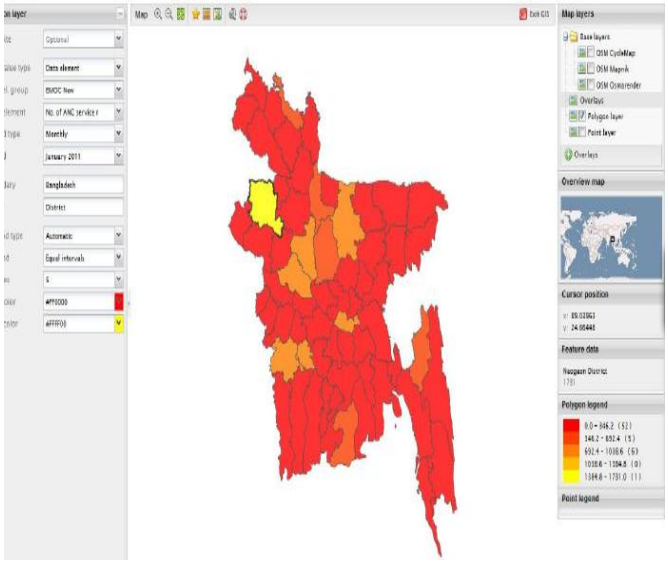
Reporting functionality in DHIS2: The reporting module in DHIS 2 provides a range of reporting alternatives. This section will explain how to use these to view and analyze data. Another section explains how to configure and set up the various reporting tools.

Charts: Users can generate and customize a range of standard charts by selecting indicators, organizational units, time periods and other variables. Charts can be saved, shared and downloaded.



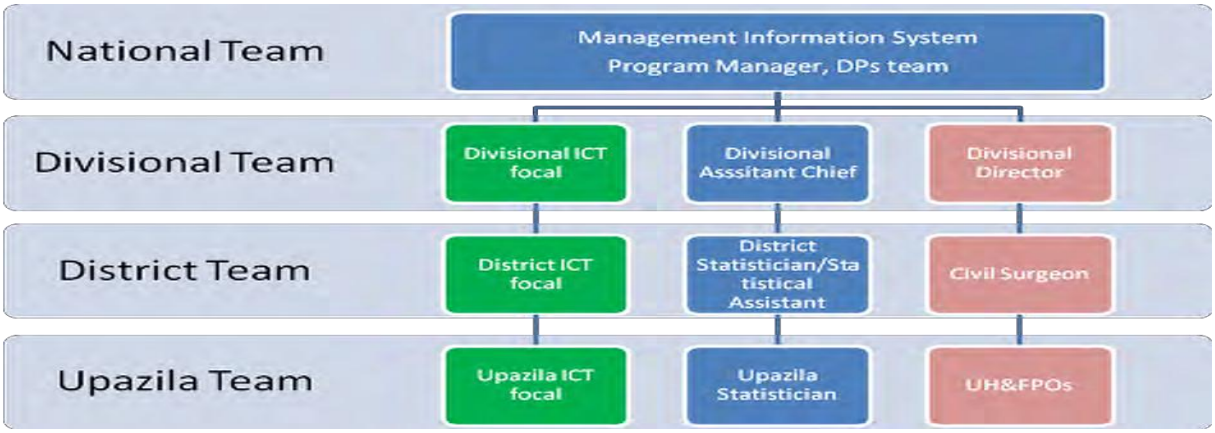
Pivot tables: Data can be arranged and analyzed in web-based pivot tables; users can filter columns and rows according to their specific needs. Tables can be saved for future use within DHIS2, or downloaded for offline use in Microsoft Excel.

GIS mapping: Data in DHIS2 can be mapped visually. Users can generate, save and share maps showing everything from the location of different types of health facilities to the proportion of children who are fully immunized in a given administrative unit.



Dashboard: DHIS2 users can configure their own personal 'dashboards' where the charts, maps and reports they use most often are continuously up- dated for real-time tracking of key indicators. The dashboard feature also allows users to communicate directly with other DHIS2 users through a messaging function, thereby facilitating joint discussions and interpretations of data.

Human Resources for MIS- DGHS at different levels:



Chapter 2

Data Entry in DHIS2

Before getting started with DHIS2 you need to know what are the forms are available in the implementation in Banglaesh perspective and then how you can capture data.

SUMMARY

Overview

DHIS2 lets you capture aggregate data on a variety of devices - it even works offline. If Internet connectivity drops during capture, data will be stored locally in the browser and you can continue working as before. When connectivity is back you can push data up to the online server.

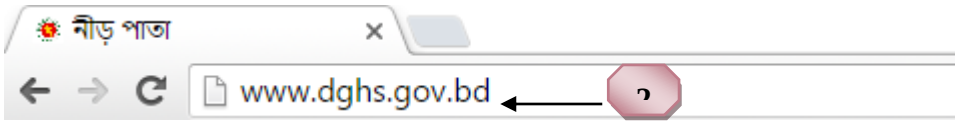
After complete this chapter you will learn about the idea of dataset or forms and also the data flow capturing from different locations. You can also learn the step by step guideline how to capture data and also the concept of data input validation data and audit trail. At the end of this chapter there you can come to know how to capture offline data.

How to Open

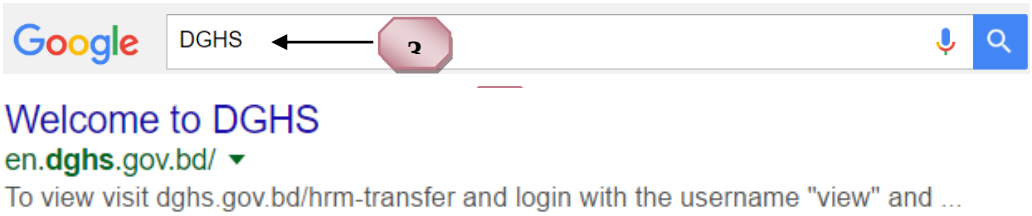
To open DHIS2 first go to the browser and type www.dghs.gov.bd this link. Then click “Online Data Entry” in the left. Then click “DHIS2 Central Database” or “DHIS2 individual record” for entering data. After that user can login to the system with given username and password. After successful login to the system user can view his/her particular home page. Detail step by step guideline is mention below:

1. Double Click on Google Chrome Browser from Desktop. It is suggested that user should use the Google Chrome Browser for DHIS2.

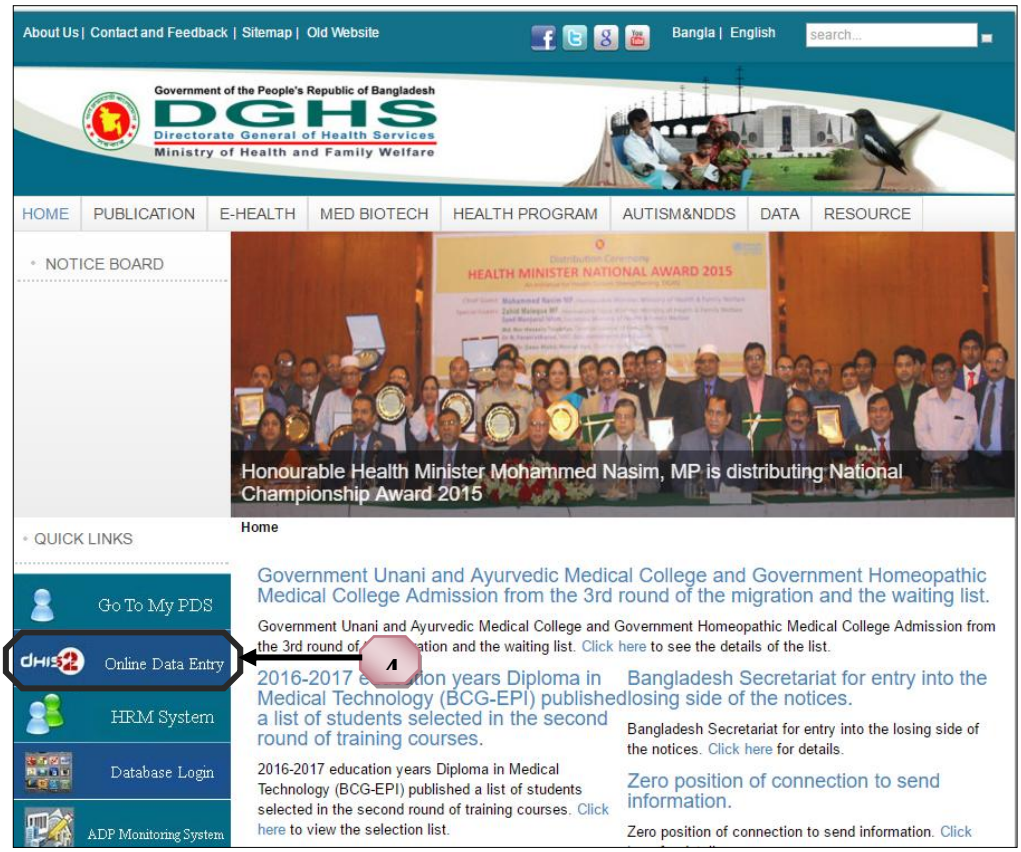
2. Type the following address to get the DGHS official website. www.dghs.gov.bd



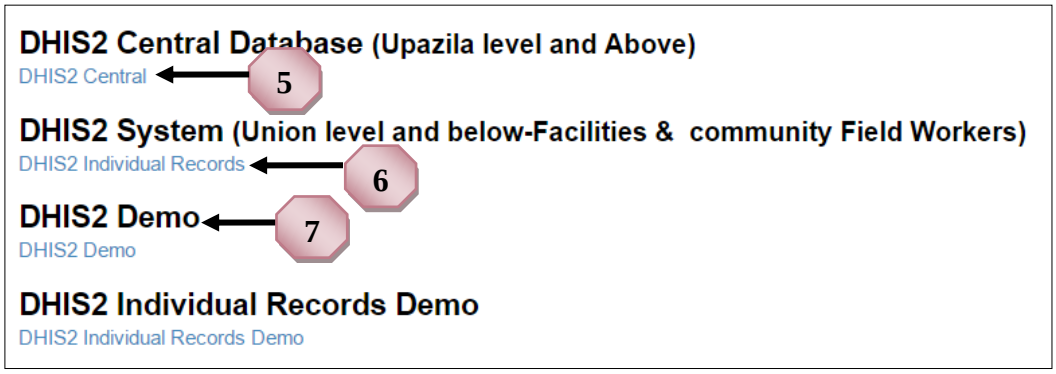
3. Or type “DGHS” in www.google.com and click the link in “Welcome to DGHS”



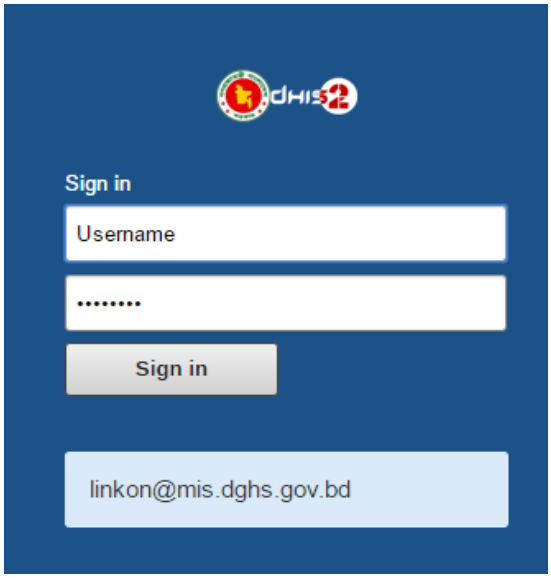
4. Now the DGHS home page will appear and click “**Online Data Entry”** in the left is as below



5. Click **DHIS2 Central Database** which is upzaila level and above
6. Click **DHIS2 individual record** which is union level and below facility like community clinic
7. Click **Demo server** for testing



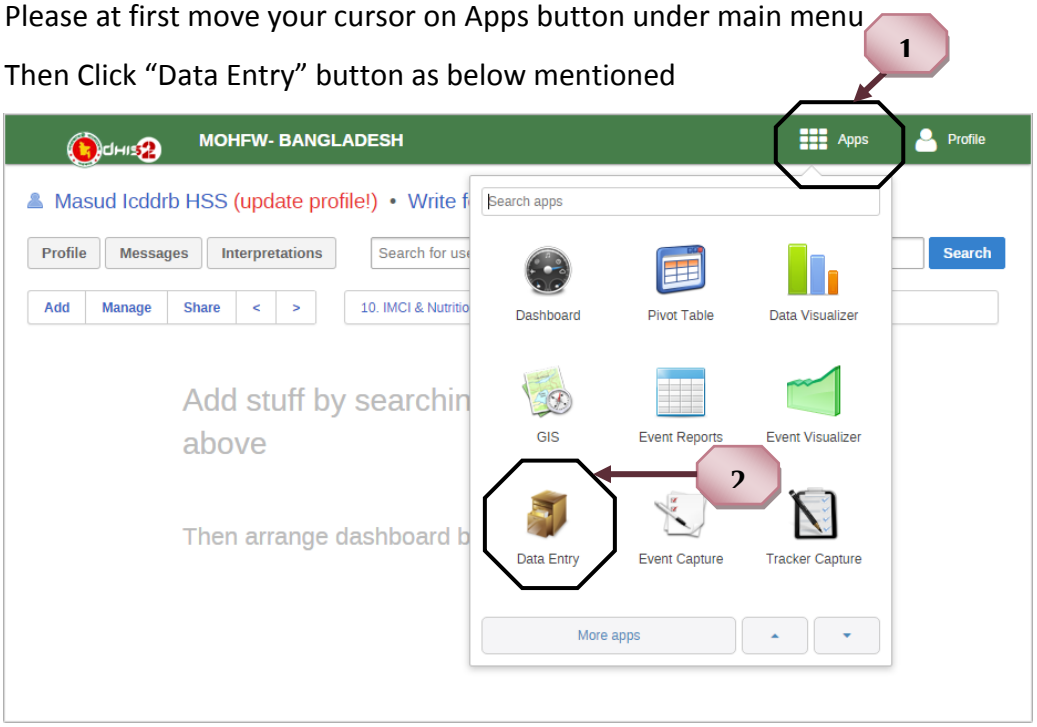
To login into the system type your provided username and default password and click Sign In button. Enter the provided username and default password and click Sign In button.



After successful login the home page will appear like as below.

To open "**Data Entry**"

1. Please at first move your cursor on Apps button under main menu
2. Then Click "Data Entry" button as below mentioned



Workflow of Data Capture

Aggregated data is capturing the summary data. They Frequency of dataset capturing can be daily, weekly, monthly, bimonthly etc. Days after period to qualify for timely submission are configurable in dataset settings.

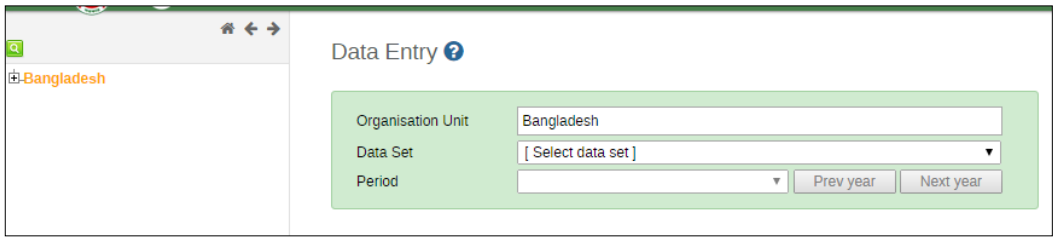
Matrix of data entry forms capture from different organizational level.

Data Set	Medical College	CS Office	District Hospital	NGO	Private Clinic	UHC	USC
Cervical and Breast Cancer Screening Programme Report	Yes		Yes			Yes	
CSBA Monthly Progress Report						Yes	
Daily OPD and Emergency Visits, Admission Data Set			Yes			Yes	
Dog bite report			Yes				
EPI District Stock Report (Form-4)		Yes					
EPI Infant and Women Data Set (Form-1 & 2)						Yes	
EPI Upazilla Stock Report (Form-3)						Yes	
Monthly EmOC DataSet with Genital Fistula			Yes	Yes	Yes	Yes	
Monthly HMC meeting			Yes			Yes	
Monthly Hospital Bed Statement	Yes		Yes			Yes	
Monthly IMCI Dataset			Yes			Yes	Yes
Monthly Major Equipment Information	Yes	Yes	Yes			Yes	
Monthly Mobile Phone Health Dataset			Yes			Yes	
SI report		Yes					
Indoor patient Registration (Event Capture)						Yes	

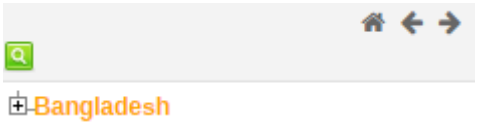
N.B. Please see **Annex-I** for the guideline of all relevant forms.

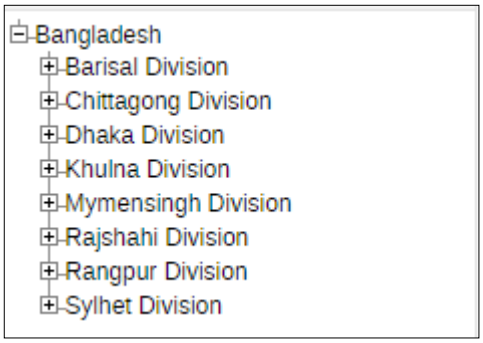
Selecting data entry form

After click the data entry button below mentioned screen will appear. This is the home screen for data entry.

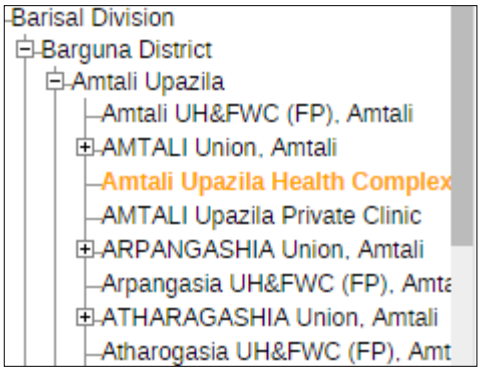


1. Click on + button to expand the organization in the left panel

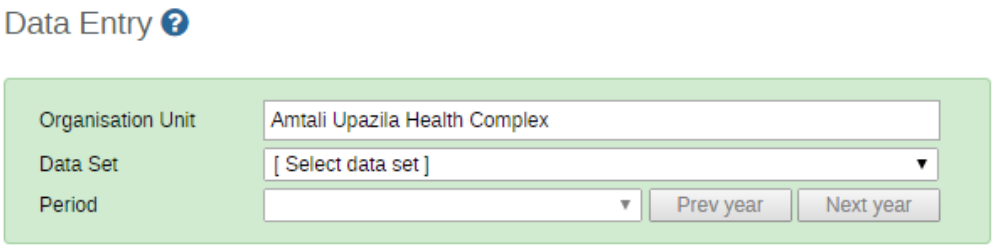




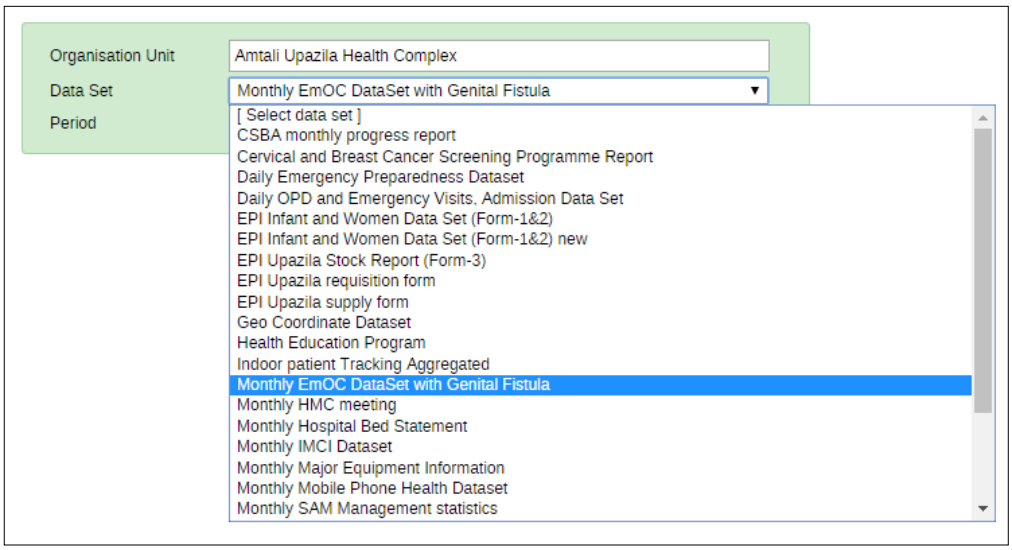
2. To capture the specific organization just expand the level. To capture the data drill down and expand and click on the desire organization unit. For example to capture the data for Amtali Upazila Health Complex first expand the division and district respectively Barishal and Barguna and under the Amtali Upazila select Amtali Upazila Health Complex.



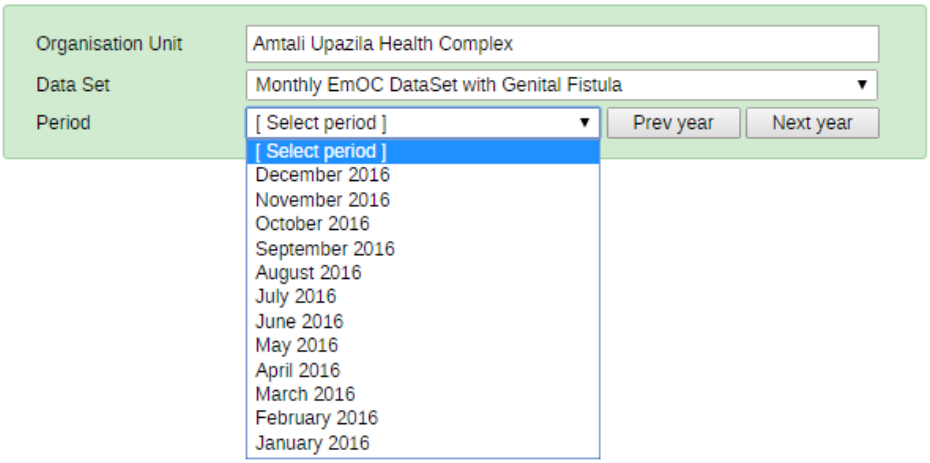
3. Now Selected Organization Unit will appear in the text box



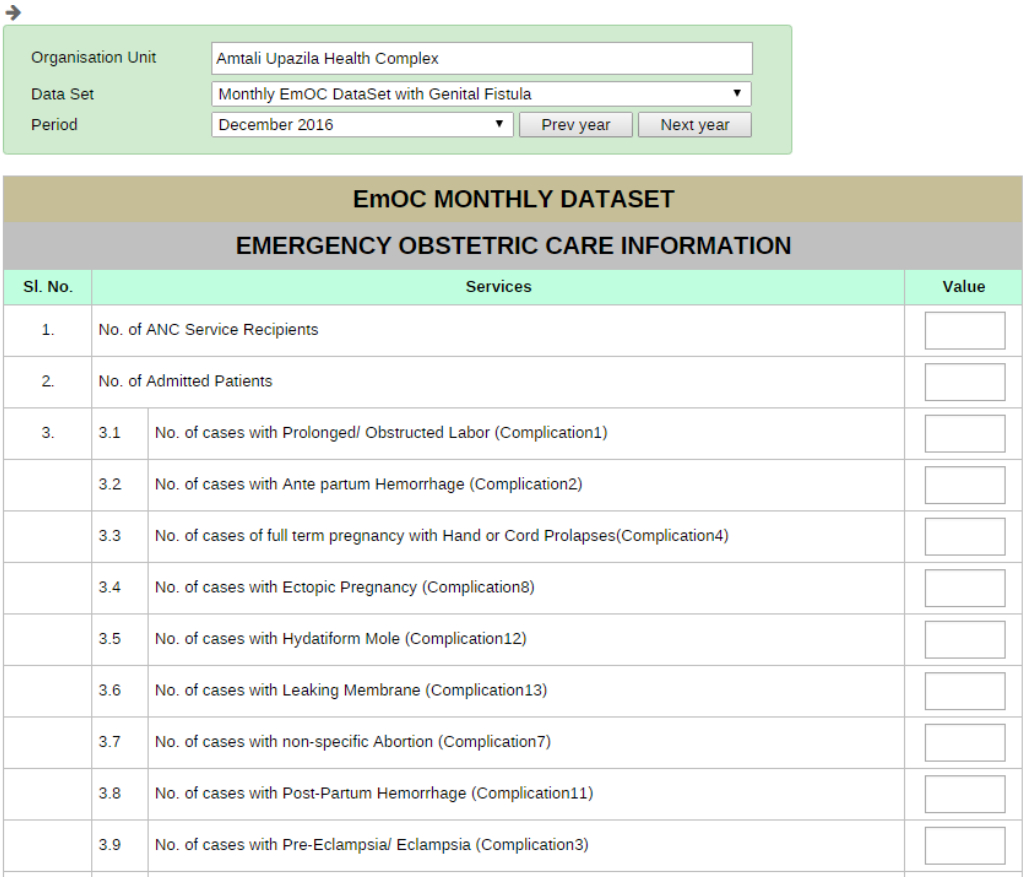
4. Select the desire dataset or forms.



5. Select the desire period.



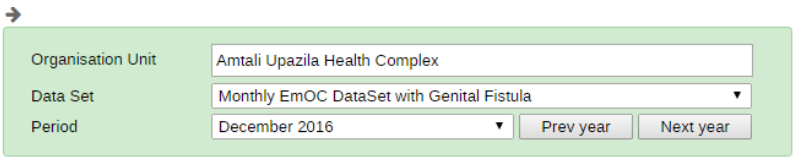
6. For selecting previous year list of period select “Prev Year” and “Next Year” list select the next year button
7. Now if you want to select the desire month for data entry please select that month and the data entry screen will appear.



8.

Entering Data

Start entering data by clicking inside the first field and type in the value. Using mouse click on the text box where you want to capture data and if you use keyboard Move to the next field using the Tab button. Shift+Tab will take you back one step.



EmOC MONTHLY DATASET

EMERGENCY OBSTETRIC CARE INFORMATION

Sl. No.	Services		Value
1.	No. of ANC Service Recipients		
2.	No. of Admitted Patients		
3.	3.1	No. of cases with Prolonged/ Obstructed Labor (Complication1)	
	3.2	No. of cases with Ante partum Hemorrhage (Complication2)	
	3.3	No. of cases of full term pregnancy with Hand or Cord Prolapses(Complication4)	
	3.4	No. of cases with Ectopic Pregnancy (Complication8)	
	3.5	No. of cases with Hydatiform Mole (Complication12)	
	3.6	No. of cases with Leaking Membrane (Complication13)	
	3.7	No. of cases with non-specific Abortion (Complication7)	
	3.8	No. of cases with Post-Partum Hemorrhage (Complication11)	
	3.9	No. of cases with Pre-Eclampsia/ Eclampsia (Complication3)	

The values are saved immediately and do not require to be saved at a later stage. A green field indicates that the value has been saved in the system (on the server).

EmOC MONTHLY DATASET

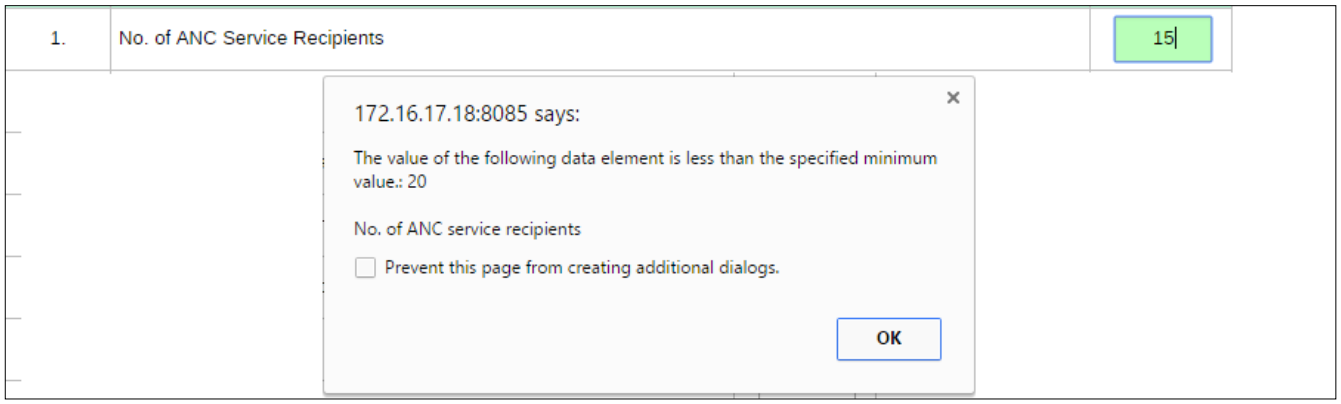
EMERGENCY OBSTETRIC CARE INFORMATION

Sl. No.	Services	Value
1.	No. of ANC Service Recipients	21
2.	No. of Admitted Patients	10

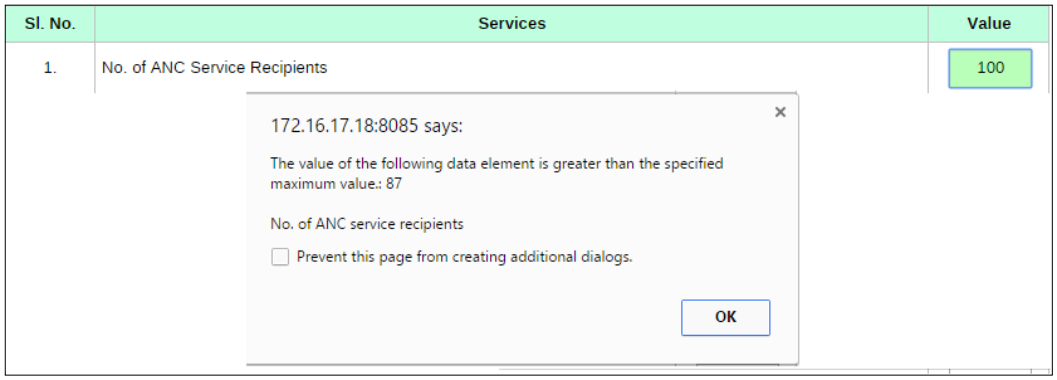
2.4.1 Input validation

If you type in an invalid value, e.g. a character in a field that only accepts numeric values you will get a pop-up that explains the problem and the field will be coloured yellow (not saved) until you have corrected the value. If you have defined a min/max range for the field (data element+organisation unit combination) a pop-up message will notify you when the value is out of range, and the value will remain unsaved until you have changed the value (or updated the range and then re-entered the value).

Value is less then the Range:



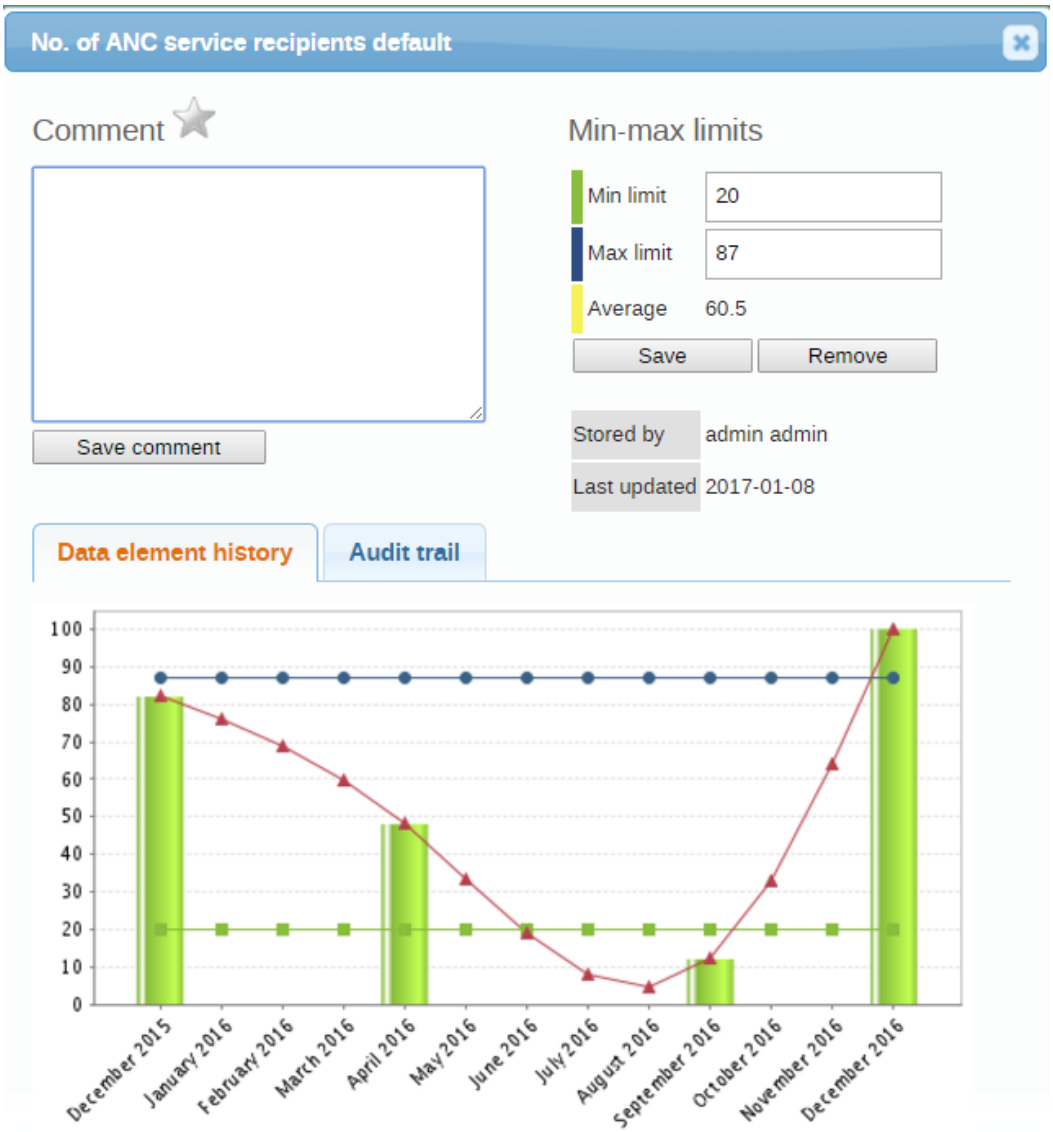
Value is grater then the Range:

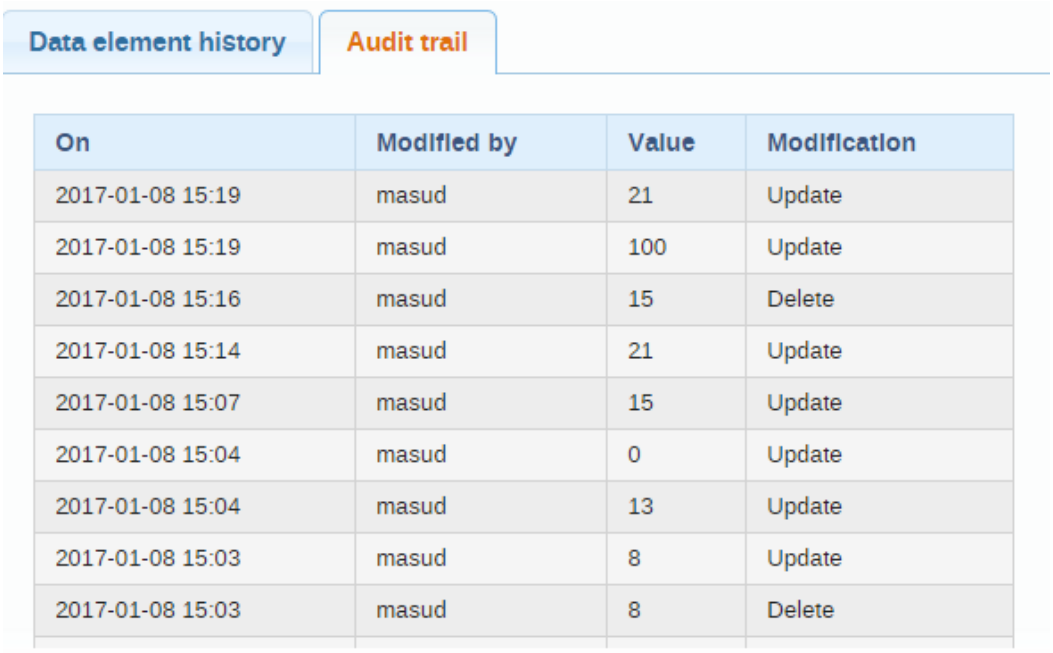


Sl. No.	Services	Value
1.	No. of ANC Service Recipients	100

2.4.2 Audit trail

The audit trail allows you to view other data values which have been entered prior to the current value. As an example, the following data element was changed from its original value to 120. The audit trail shows when the data value was altered along with which user made the changes.





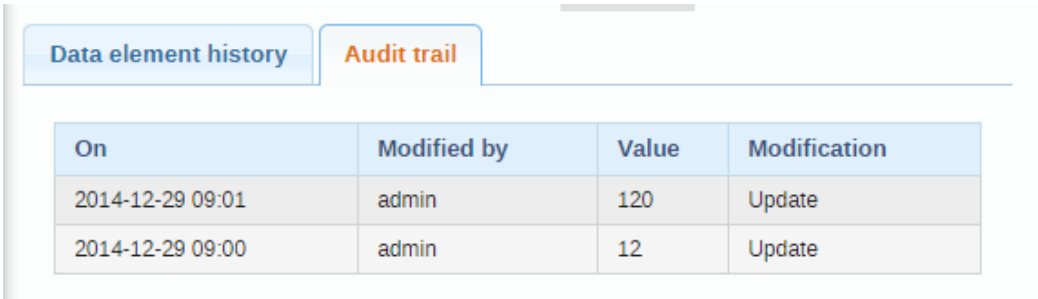
On	Modified by	Value	Modification
2017-01-08 15:19	masud	21	Update
2017-01-08 15:19	masud	100	Update
2017-01-08 15:16	masud	15	Delete
2017-01-08 15:14	masud	21	Update
2017-01-08 15:07	masud	15	Update
2017-01-08 15:04	masud	0	Update
2017-01-08 15:04	masud	13	Update
2017-01-08 15:03	masud	8	Update
2017-01-08 15:03	masud	8	Delete

2.4.3 Disabled fields

If a field is disabled (grey) it means that the field can and should not be filled. The cursor will automatically jump to the next open field.

2.4.4 Data history

By double-clicking on any input field in the form a data history window opens showing the last 12 values registered for the current field (organisation unit+data element+categoryoptioncombo) in a bar chart. This window also shows the min and max range and allows for adjusting the range for the specific organisation unit and data element combination.



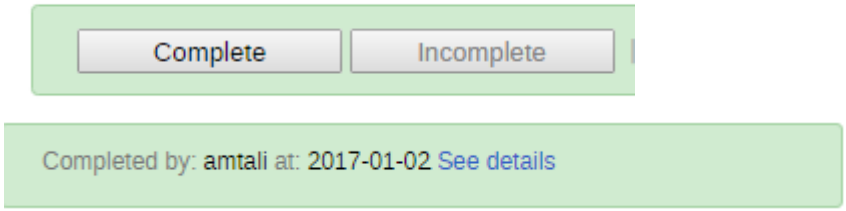
On	Modified by	Value	Modification
2014-12-29 09:01	admin	120	Update
2014-12-29 09:00	admin	12	Update

2.4.5 Follow Up

In the data history window there is also a feature to tag or star a value. E.g. a suspicious value that needs further investigation can be kept in the system, but marked for Follow-Up. In the Data Quality module you can run a Follow-Up analysis and view all values marked for Follow-Up, and then later edit the values if proved incorrect.

2.4.6 Complete and Incomplete

if the user click complete button then they cannot change the information afterward. If data is not completed then click “Incomplete” button and after that user can change the data.



Section 2.5

Editing data

If you wish to enter data which has already been entered, simply replace the data entry value with the Update values. If you want to delete a data value completely, you should select the value of interest, and Press "Delete" on your keyboard. If you enter a zero and the data element has been configured to not store zeros, the previous data value (i.e. the one you wish to modify) will not be overwritten with the new value. Therefore, it is better practice to delete the data value completely (waiting for the cell to turn green) and then to enter the new value.

Previous value of “No. Of Admitted Patient was 10” if you want to edit the value you just open the form as like in previous section mention and update the data. Move one cell to another cell automatically save the data.

Sl. No.	Services	Value
1.	No. of ANC Service Recipients	21

Update Value to 20

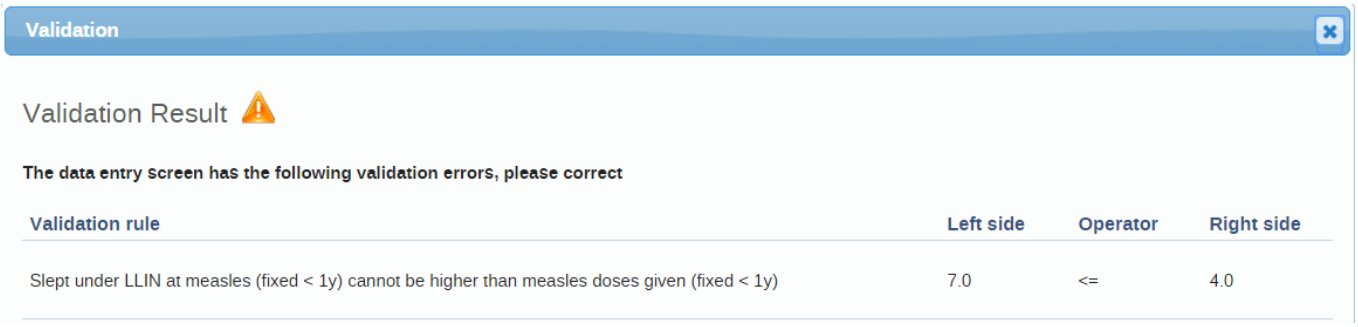
2.	No. of Admitted Patients	20

Validating data

When all the available values for the form has been filled in you can run a validation check on the data in the form. Click on the "Run Validation" button in the top right (at the beginning of the data entry page) or lower left (at the end of your data entry page) corner. All validation rules which involves data elements in the current form (dataset) will be run against the new data. Upon completion you will be presented with a list of violations or a simply a message that says "The data entry screen successfully passed validation". See the Data Quality chapter for information on how to define such validation rules.

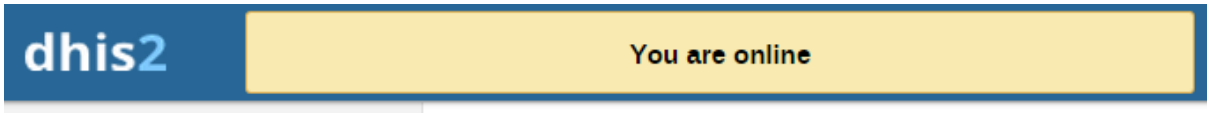
When you have corrected any erroneous values and are done with the form the recommended practice is to click on the Complete button below the form to register the form as complete. This information is used when generating completeness reports for district, county, province or the national level.

Data entry validation result



Off-line data entry

The data entry module will function even if during data entry the Internet connectivity is not stable. In order to utilize this functionality, you must login to the server while Internet connectivity is present, but if during data entry, the Internet link between your computer and the server becomes unstable, data can still be entered into the data entry form, saved to your local computer, and then pushed to the server once the Internet connectivity has been restored. Data can be entered and stored locally while being off-line and uploaded to the central server when on-line. This means that the on-line deployment strategy will be more viable in areas with unstable Internet connectivity. The total bandwidth usage is greatly reduced since forms



no longer are retrieved from the server for each rendering. When the server is able to be reached through the Internet connection, a message is displayed at the top of the data entry screen below. If the Internet connection should disconnect for some reason during the data entry process, this will be detected by the application, and you will be informed that your data will be stored locally.

Data entry can proceed as normal. Once you have entered all of the necessary data, and the application detects that the server is back on-line, you will be informed that you have data which needs to be synchronized with the server.

Once the data has successfully synchronized with the server, you will receive a confirmation message that the data has been successfully uploaded to the server.

Chapter 3

Pivot Table

Pivot table is a dynamic tool for data analysis which lets quickly summarize and arrange data according to its dimensions.

SUMMARY

Overview

Pivot table is a dynamic tool for data analysis which lets quickly summarize and arrange data according to its dimensions. Data dimensions in DHIS 2 are data elements (explaining what the data means), periods (representing the time aspect) and the organizational hierarchy (representing the geographical location of the data). From these dimensions select dimension items to include in the pivot table.

After complete this chapter you will learn about the how to analyze data using pivot table, concept of data elements, indicators and reporting rate, selecting organization unit and time period and finally the output of the pivot table. At the end of this chapter there is a real time example of creating pivot table so that you can easily create pivot table for your desire data analysis.

Analysis Concepts

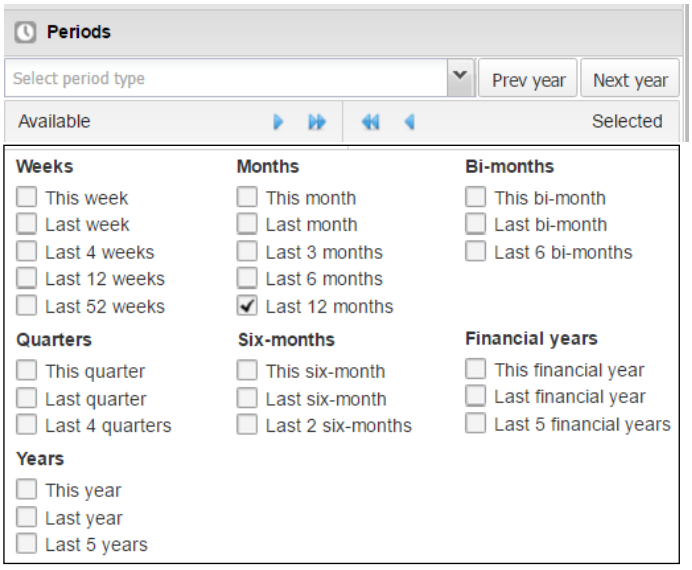
To analyze data using pivot table you need to know the "**Basic Building Block**" of DHIS2 reporting. First of all you have to think about **what** you want to analyze. In this case in DHIS2 have some options indicators, data elements and reporting rates, event data items and program indicators. Then you need to select **when** it was happen. In this case you have to select the time period and finally you need to select **where** it was happen which means the organization unit.

What:

What you want to analyze

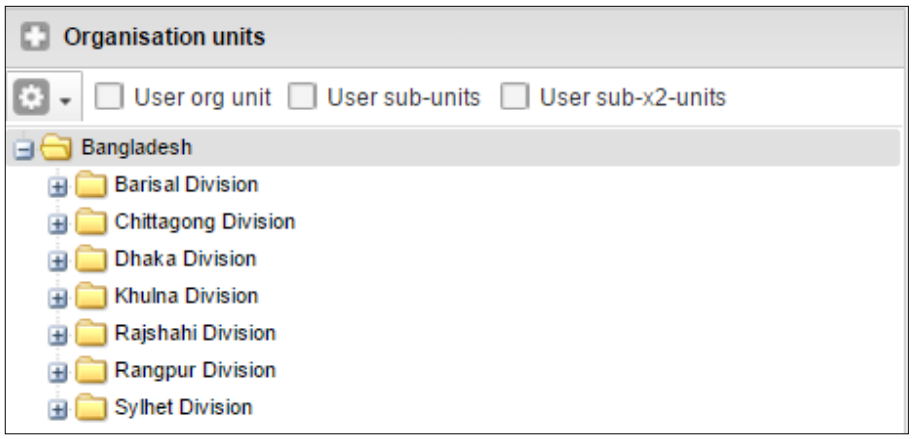
When:

Period of your analysis



Where

Location means organization unit of your analysis



Concept of Indicator, Data Elements and Reporting Rate

Data Element is a record of health event or health related event.

Number of pregnant women who received an antenatal check-up	No. of Admitted Women
Number of children given BCG immunization	No. of Deliveries
Number of C-Section	No. of U-5 child death

Indicator is a data element placed in a given context so that it becomes information that can be used for program monitoring, management, and action. Indictors enable to compare “apples” with “apples” not with “melons” such as ratio, percentage etc.

Exp: Suppose in one location total number of children is 450 and among them BCG given is 360.

Indicator: BCG Coverage rate = 80%.

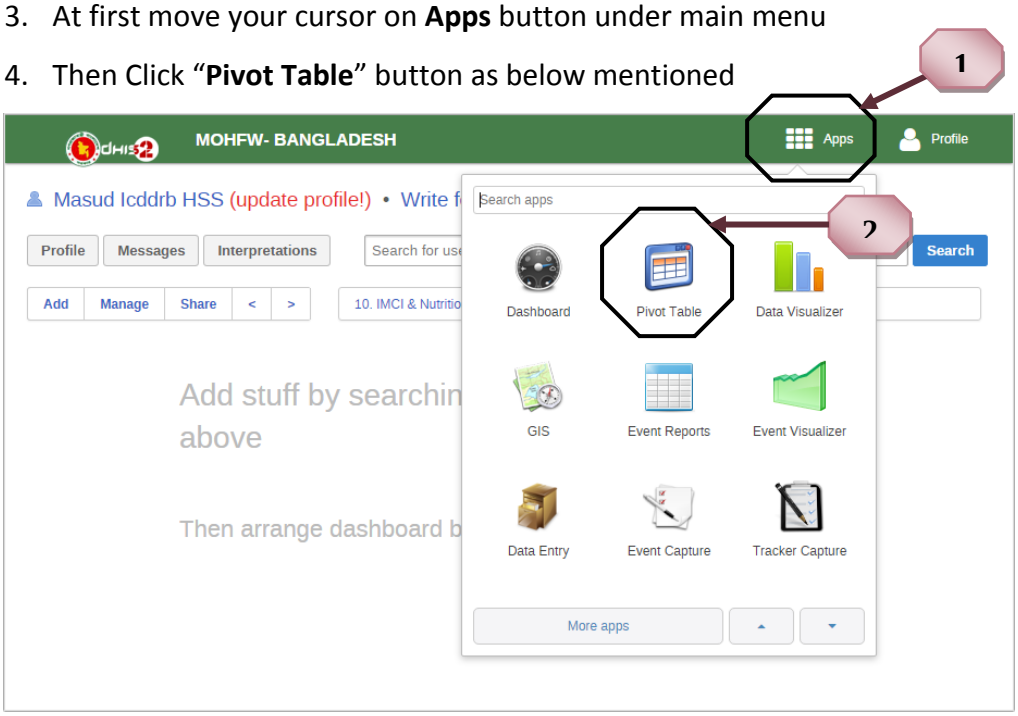
Here, multiplying factor: 100; Calculation: 360/450*100 = 80%

Reporting rate is the percentage of a particular data set or forms which has been submitted in different period. Using this report you can easily monitoring the data submission status from different location and period.

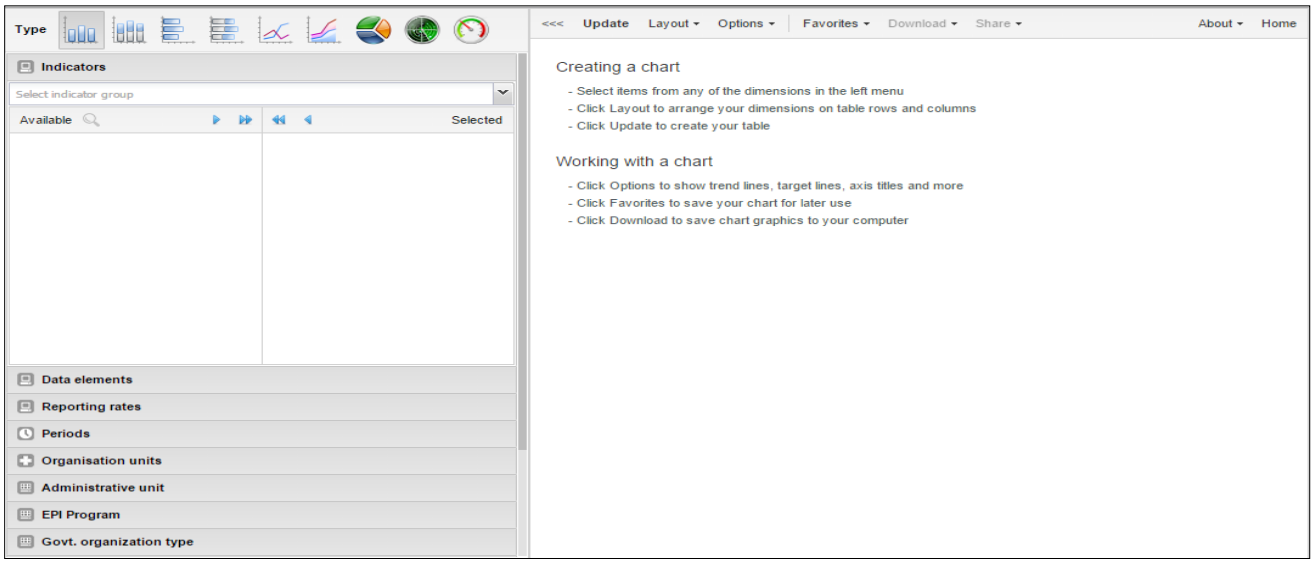
How to Open

To open “Pivot Table”

3. At first move your cursor on **Apps** button under main menu
4. Then Click “**Pivot Table**” button as below mentioned



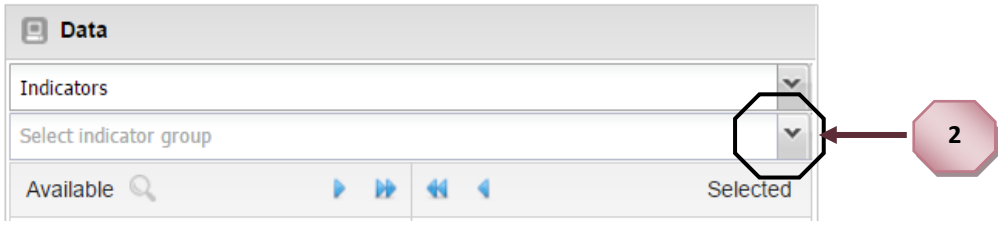
5. After click the button below mentioned screen will appear. This is the home screen for Pivot Table.



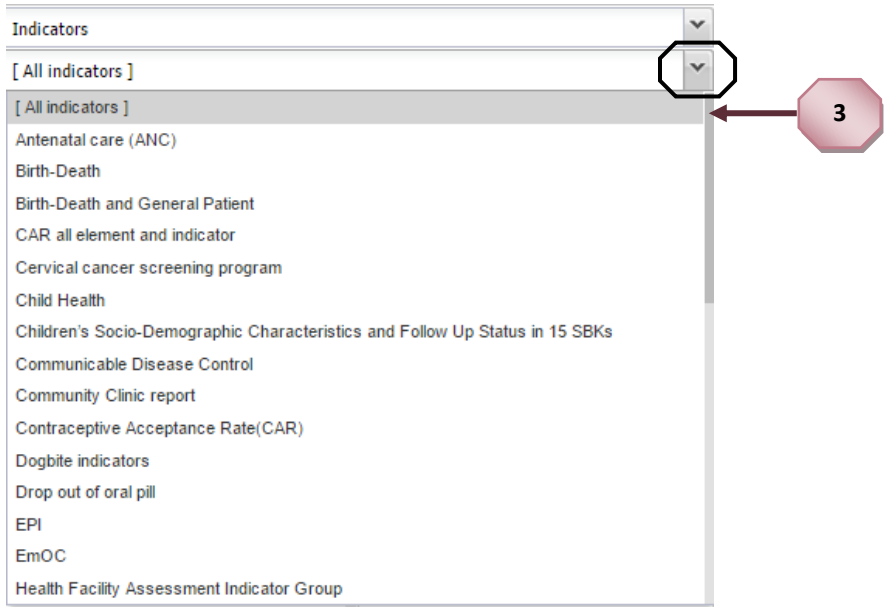
Selecting Indicators

1. Please click “Indicators” dropdown from left panel.

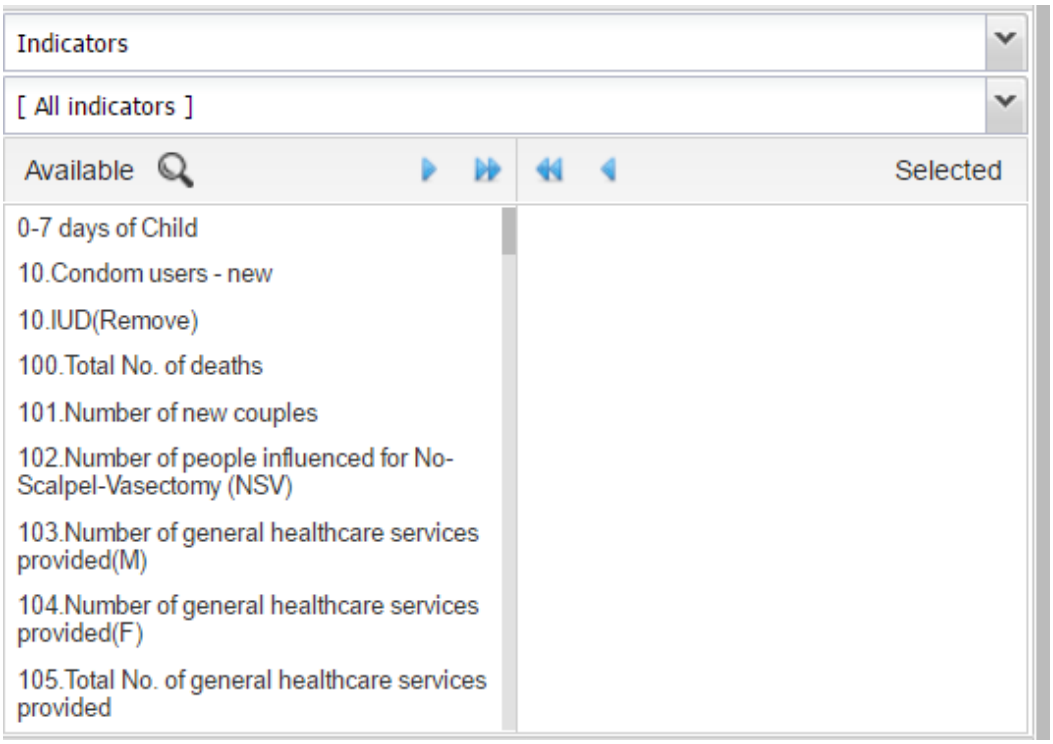
2. You can select Indicators group from “Select Indicator group” drop down which is mentioned at Step 2



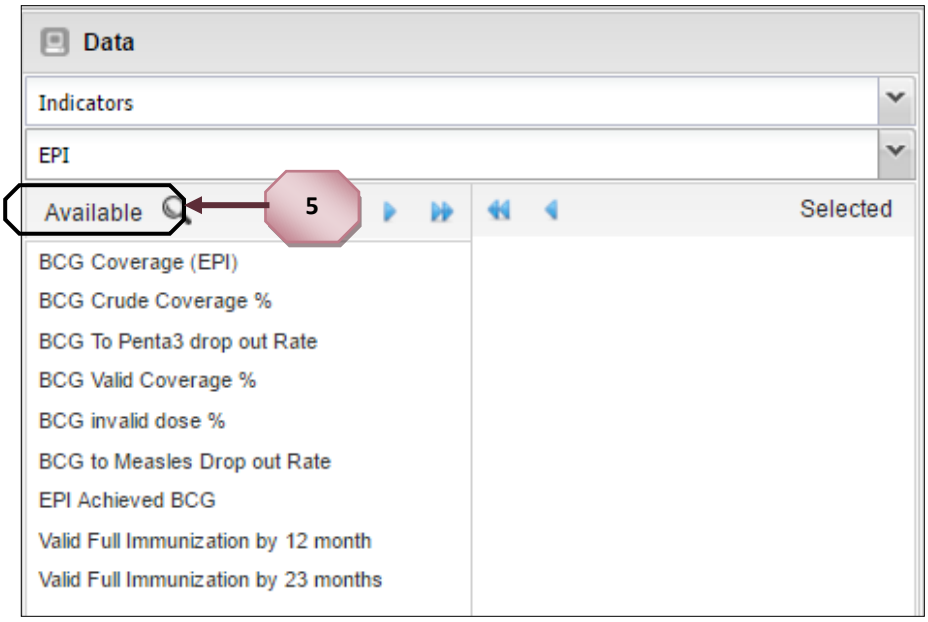
3. Click dropdown list for selecting the indicator group.



4. You can select [All Indicators] or you can select your desire indicator group. You can find which Indicator belongs to which groups please download the "**DHIS-2 Data Entry Instruction**" from **www.dghs.gov.bd** under **Resource** menu.

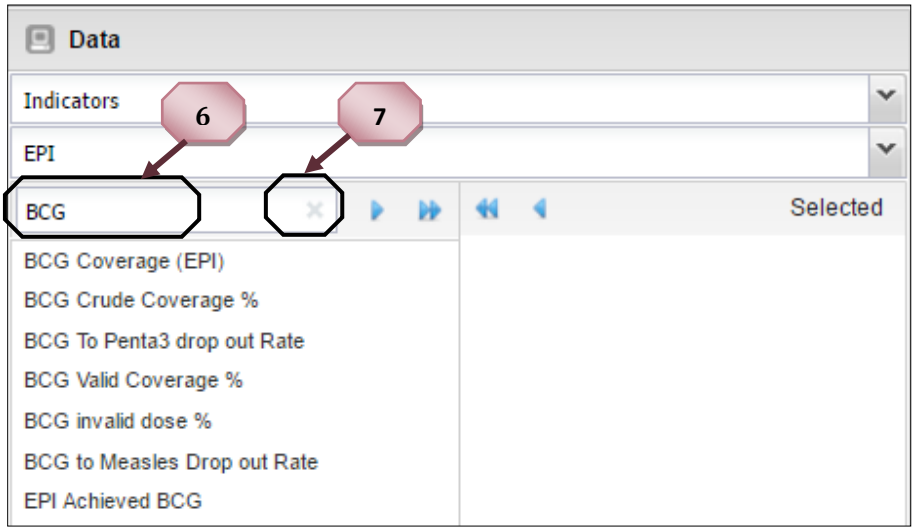


5. After select any of the indicator group from the list then their corresponding indicator will populate under "Available" List Box. You can search indicator name after click the button which is mentioned at Step 5 or finding the indicator by scrolling up and down.

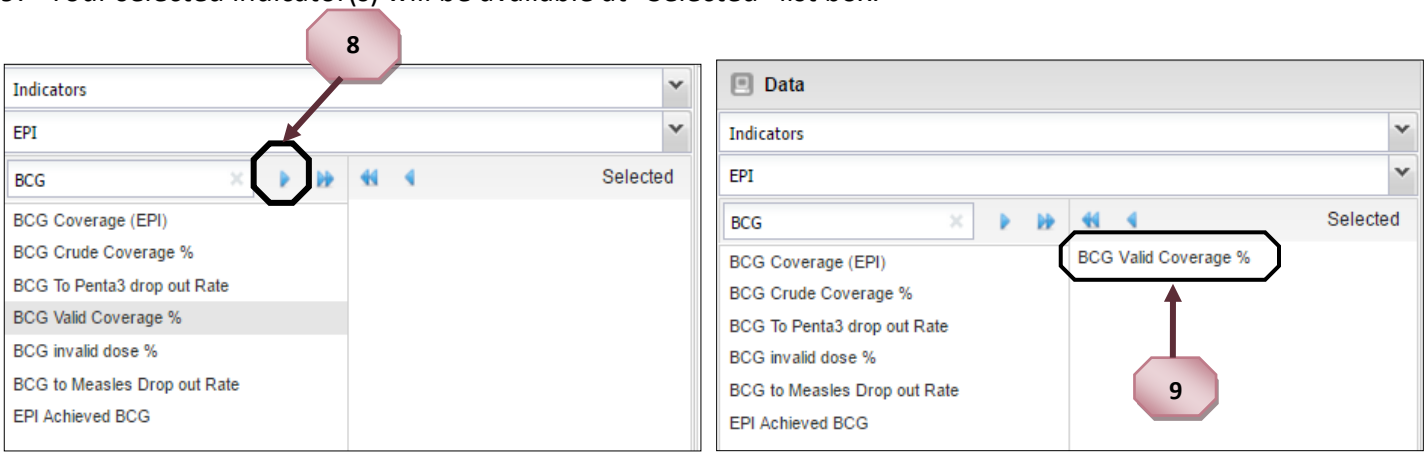


6. After clicking the “Available” button write your desire indicator in mentioned text box and you will see that DHIS2 is searching the text when you are typing.

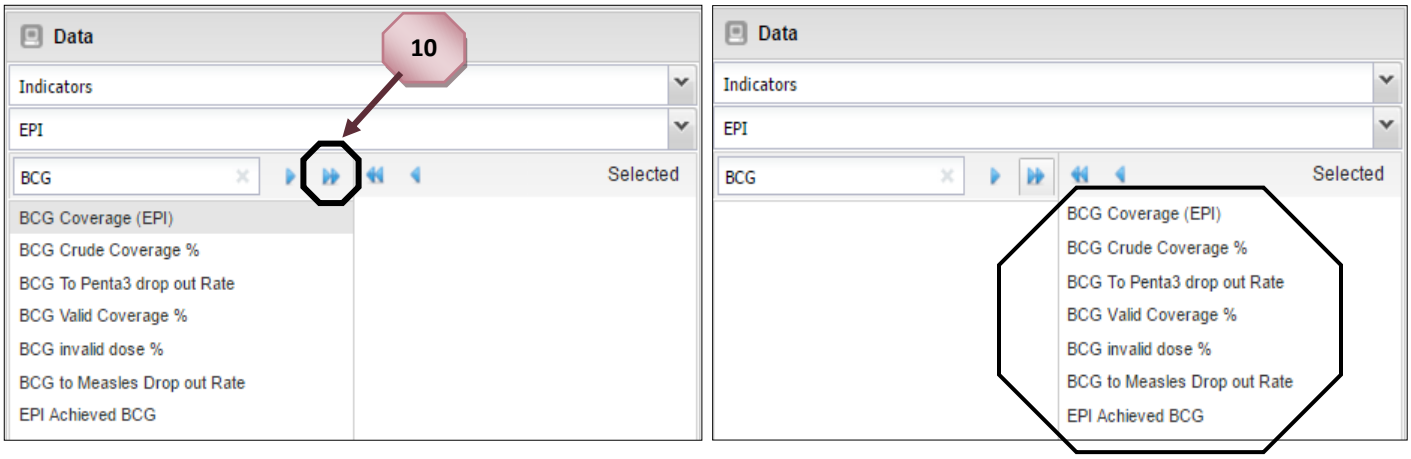
7. To cancel the search, please click the “x” button which is mentioned at step 7.



8. If you want to select individual indicator then select the indicator and click the button which is mentioned at Step 8. If you want select multiple indicators then select each indicator with holding CTRL button and click.
9. Your selected indicator(s) will be available at “Selected” list box.

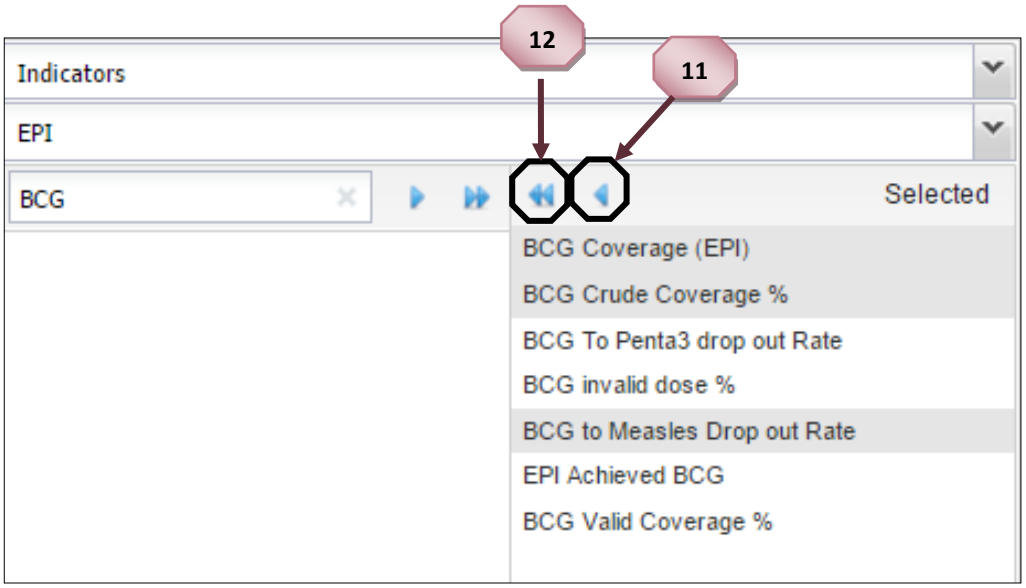


10. If you want to select all indicators then click the button which is mentioned at Step 10. All indicator(s) will be available at “Selected” list box.



11. If you want to remove individual indicator from the selected box then select the indicator and click the button which is mentioned at **Step 11**. If you want to remove multiple indicators then select each indicator with holding CTRL button and click the button which is mentioned at **Step 11**. Selected indicator(s) will be removed from “Selected” list box.

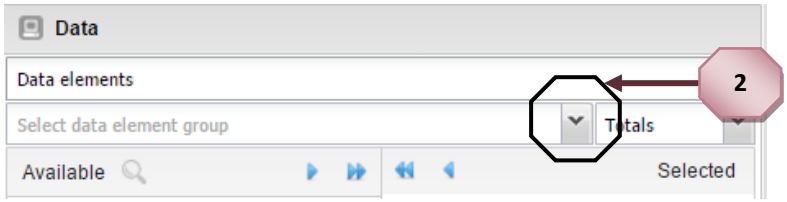
12. If we want to remove all indicators then click the button which is mentioned at **Step 12**. All indicator(s) will be removed from “Selected” list box.



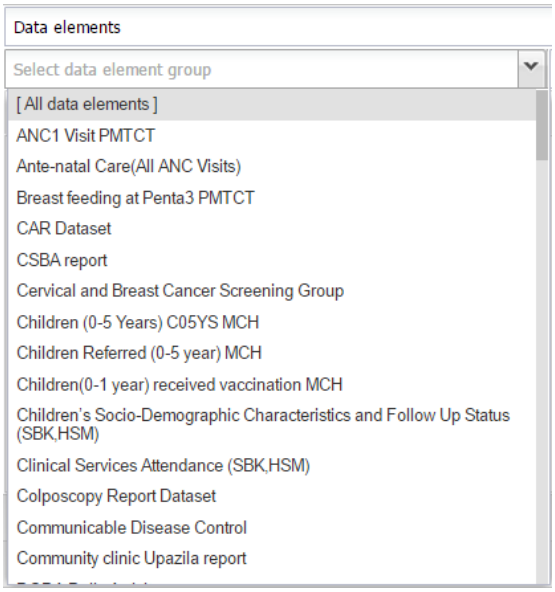
Selecting Data Elements

1. Please click "**Data elements**" dropdown from left panel.

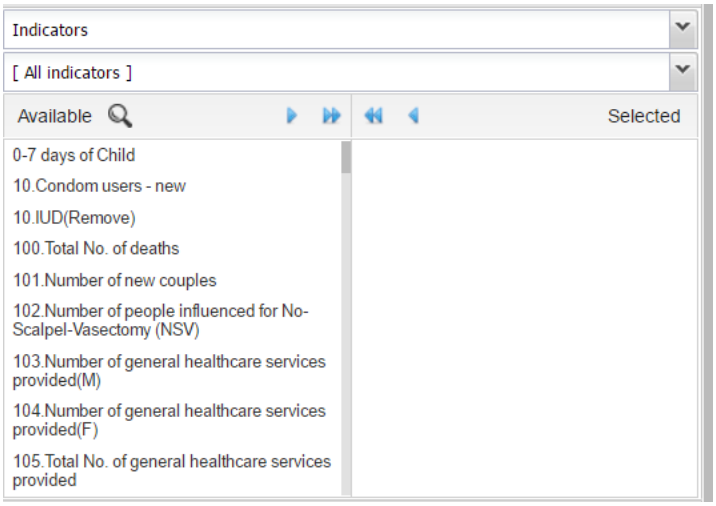
2. You can click Data Elements group from "**Select data elements**" drop down which is mentioned at Step 2.

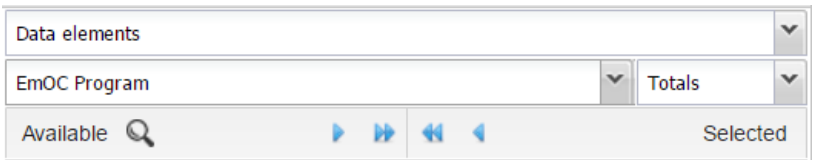


3. Click dropdown for selecting the data element group

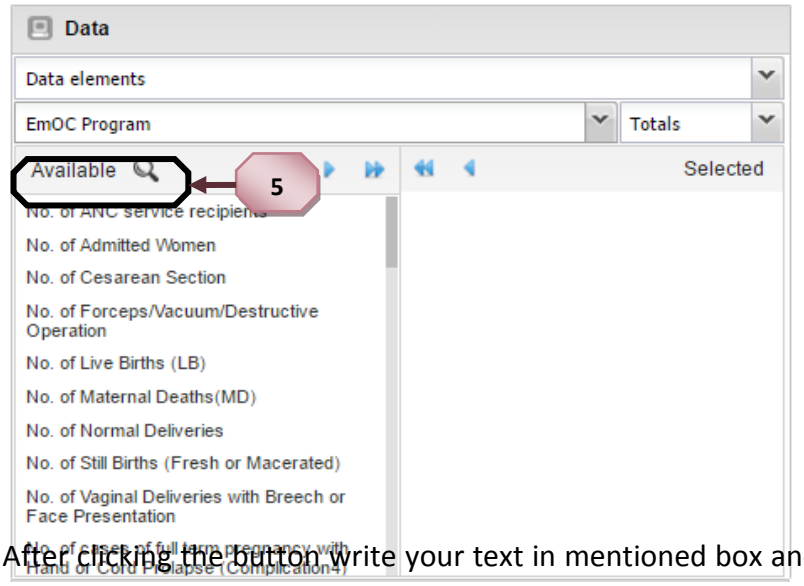


4. You can select [All Indicators] or you can select your desire indicator group. You can find which Indicator belongs to which groups please download the "**DHIS-2 Data Entry Instruction**" from www.dghs.gov.bd under **Resource** menu.

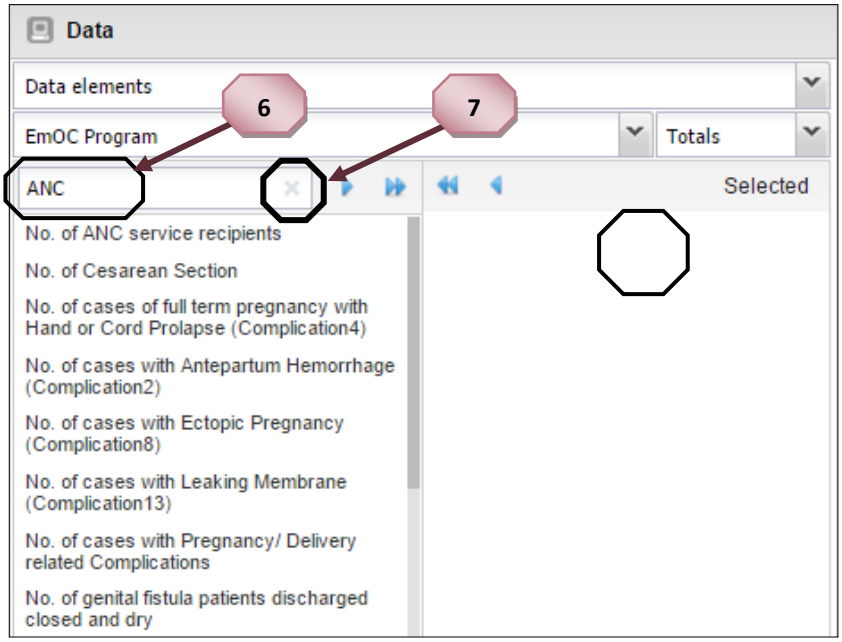




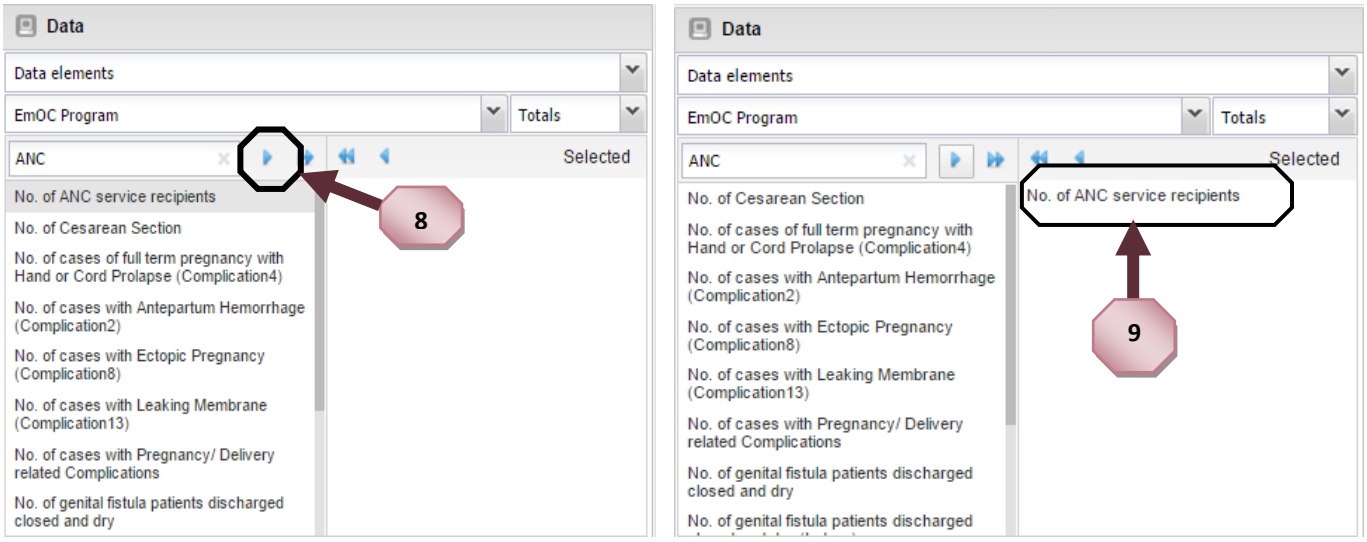
5. After selecting any of the Data Element group from the list then their corresponding Data Element will be populated under “Available” List Box**.** You can search Data Element by name after click the button which is mentioned at Step 5.



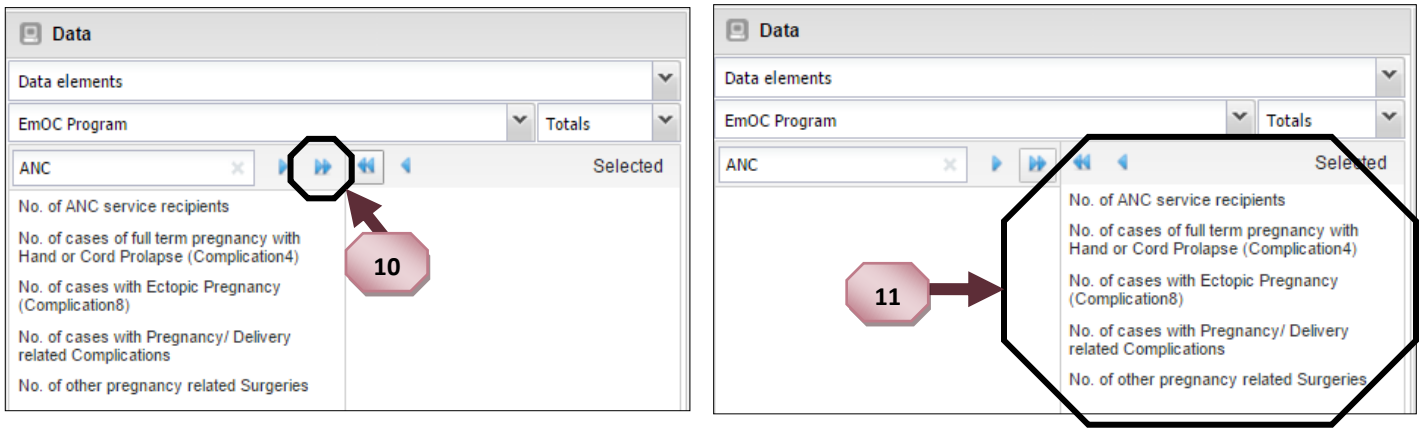
6. After clicking the button write your text in mentioned box and you will see that DHIS2 is searching the text when you are typing.
7. To cancel the search, please click the “x” button which is mentioned at step 6



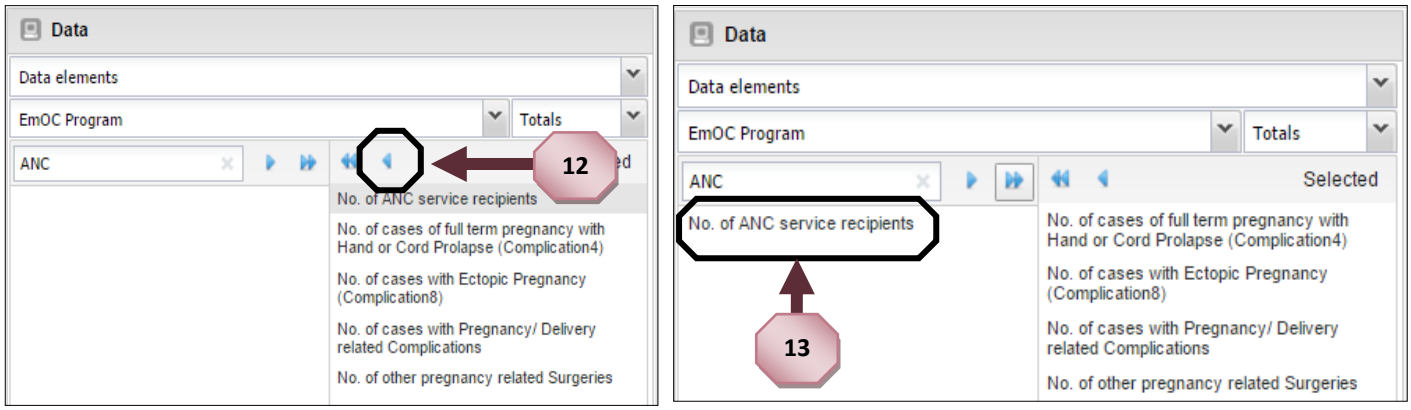
8. If you want to select individual Data Element then select the Data Element and click the button which is mentioned at Step 8. If you want select multiple Data Elements then select each Data Element with holding CTRL button and click the button which is mentioned at Step 8.
9. Your selected data element(s) will be available at “Selected” list box.



10. If you want to select all data element then click the button which is mentioned at Step 10.
11. All Data Element (s) will be available at “Selected” list box.

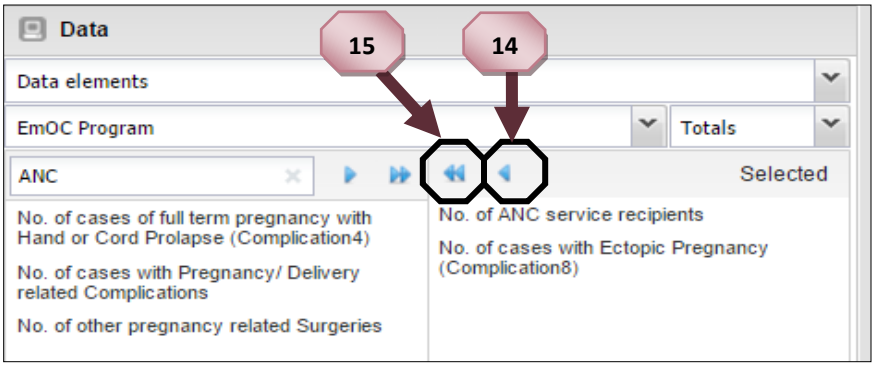


12. If you want to remove individual data element then select and double click on the selected elements or click the button which is mentioned at Step 12
13. Your selected Data Element(s) will be removed from “Selected” list box.



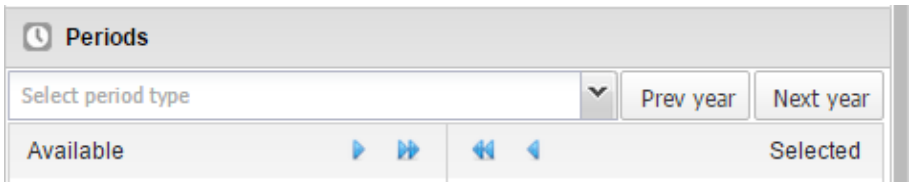
14. If you want remove multiple Data Element(s) then select each with holding CTRL button and click the button which is mentioned at Step 14. Your selected Data Element(s) will be removed from "Selected" list box.

15. Click the button which is mentioned at Step 15. All Data Element (s) will be removed from "Selected" list

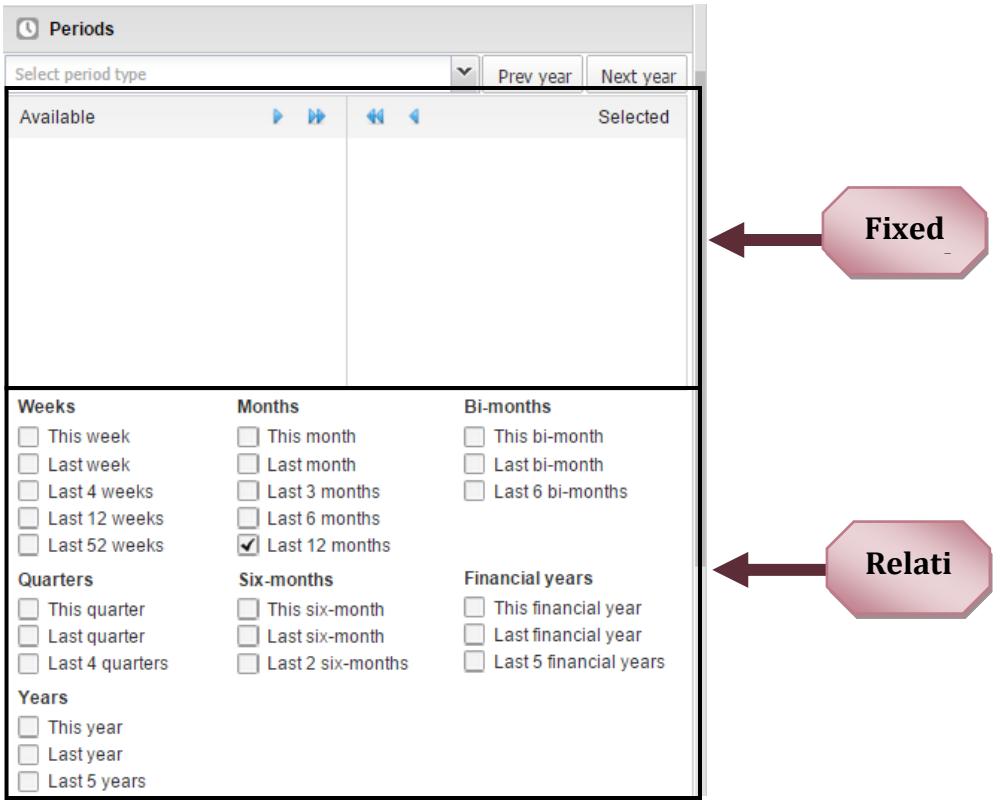


Selecting Period

Please click “Periods” menu from left panel.

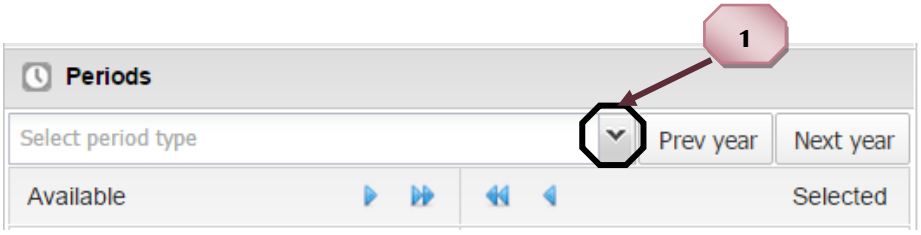


By default in “**Periods”** menu **“Last 12 months”** under Months is selected. You can select two kinds of “**Periods”** one is **“Fixed”** and another is **“Relative**” which is mentioned below.

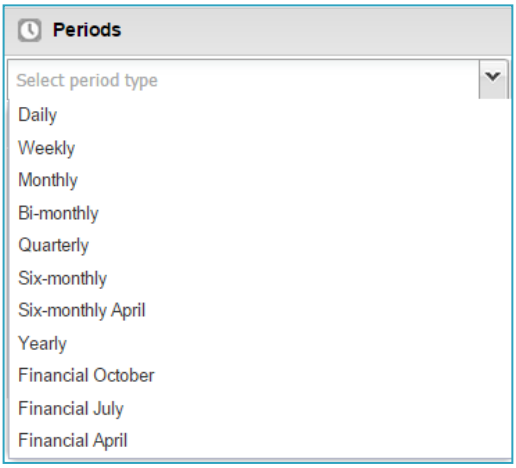


Fixed Period

1. You can select different kinds of period from **"Periods"** drop down menu

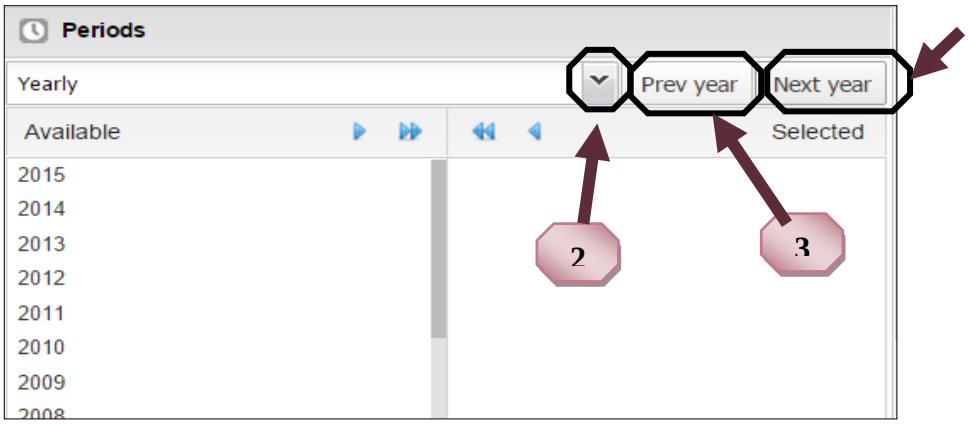


Below is the available value for the "Periods" drop down menu.



Yearly:

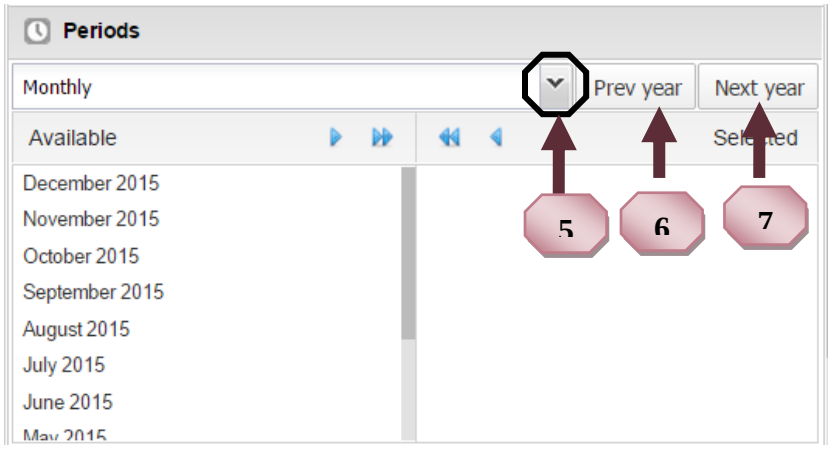
If you can select "Yearly" then from current year to last 10 years value will be populated in "Available" list box which is mentioned at Step 2.



If current year is 2015 then after select **"Yearly"** year will be 2015 and populated value will be 2015 to 2005. If you click **"Prev year"** then, current year would be the previous year and last 10 years value will be populated in **"Available"** list box which is mentioned at **Step 3**. If current year is 2015 then after clicking **"Prev year"** current year will be 2014 and populated value will be 2014 to 2004 If you click **"Next year"** then, current year would be the next year and last 10 years value will be populated in **"Available"** list box which is mentioned at **Step 4**. If current year is 2015 then after clicking **"Next year"** current year will be 2016 and populated value will be 2016 to 2006

Monthly:

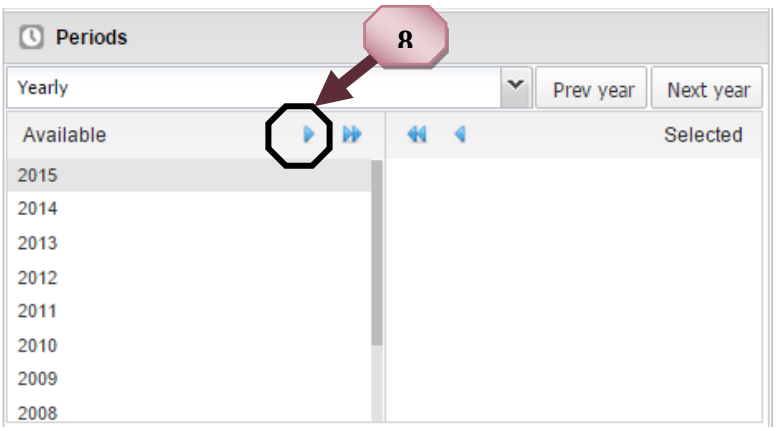
If you can select **"Monthly"** then from current year December to current year January value will be populated in **"Available"** list box which is mentioned at **Step 5**.

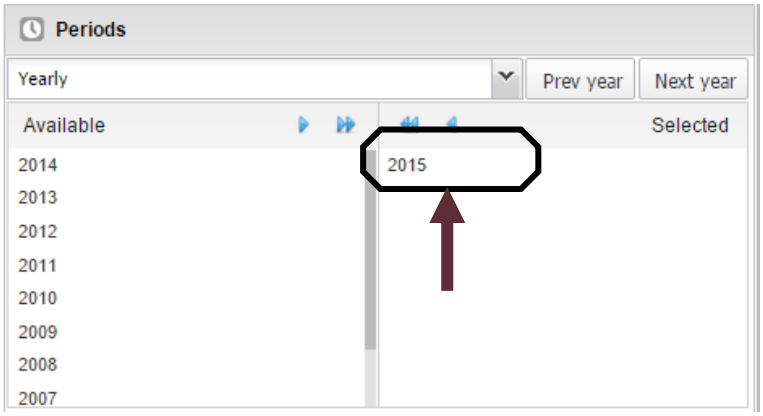


If you click "Prev year" then, current year would be the previous year and 12 months of that year value will be populated in "Available" list box which is mentioned at Step 6. If current year is 2015 then after clicking "Prev year" value will be December 2014 to January 20014 If you click "Next year" then, current year would be the next year and 12 months of that year value will be populated in

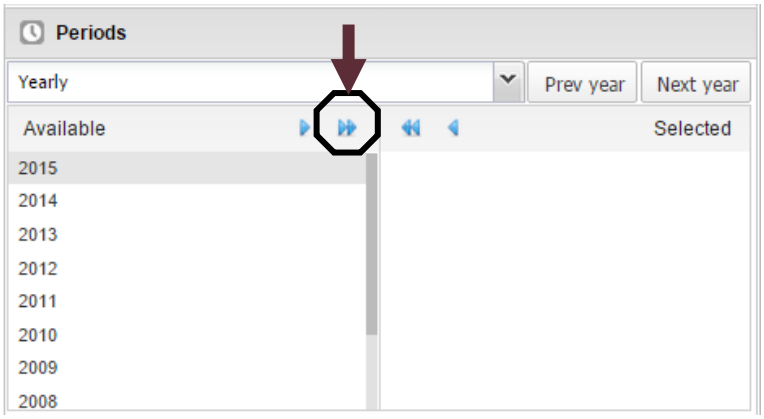
"Available" list box which is mentioned at Step 7. If current year is 2015 then after clicking "Next year" value will be December 2016 to January 20016

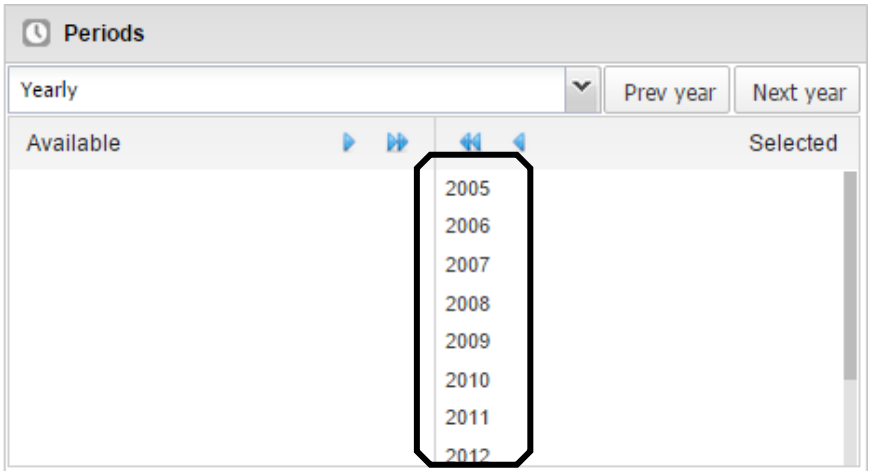
If you want to select individual "Periods" then select the "Periods" from available list box and click the button which is mentioned at Step 8. If you want select multiple "Periods" then select each "Periods" with holding CTRL button and click the button which is mentioned at Step 8. Your selected Data "Periods" (s) will be available at "Selected" list box.



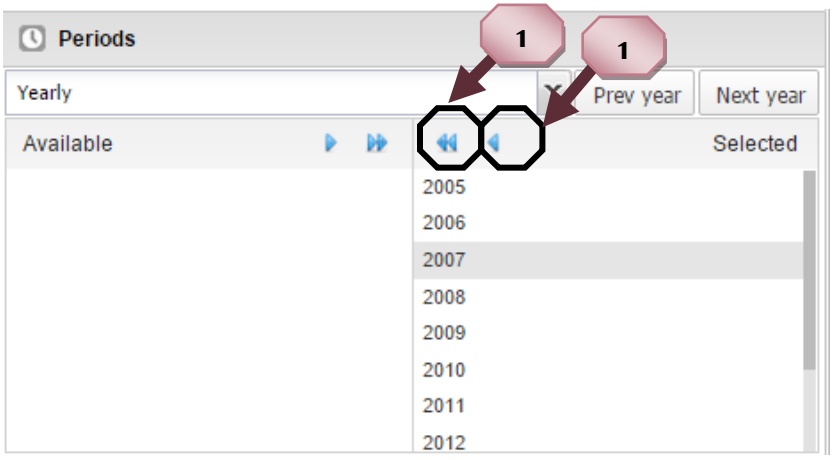


If you want to select all "Periods" then click the button which is mentioned at Step 9. All "Periods" (s) will be available at "Selected" list box.





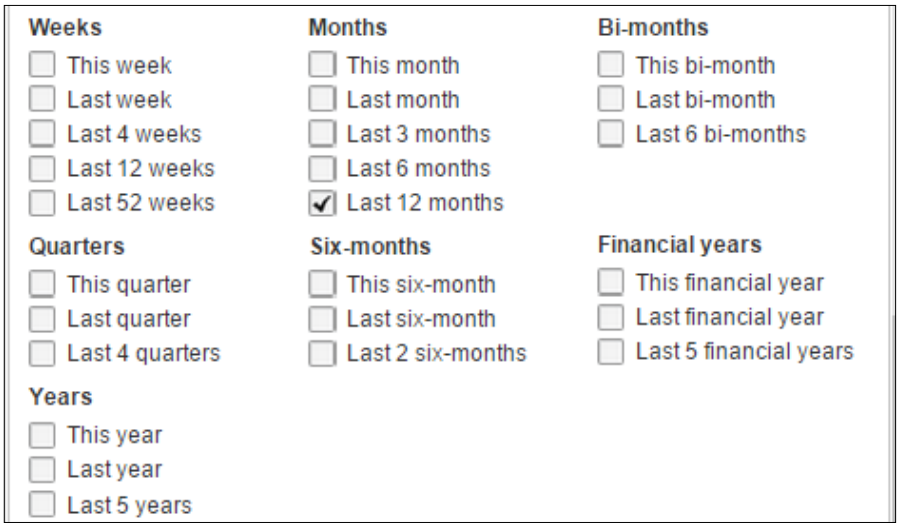
If you want to remove individual **"Periods"** then select the **"Periods"** and click the button which is mentioned at **Step 10**. If you want remove multiple **"Periods"**(s) then select each **"Periods"** with holding CTRL button and click the button which is mentioned at **Step 10**. Your selected **"Periods"**(s) will be removed from "Selected" list box.



If you want to remove all **“Periods”** then click the button which is mentioned at **Step 11**. All **“Periods”** (s) will be removed from “Selected” list box.

Relative Period

There are various types of relative period and all names are fairly self-descriptive and they are relative to the current date.



This month
If the current month is August and you select "This month", then the month August will be included in the chart.

Last month
If the current month is August and you select "Last month", then the month of July will be included in the chart.

Last 12 months
If you select "Last 12 months", then from month of August current year to month of July previous year will be included in the chart.

This year
If the current year is 2015 and you select "This year", then the year 2015 will be included in the chart.

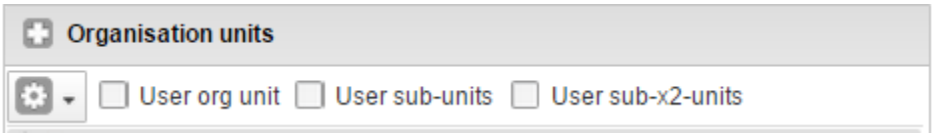
Last month
If the current year is 2015 and you select "Last year", then the year 2014 will be included in the chart.

Last 5 years
If the current year is 2015 and you select "Last 5 years", then from 2015 to 2010 year will be included in the chart.

Note:
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.

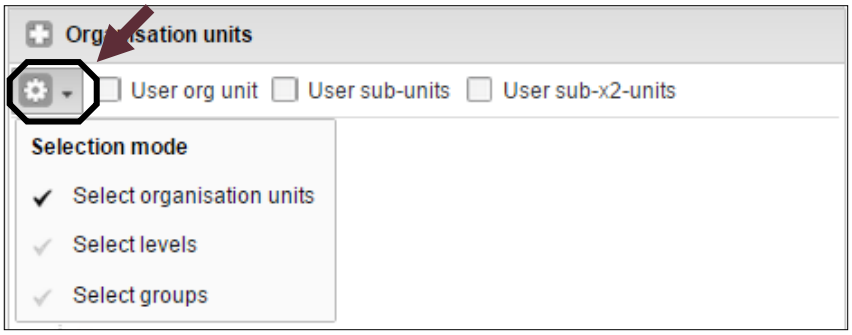
Selecting Organization Unit

Please click "**Organization units**" menu from left panel.



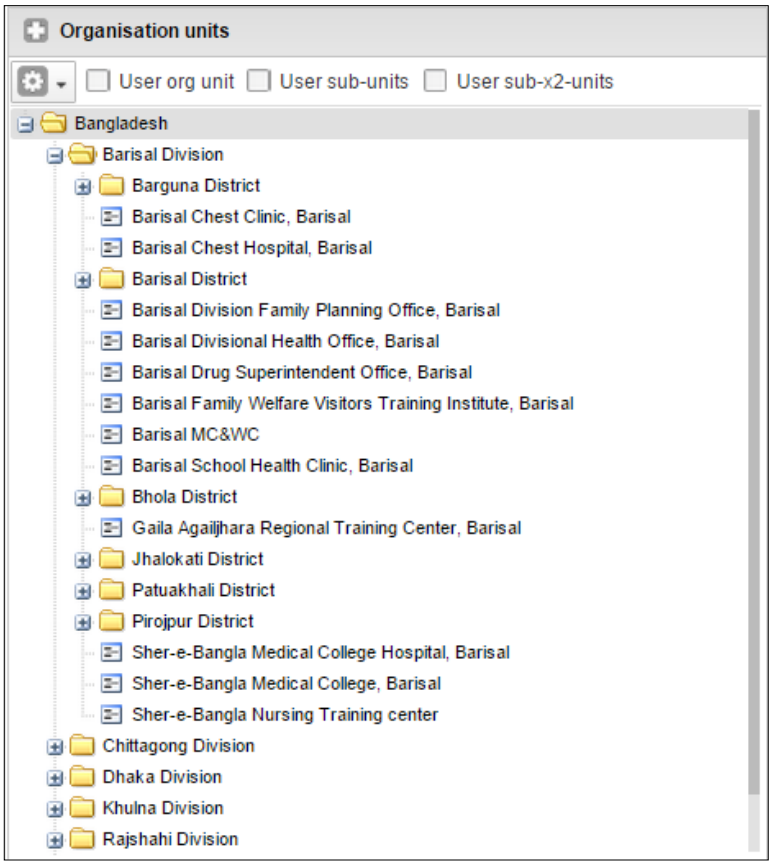
You can select "Organization units" by three ways. They are "Select Organization units", "Select levels" and "Select groups". By default it is "Select Organization units". Please click the button to select different kinds of option which is mentioned below.

After clicking the button below mentioned screen will appear.

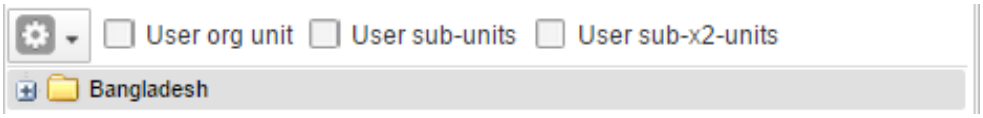


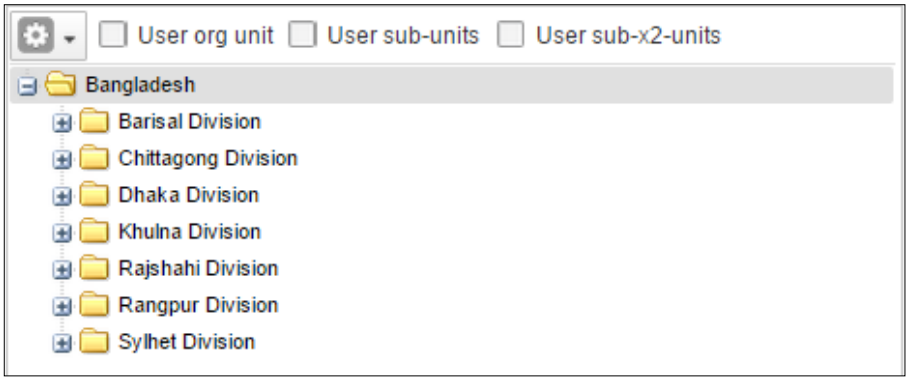
Select Organization units

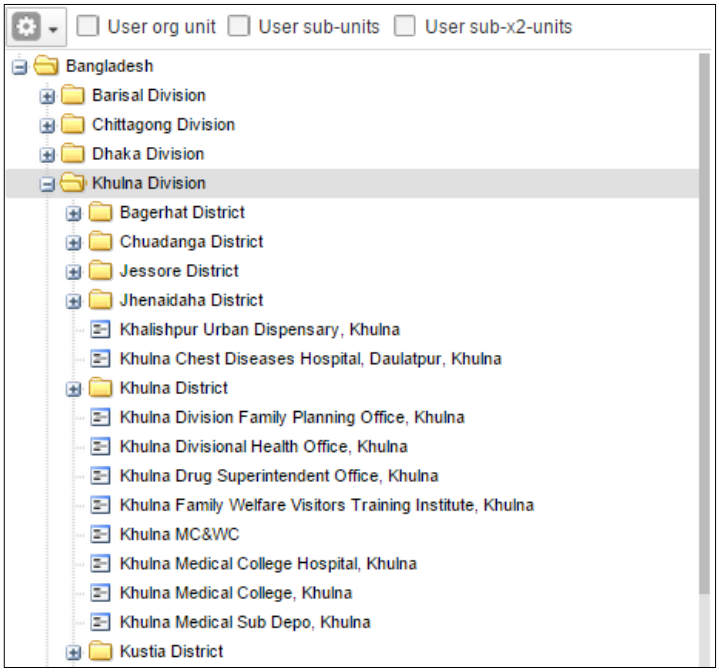
You can select your desired organization units from the tree menu. It is by default selected.



To select organization units you click the "+" button and you can go further from tree. Please check the below mentioned image which are showing that, at first we have selected "Bangladesh" then click "+" button then select "Khulna Division". In this way you can go further like Bangladesh-> Division-> District-> Upazila-> Union-> Health Facility etc.

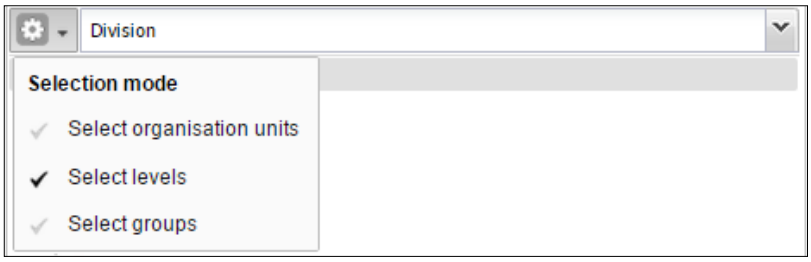






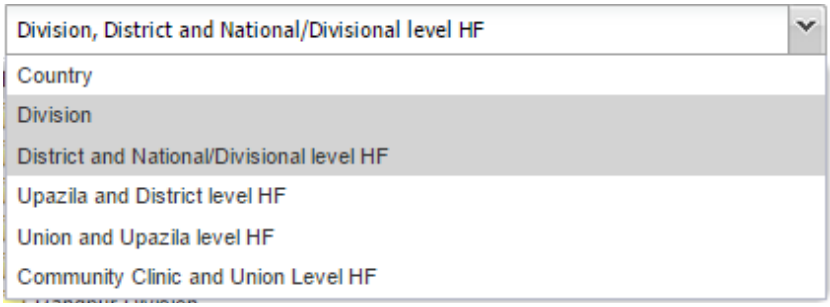
Select levels

You can select organization units level wise by clicking “Select levels”.



Presently there are “Country”, “Division”, “District and National/Divisional level HF”, “Upazila and District level HF”, “Union and Upazila level HF”, “Community Clinic and Union Level HF”.

You can select multiple levels by clicking items from the drop down list



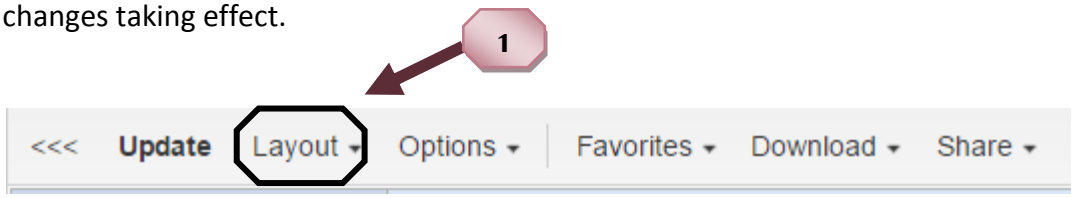
Note:

This requires that you have selected one or more elements from all of the three dimensions –

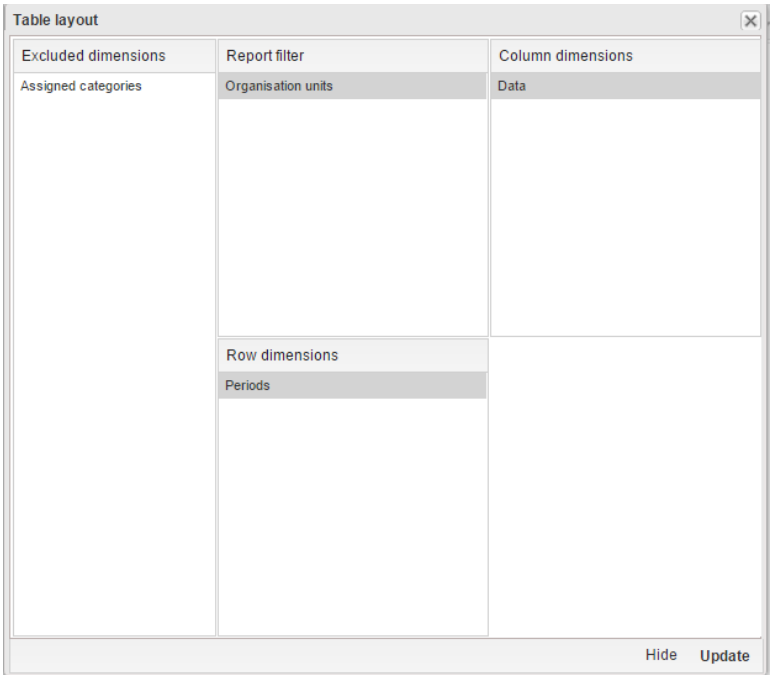
1. data (indicators, data elements, reporting rates),
2. periods (relative, fixed) and Note that "Last 12 months" from the period dimension are selected by default
3. organization units (units or groups) and Note that the root organization unit are selected by default

Displaying a Pivot Table

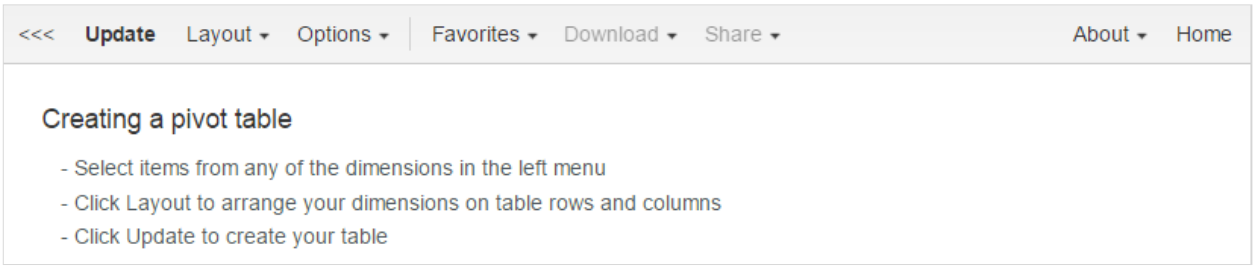
Click "Layout" in the top menu to open the layout screen which is mentioned at **Step 1.** without any changes taking effect.



In this screen position data dimensions as table columns, rows or filters by clicking and dragging the dimensions from the dimensions list to the respective column, row and filter lists. Any number of dimensions can be set in any of the lists. For instance, click on "Organization units" and drag it to the row list in order to position the organization unit dimension as table rows. Note that indicators, data elements and data set reporting rates are part of the common "Data" dimension and will be displayed together in the pivot table. For instance, after selecting indicators and data elements in the left menu, drag "Data" from the available dimensions list to the row dimension list in order to arrange them as rows in the pivot table. After set up pivot table click "Update" to render pivot table, or click "Hide" to hide the layout screen



We can display a pivot table based on selections simply by clicking the "Update" button on the top centre menu.

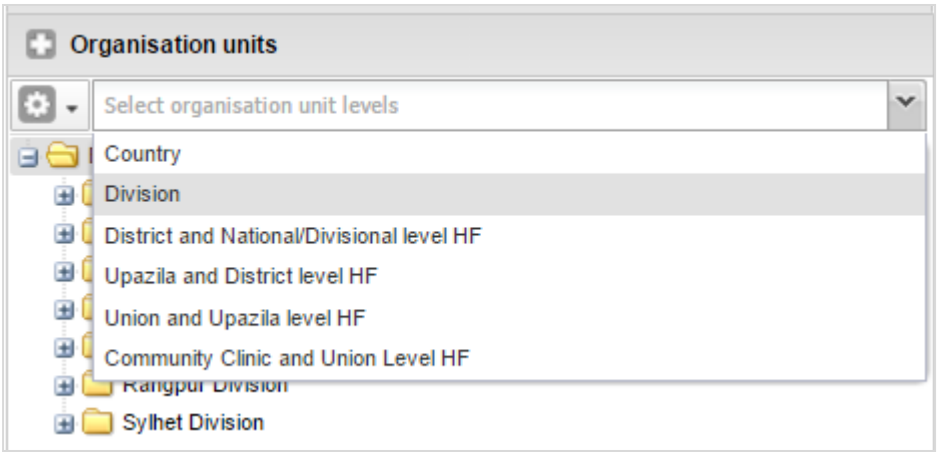


Note:

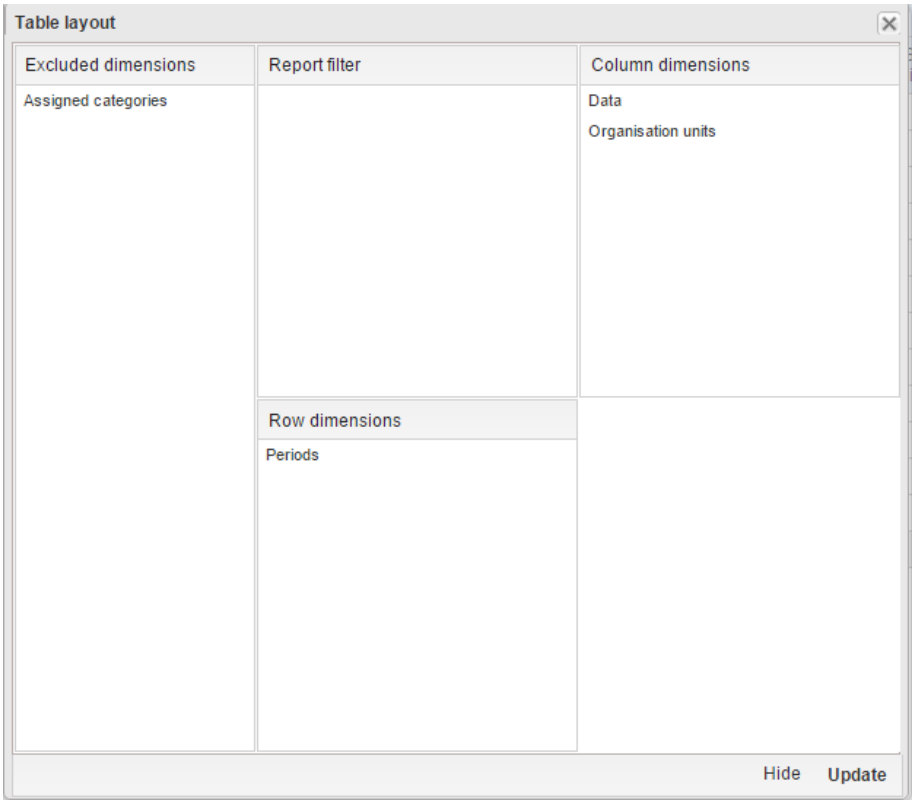
We can hide and show individual data series in the pivot table by clicking directly on the series label in the pivot table- they appear either at the top or to the right. If we want to give the pivot table more space on screen we can click on the triple left-arrow button on the top centre menu which is mentioned at Step 2. This will collapse the left side menu. We can get this menu back by clicking on the same button again. Now after selecting indicators, data elements, period and organizational unit click update button and view the pivot table like as below:

Periods / Indicators	BCG Valid Coverage %	Total
January 2015	72	72
February 2015	67.3	67.3
March 2015	73.8	73.8
April 2015	60.3	60.3
May 2015	67.8	67.8
June 2015	61.3	61.3
July 2015	69.9	69.9
August 2015	85.5	85.5
September 2015	68.5	68.5
October 2015	74.8	74.8
November 2015	65.9	65.9
December 2015		
Total	767.1	767.1

Now if we want to see this pivot table by division wise then change the organizational unit to division is as below:



For displaying the column in pivot table division wise change the table layout is as follows:

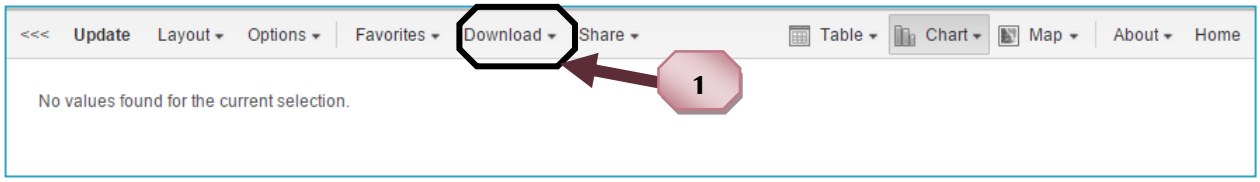


Click update button and view the pivot table

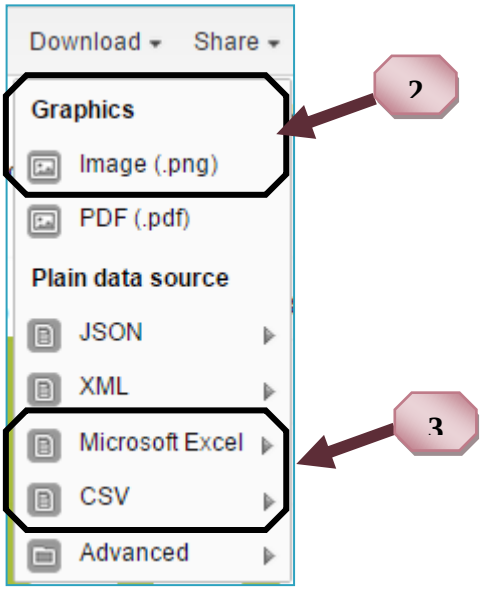
Indicators	BCG Valid Coverage %						
Periods / Organisation units	Barisal Division	Chittagong Division	Dhaka Division	Khulna Division	Rajshahi Division	Rangpur Division	Sylhet Division
January 2015	44.4	78.8	85	46.5	104	72.2	55.2
February 2015	33.3	79.5	82.1	31.7	93.7	86.9	61.4
March 2015	81	70	92.7	51.2	73.3	61.5	83.5
April 2015	84.2	70.1	68.5	38.4	41.2	59.2	87
May 2015	53.6	72.3	89.7	30.3	74.2	57	101.5
June 2015	41.2	83.3	73.9	33.1	51.6	47.8	93.2
July 2015	86	66	81.1	40	66.7	79.1	99.6
August 2015	82.1	103.9	107.5	45.4	70.6	92	82.9
September 2015	74.4	68.6	77.1	34.3	94.8	82.6	64
October 2015	99	56.1	98	47.4	111.4	74	67.7
November 2015	107.7	92.1	71.3	40.7	142.4	53.3	41.1
December 2015							
Total	786.9	840.7	926.9	439	923.9	765.6	837.1

Downloading Pivot Table

After you have rendered a pivot table you can download it to your local computer by clicking on "Download" on the top centre menu which is mentioned at Step 1.



When you click “download” button below mentioned menu will appear.

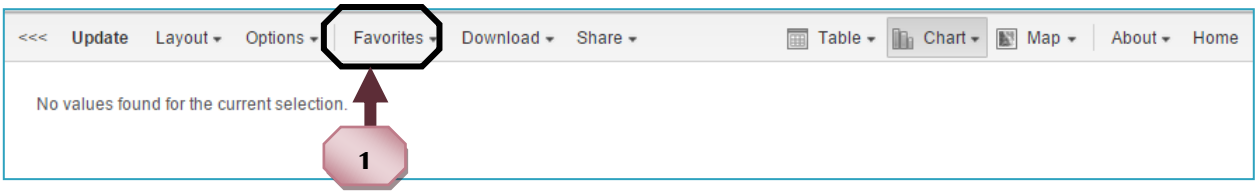


If you click “Image (.png)” or “PDF (.pdf)” then the file will be automatically downloaded to your computer which is mentioned at Step 2 Then you can embed the image file into a text document as part of a report.

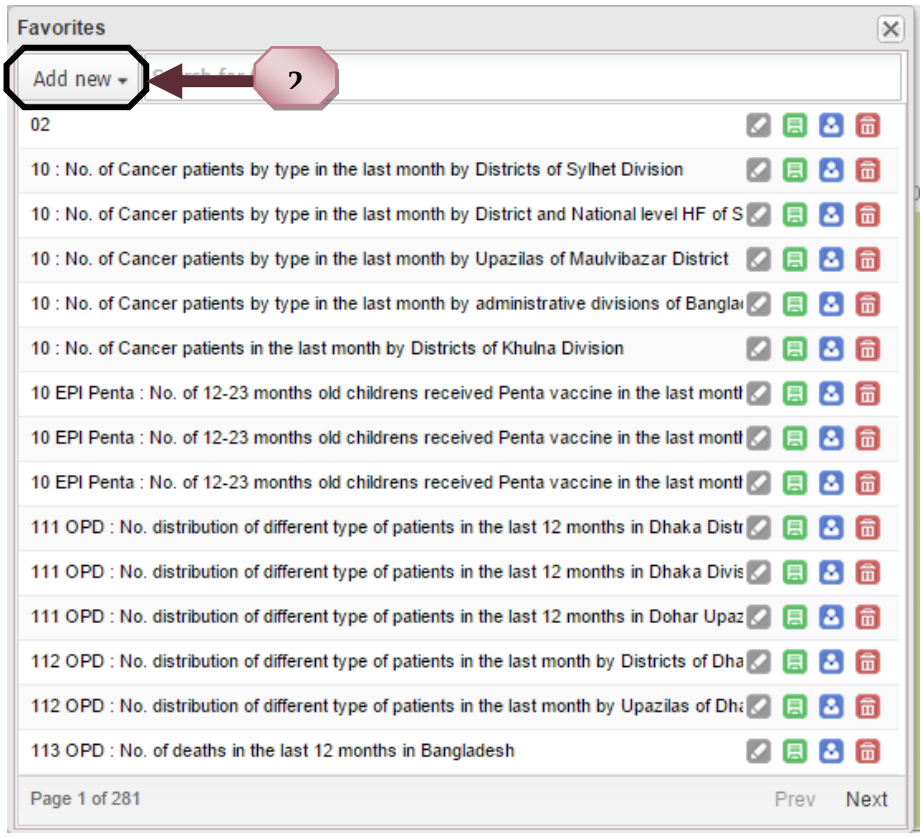
You can also download the data source behind the chart in “Microsoft Excel” or “CSV” format which is mentioned at Step 3.

Saving pivot table as favorite

After you have rendered a chart you can save it to the server for further use by clicking on "Favorites" on the top centre menu which is mentioned at **Step 1**.

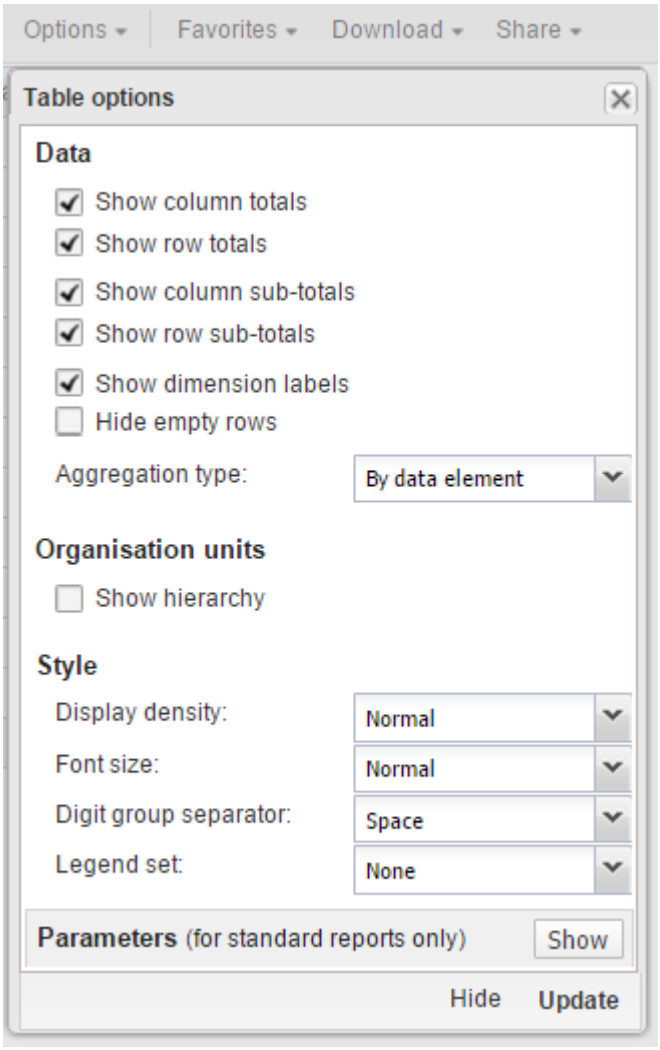


After clicking the button below mentioned screen will appear.



Save: To save the chart please click “Add New” button that is mentioned at “Step 2”. Then the below mentioned screen will appear. Write pivot table name which is mentioned in Step 3 and click “Create” mentioned in Step 4

Table Option



Several table options are available when working with a pivot table. Open the options screen by clicking on "Options" in the top menu. The following options are available:

• **Show totals:** Display total values in the table for each row and column, as well as a grand total for all values in the table.

- **Show sub-totals:** Display subtotals in the table for each dimension. In the screenshot above, notice how subtotals are generated for each of the periods in the period 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.

- **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.

- **Show hierarchy:** Shows the name of all ancestors for organization units. The organization units are then sorted alphabetically which will order the organization units perfectly according to the hierarchy.

- **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 color indicator next to the values. Currently the GIS legend sets are being used.

Case Study

Objective: Create a pivot table which will show division wise child nutrition status for the period of last month in Bangladesh.

Organisation units / Data	IMCI Underweight (0 - 5 years)	IMCI Stunting (0 - 5 years)	IMCI Wasting (0 - 5 years)	Total
Barisal Division	1 013	401	157	1 571
Chittagong Division	1 927	870	480	3 277
Dhaka Division	2 491	585	495	3 571
Khulna Division	2 055	754	386	3 195
Rajshahi Division	1 297	700	465	2 462
Rangpur Division	1 183	476	227	1 886
Sylhet Division	947	674	232	1 853
Total	10 913	4 460	2 442	17 815

Step-1: Open Pivot Table

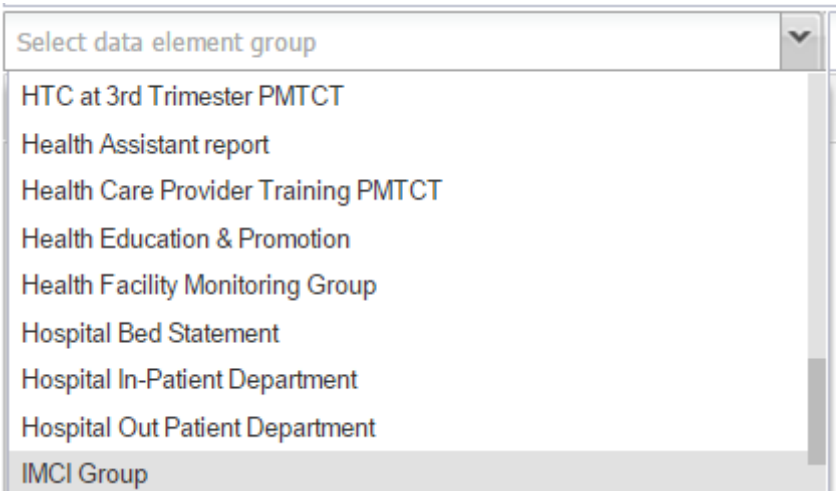
1.1 Click **Apps** icon

1.2 Click "Pivot Table" icon

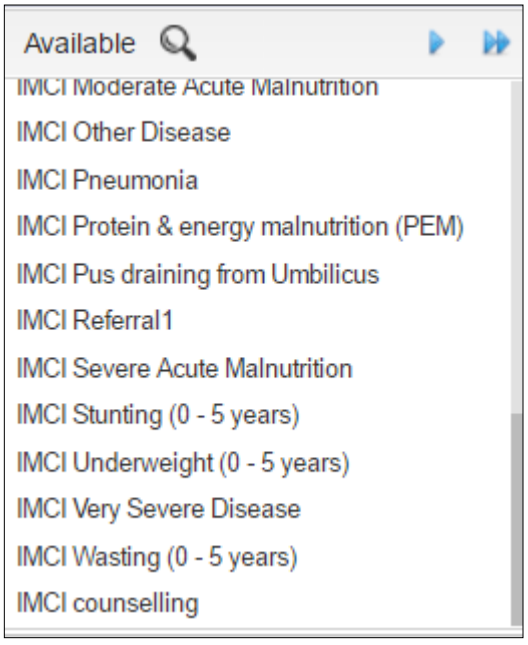
Step-2: Select Data element (What)

2.1 Click down arrow and select “Data Element”

2.2 Click down arrow and select “IMCI Group”



2.3 Select required field from the list. For multiple selections you have to hold CTRL button

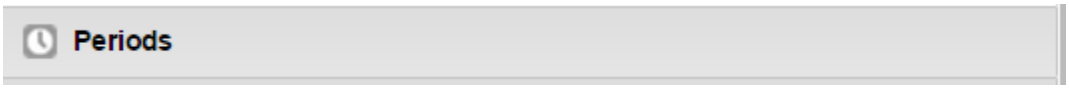


2.4 You can click arrow button for selection

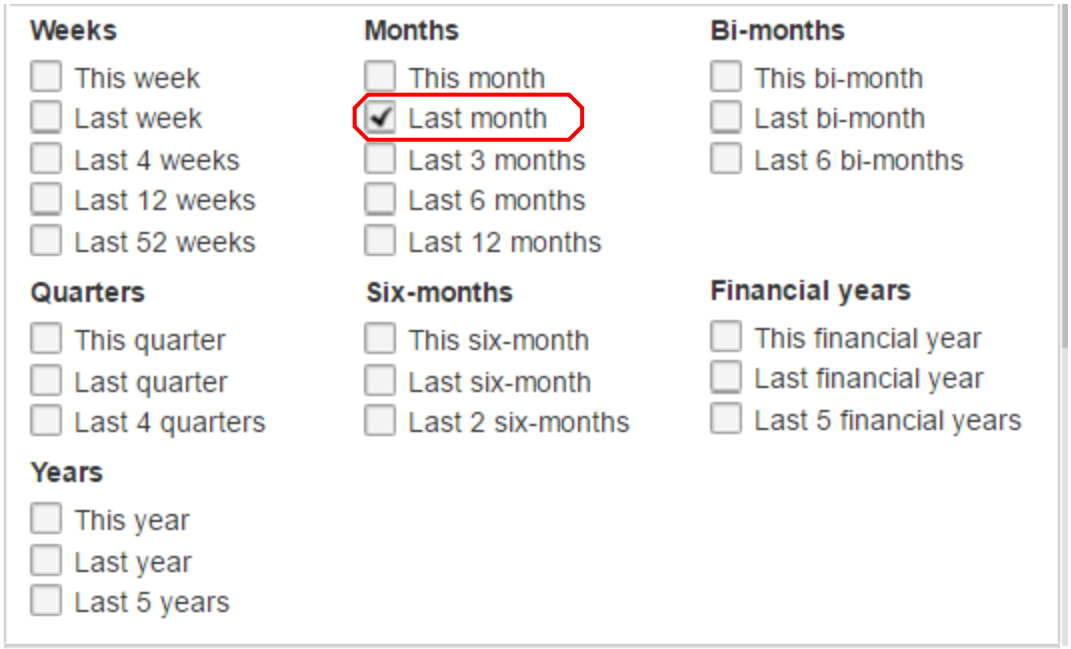
2.5 Your Data screen will look like this.

Step-3: Select Period (When)

3.1 Click Periods

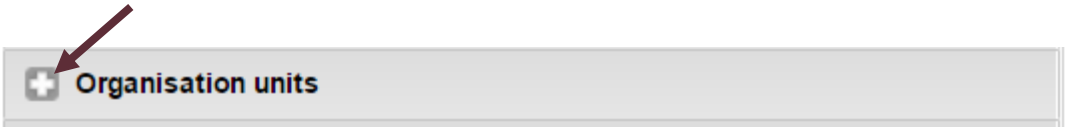


3.2 Select "Last month" from Months

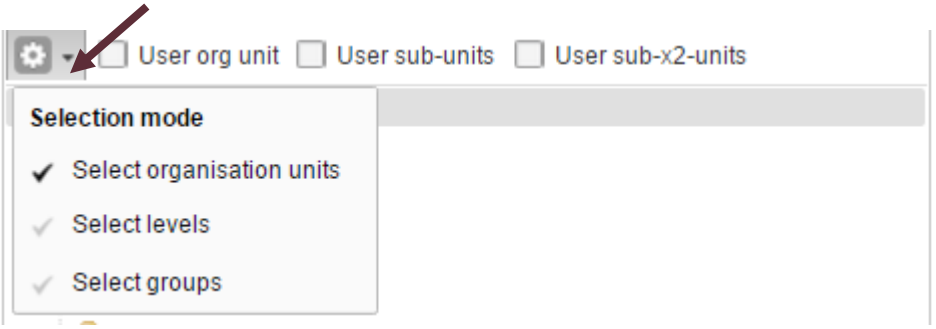


Step-4: Select Organization Unit (Where)

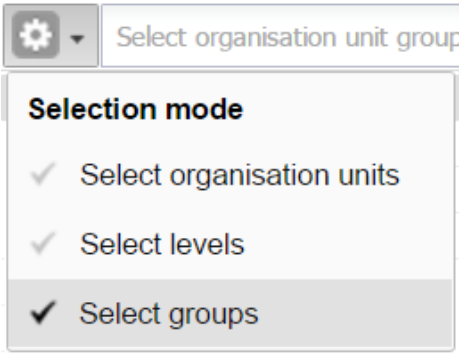
4.1 Click "Organisation Units" tab.



4.2 Click dropdown for selecting the selection mode

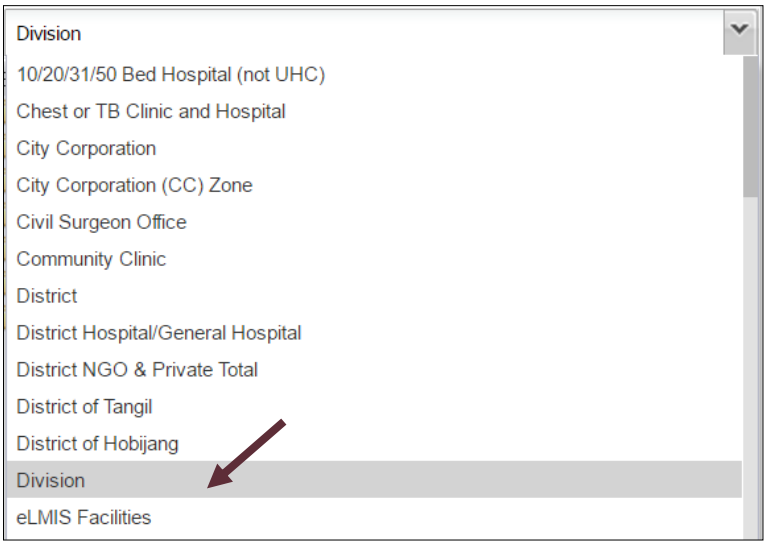


4.3 Click "**Select group**" from menu



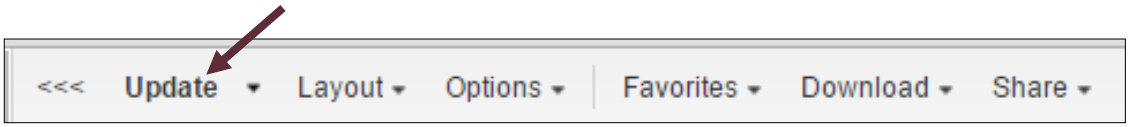
4.4 Click "Down arrow", it will open a drop down menu.

4.5 Select **Division** from the list



Step-5: Click Update

Click on **"Update"** from top menu



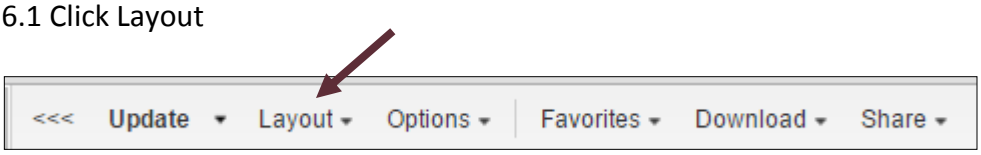
you will see the below pivot table will appear

Periods / Data	IMCI Underweight (0 - 5 years)	IMCI Stunting (0 - 5 years)	IMCI Wasting (0 - 5 years)	Total
July 2016	10 913	4 460	2 442	17 815
Total	10 913	4 460	2 442	17 815

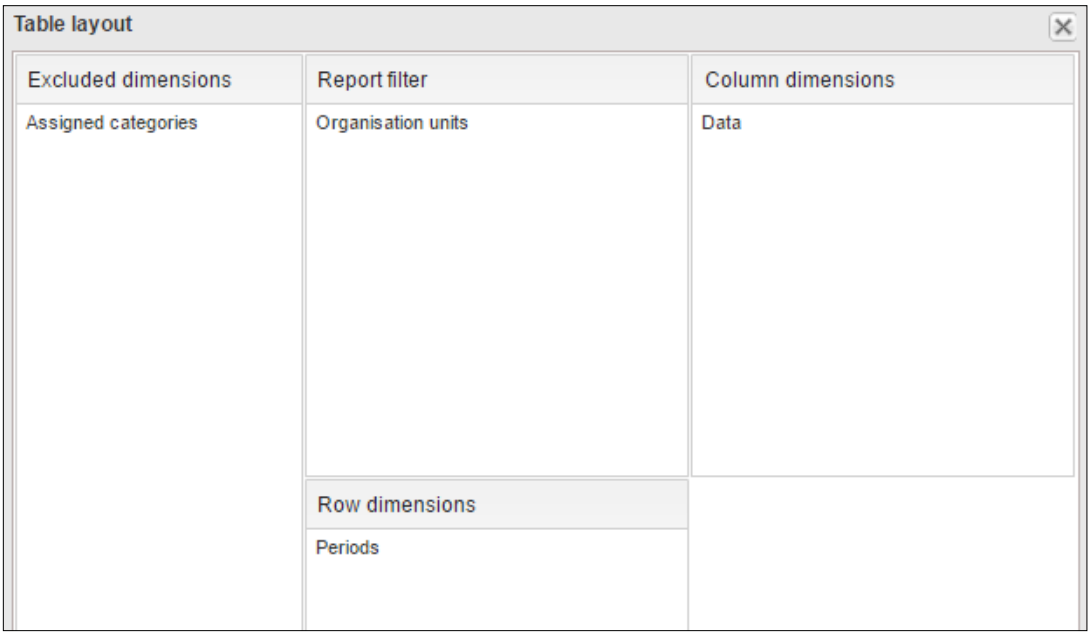
Step-6: Change Layout

We can always change the orientation of "What", "When" and "Where". To change the layout.

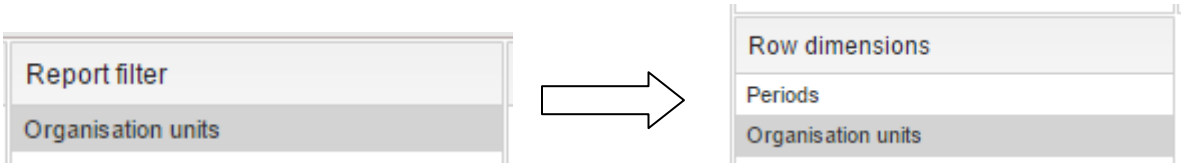
6.1 Click Layout



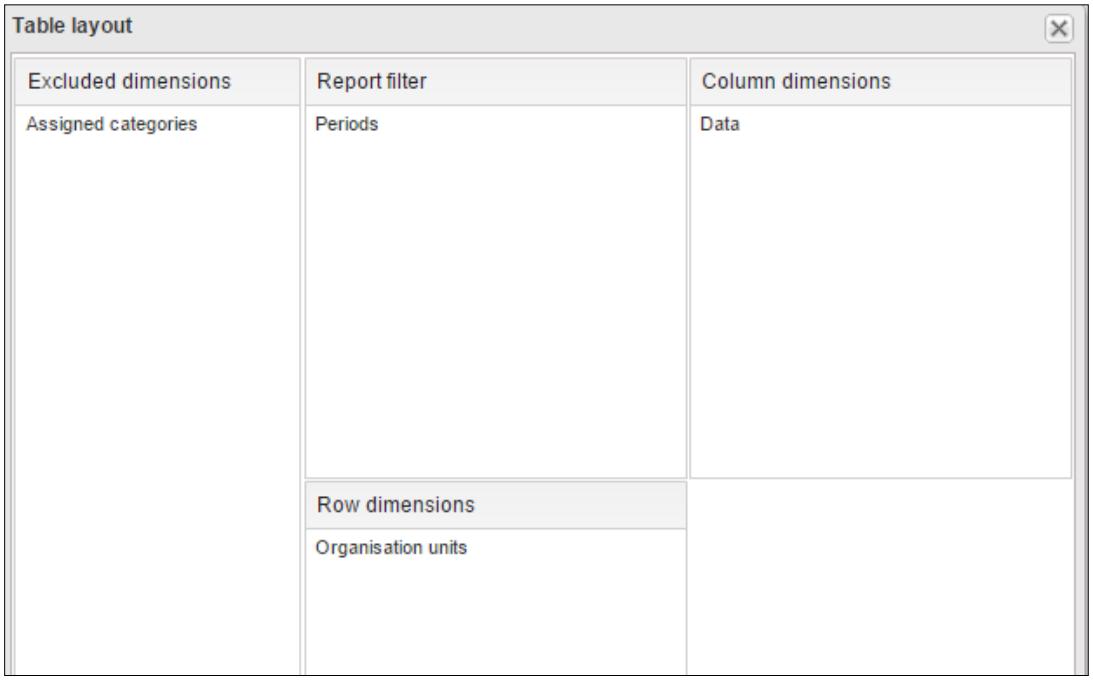
6.2 It will open **"Table Layout"**



6.3 To display division as row information, please select "Organization Units" from "Report filter" and drag and drop "Organization unit" in "Row dimensions".

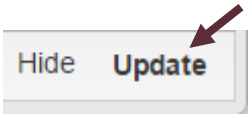


6.4 Same way please select "Periods" from "Row dimensions" drag and drop to "Report filter". Now your Table layout will look like this



Step-7: Now View the desire pivot table

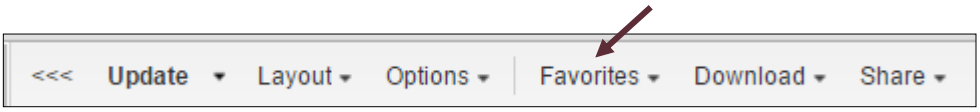
7.1 Please click "Update" button



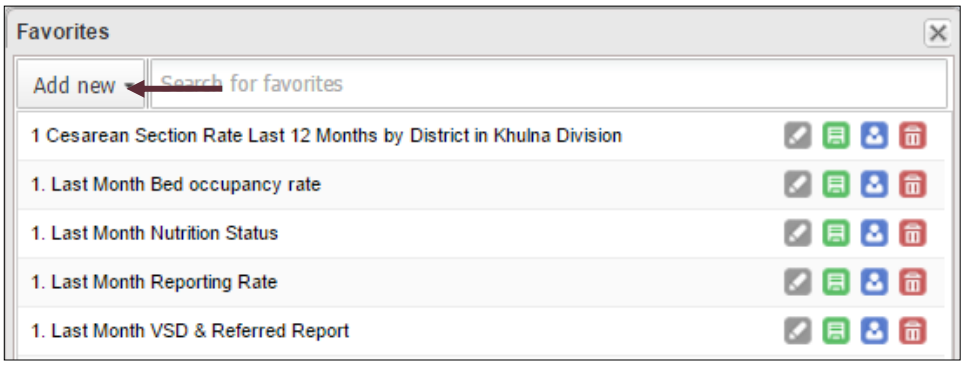
Organisation units / Data	IMCI Underweight (0 - 5 years)	IMCI Stunting (0 - 5 years)	IMCI Wasting (0 - 5 years)	Total
Barisal Division	1 013	401	157	1 571
Chittagong Division	1 927	870	480	3 277
Dhaka Division	2 491	585	495	3 571
Khulna Division	2 055	754	386	3 195
Rajshahi Division	1 297	700	465	2 462
Rangpur Division	1 183	476	227	1 886
Sylhet Division	947	674	232	1 853
Total	10 913	4 460	2 442	17 815

Step-8: Save pivot table

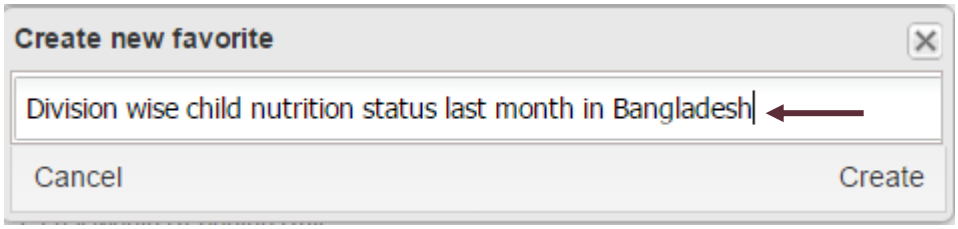
8.1 Clicks on Favorites



8.2 Click on Add New button

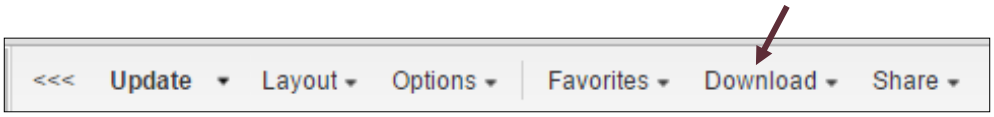


To save the pivot table writes the name of the table and click create button to save the pivot table

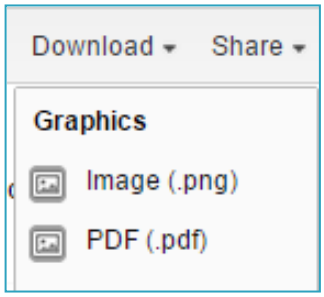


Step-9: Download Pivot Table

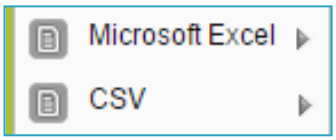
9.1 After you have rendered a pivot table you can download it to your local computer by clicking on "**Download**" on the top centre menu



9.2 When you click “download” button below mentioned menu will appear. If you click “Image (.png)” or “PDF (.pdf)” then the file will be automatically downloaded to your computer.

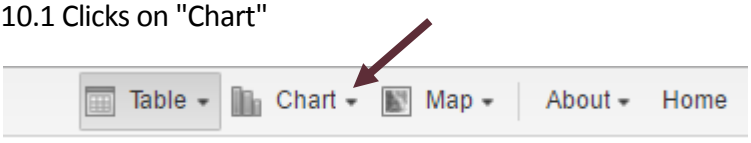


9.3 You can also download the data source behind the chart in “Microsoft Excel” or “CSV” format

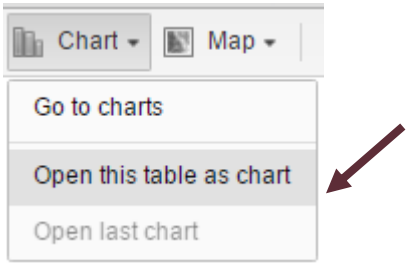


Step-10: Convert this table as chart

10.1 Clicks on "Chart"



10.2 From menu select "Open this table as chart"



Chapter 4

Data Visualizer

The data visualizer module enables users to easily create dynamic data analysis and visualizations through various types of charts.

SUMMARY

Overview

Data visualizer module enables users to easily create dynamic data analysis and visualizations through various types of charts. The data visualizer is designed firstly to be easy-to-use - you can simply select the indicators, data elements, periods and organization units you want to include and click "Update" to get your visualization.

After complete this chapter you will learn about the how to analyze data using visualizer, concept of data elements, indicators and reporting rate, selecting organization unit and time period and finally the output of the visualizer. At the end of this chapter there is a real time example of creating chart so that you can easily create chart for your desire data analysis.

The visualizer module provides 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 "Chart type".

1. Column chart: Chart which displays information as vertical rectangular columns with lengths proportional to the values they represent. Useful e.g. for comparing performance of different districts.

2. Stacked column chart: Chart with vertical rectangular columns where bars representing multiple categories are stacked on top of each other. Useful e.g. 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: Graph which displays information as a series of points connected by straight lines. Also referred to as time series. Useful e.g. to visualize trends in indicator data over multiple time periods.

6. Area chart: Chart which is based on line chart, with the space between the axis and the line filled with colors 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 e.g. to visualize 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 which is also known as spider chart.

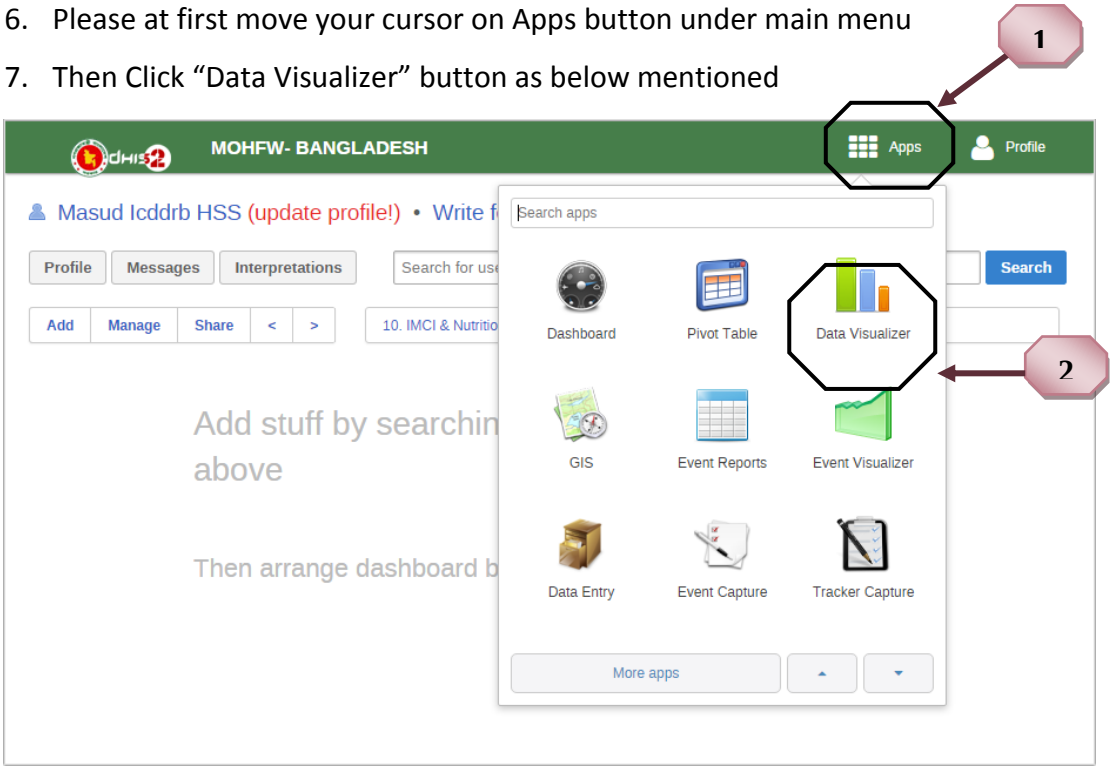
9. Speedometer Chart: Semi-circle chart which displays values out of 100%. Sometimes referred to as a gauge chart.

Section 4.1

How to Open

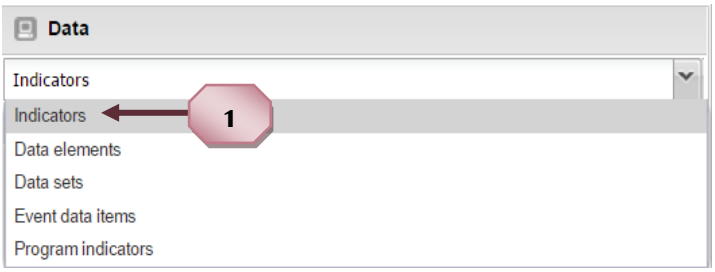
To open “Data Visualizer”

6. Please at first move your cursor on Apps button under main menu
7. Then Click “Data Visualizer” button as below mentioned

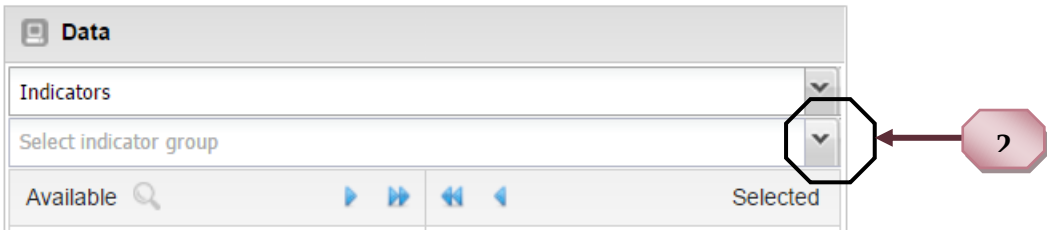


Selecting Indicators

1. Please click “Indicators” menu from left panel.

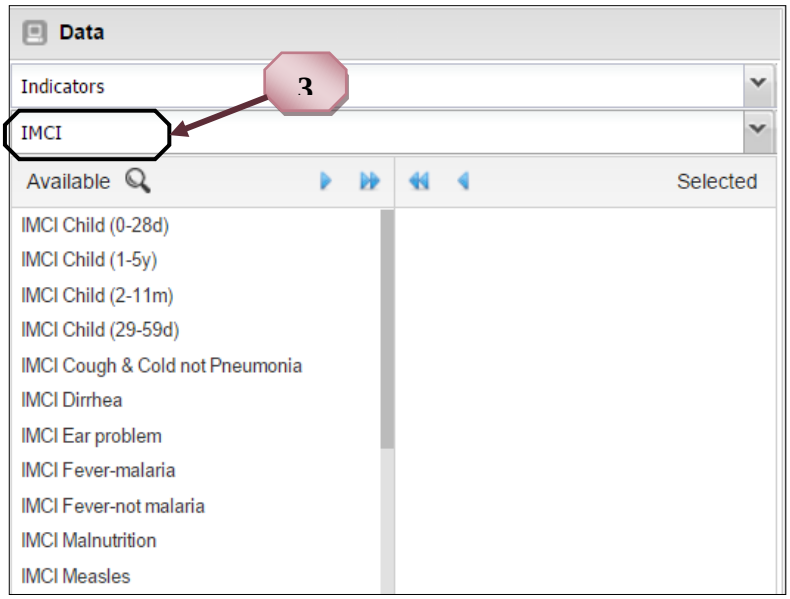


2. You can select Indicators category from **“Indicators”** drop down menu which is mentioned at **Step 2**



Below are the lists of indicator category that you can select from mentioned drop down box

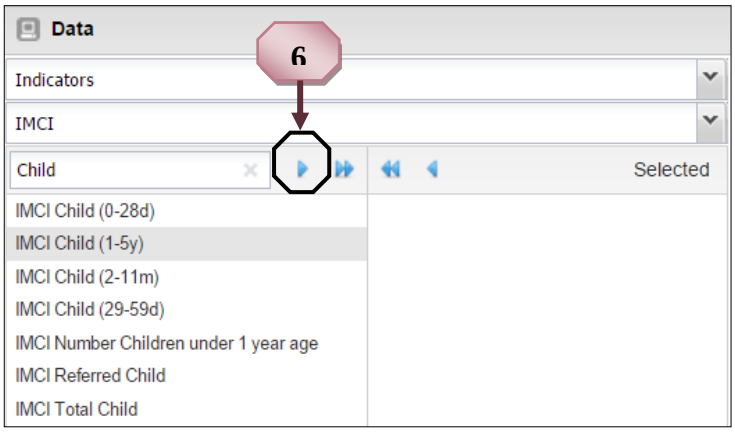
3. After select any of the indicator group from the list then their corresponding indicator will populate under “Available” List Box or select [All Indicators] then all indicators will populate under “Available” List Box. You can search indicator name after click the button which is mentioned at **Step 3**

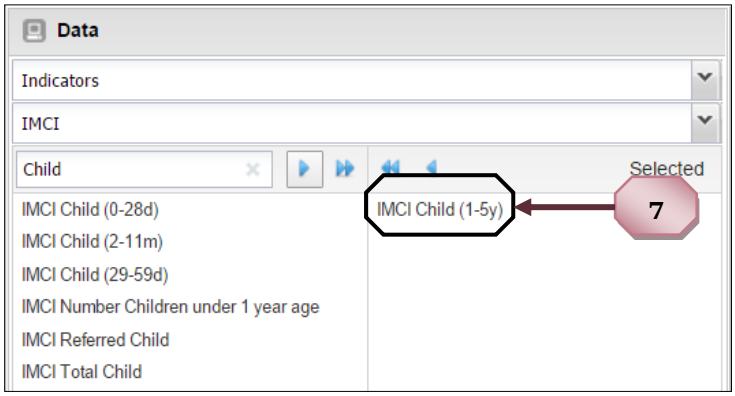


4. After clicking the button write your text in mentioned box and you will see that DHIS2 is searching the text when you are typing.
5. To cancel the search, please click the **"x"** button which is mentioned at **step 5**.

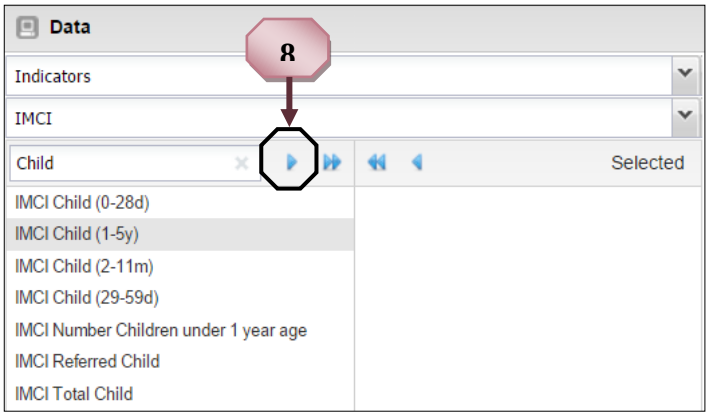
6. If you want to select individual indicator then select the indicator and click the button which is mentioned at Step 6. If you want select multiple indicators then select each indicator with holding CTRL button and click the button which is mentioned at Step 6.

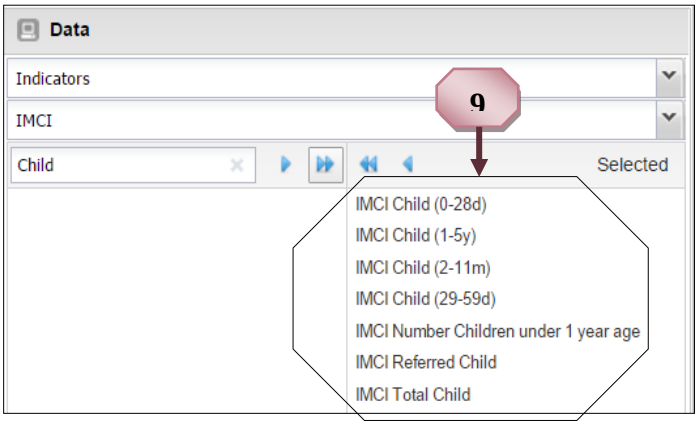
7. Your selected indicator(s) will be available at "Selected" list box.





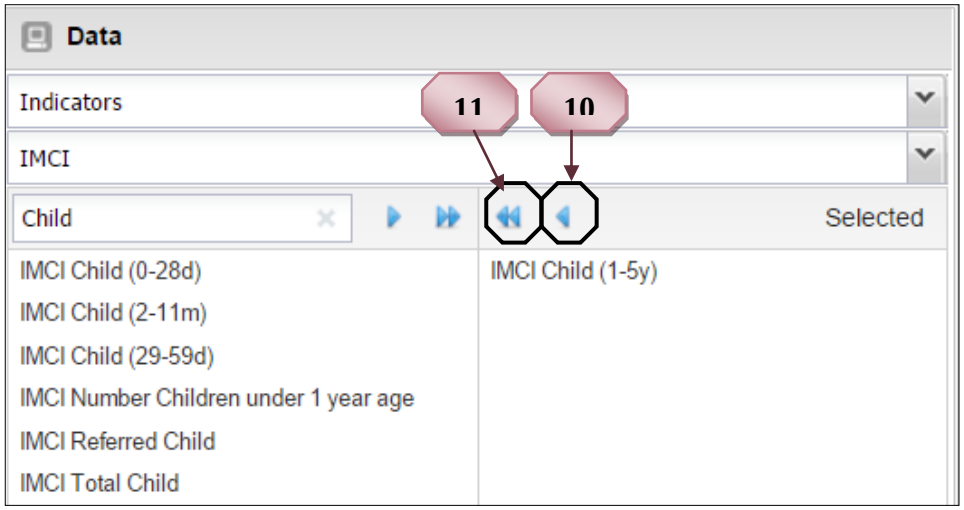
8. If you want to select all indicators then click the button which is mentioned at Step 7.
9. All indicator(s) will be available at “Selected” list box.





10. If you want to remove individual indicator then select the indicator and click the button which is mentioned at Step 10. If you want remove multiple indicators then select each indicator with holding CTRL button and click the button which is mentioned at Step 10. Your selected indicator(s) will be removed from “Selected” list box.

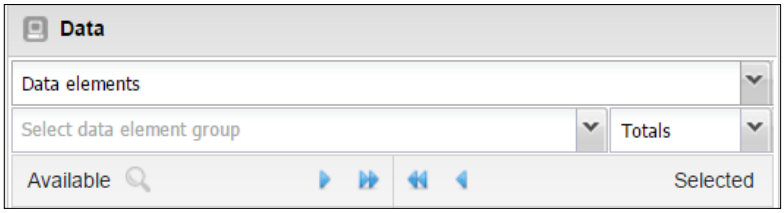
11. If you want to remove all indicators then click the button which is mentioned at Step 11. All indicator(s) will be removed from “Selected” list box.



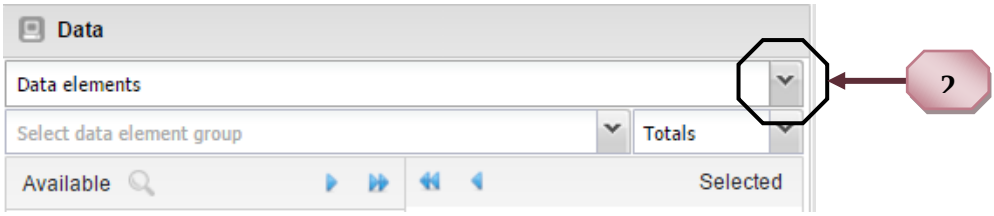
Section 4.3

Selecting Data Elements

1. Please click "**Data Elements**" menu from left panel.

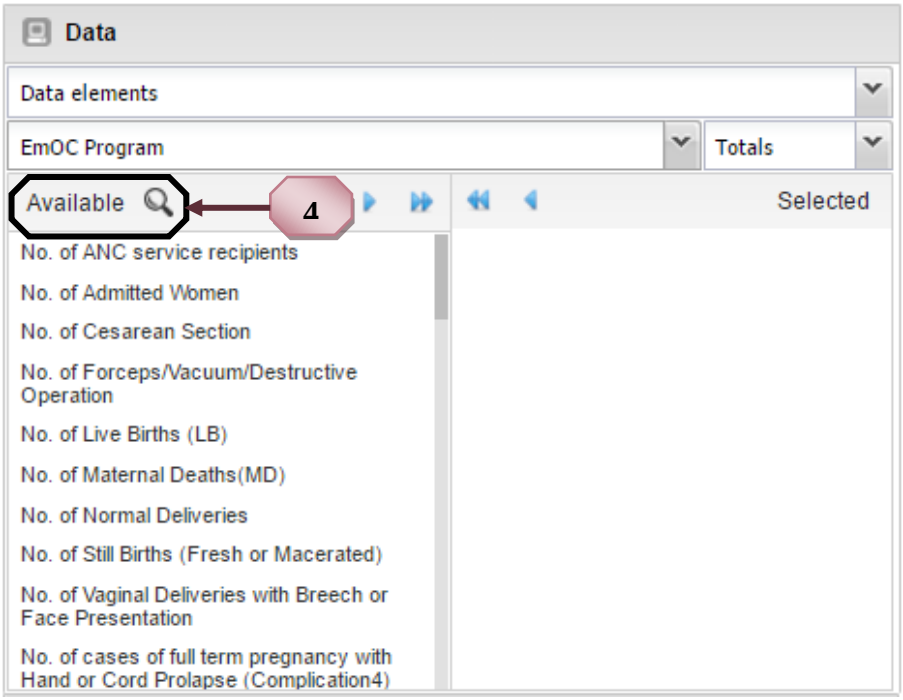


2. You can select Data Elements group from "Data Elements" drop down menu which is mentioned at Step 2.



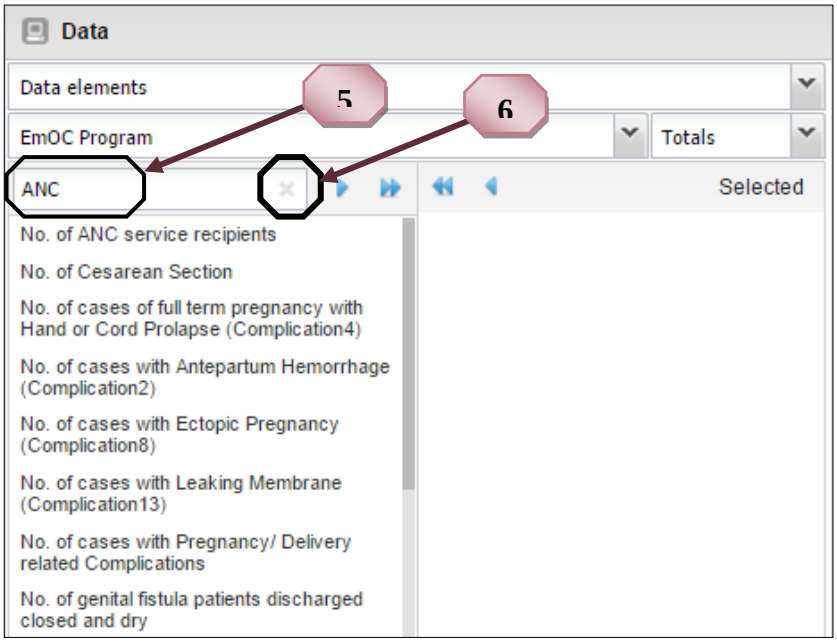
3. Below are the lists of Data Elements group that you can select from drop down box

4. After selecting any of the Data Element group from the list then their corresponding Data Element will be populated under "Available" List Box or select [All Data Elements] then all Data Element will be populated under "Available" List Box. You can search Data Element by name after click the button which is mentioned at Step 4.



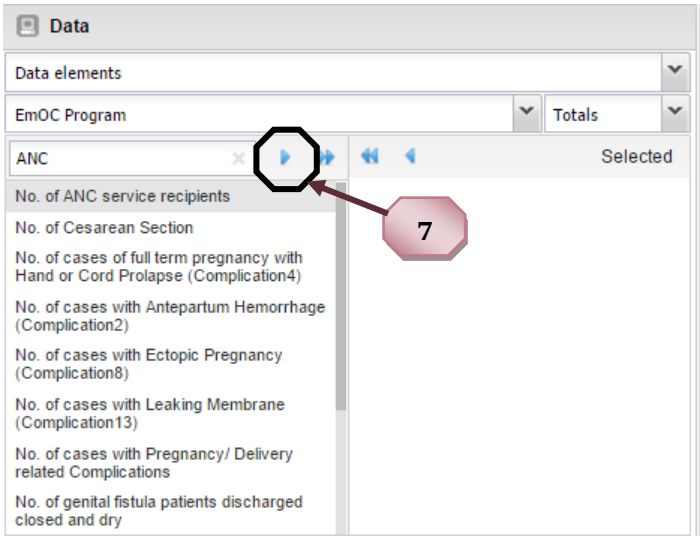
5. After clicking the button write your text in mentioned box and you will see that DHIS2 is searching the text when you are typing.

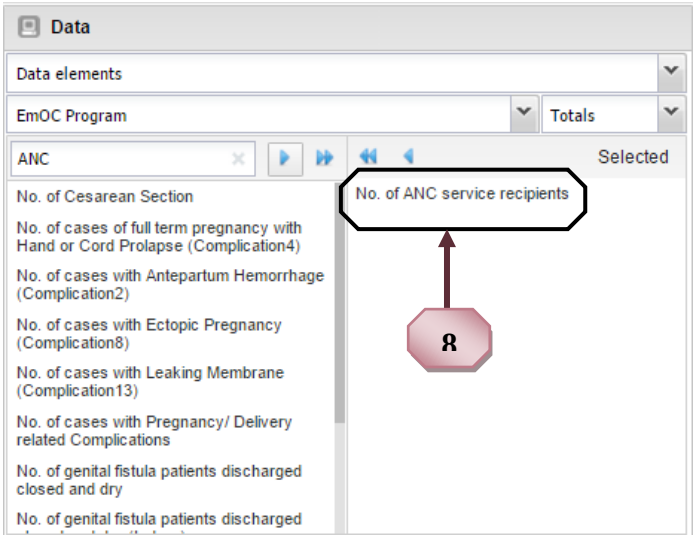
6. To cancel the search, please click the “x” button which is mentioned at step 6



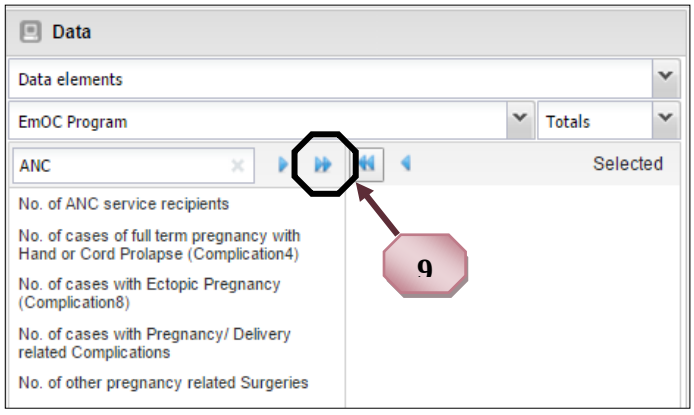
7. If you want to select individual Data Element then select the Data Element and click the button which is mentioned at Step 7. If you want select multiple Data Elements then select each Data Element with holding CTRL button and click the button which is mentioned at Step 7.

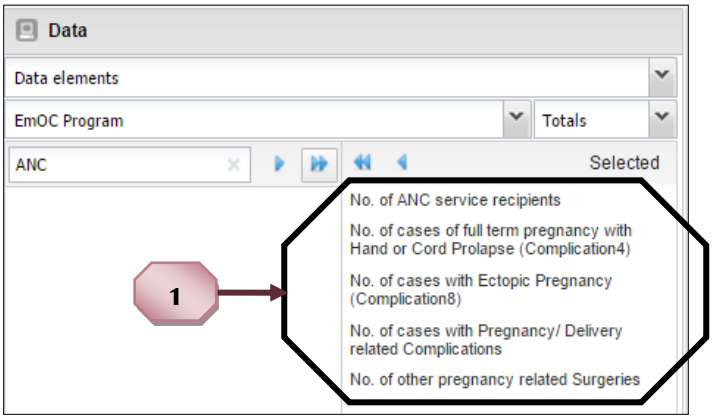
8. Your selected Data Element(s) will be available at “Selected” list box.



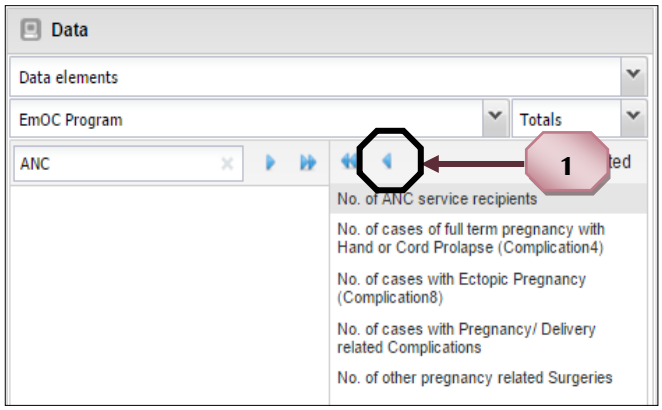


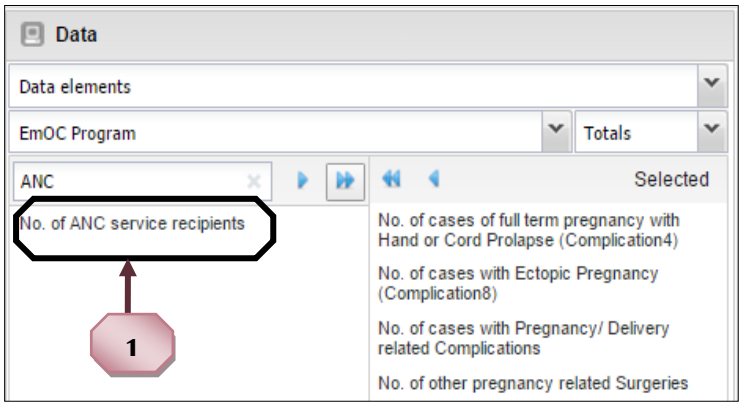
9. If you want to select all Data Element then click the button which is mentioned at Step 9.
10. All Data Element (s) will be available at “Selected” list box.





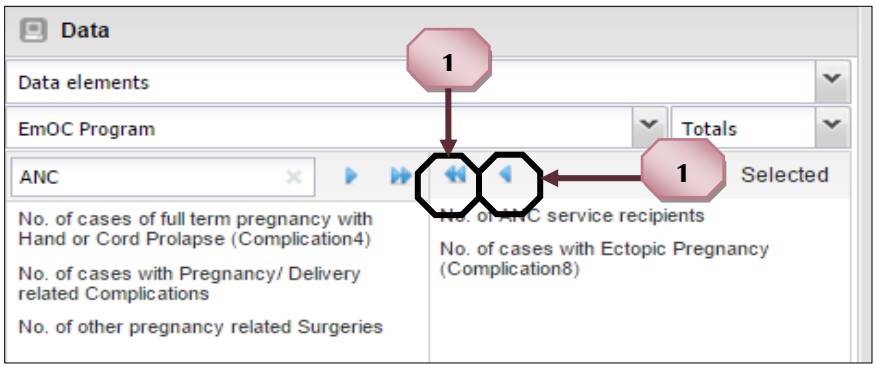
11. If you want to remove individual Data Element then select the Data Element and double click on the selected elements or click the button which is mentioned at Step 11.
12. Your selected Data Element(s) will be removed from “Selected” list box.





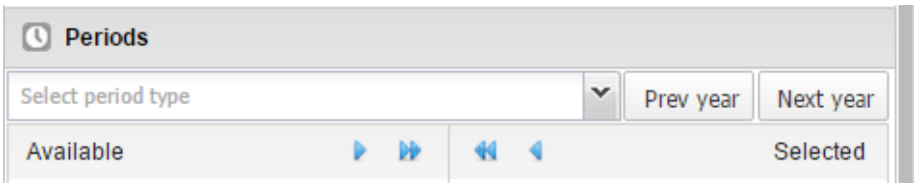
13. If you want remove multiple Data Element(s) then select each Data Element with holding CTRL button and click the button which is mentioned at Step 18. Your selected Data Element(s) will be removed from "Selected" list box.

14. Click the button which is mentioned at **Step 14**. All Data Element (s) will be removed from "Selected" list

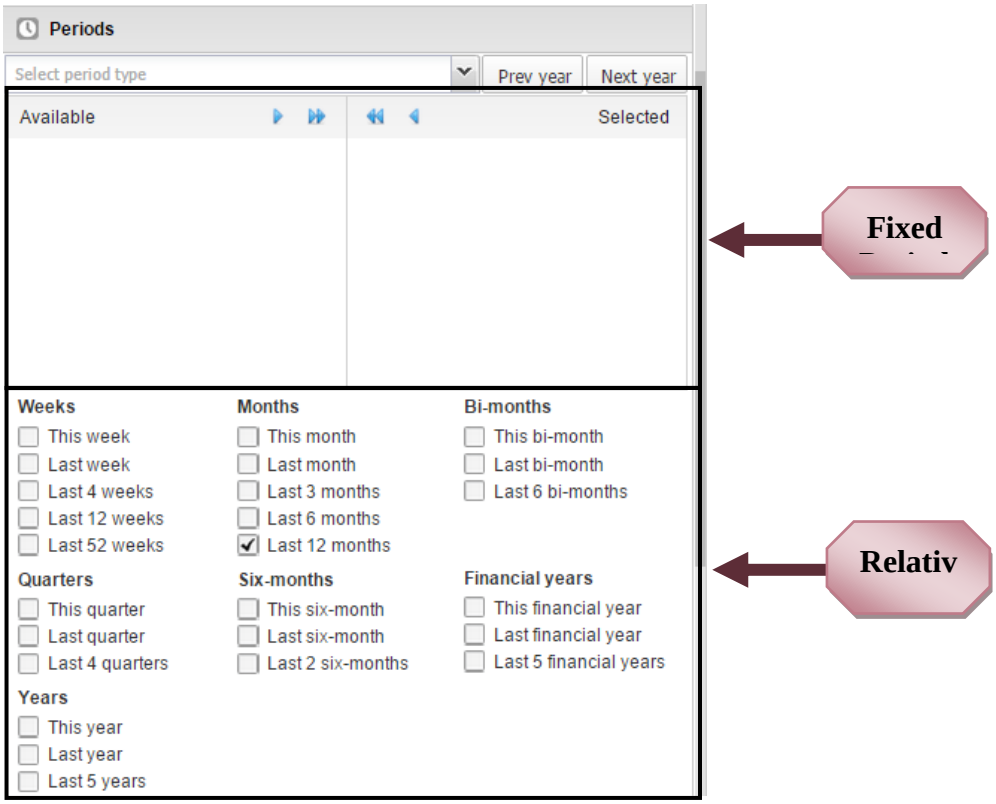


Selecting Period

Please click “Periods” menu from left panel.



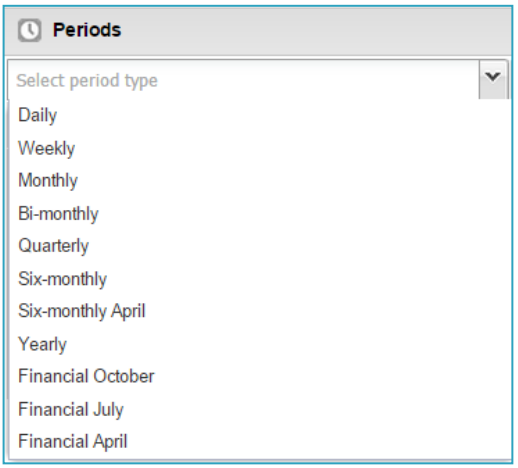
By default in “**Periods”** menu **“Last 12 months”** under Months is selected.
You can select two kinds of “**Periods”** one is **“Fixed”** and another is **“Relative**” which is mentioned below.



Fixed Period

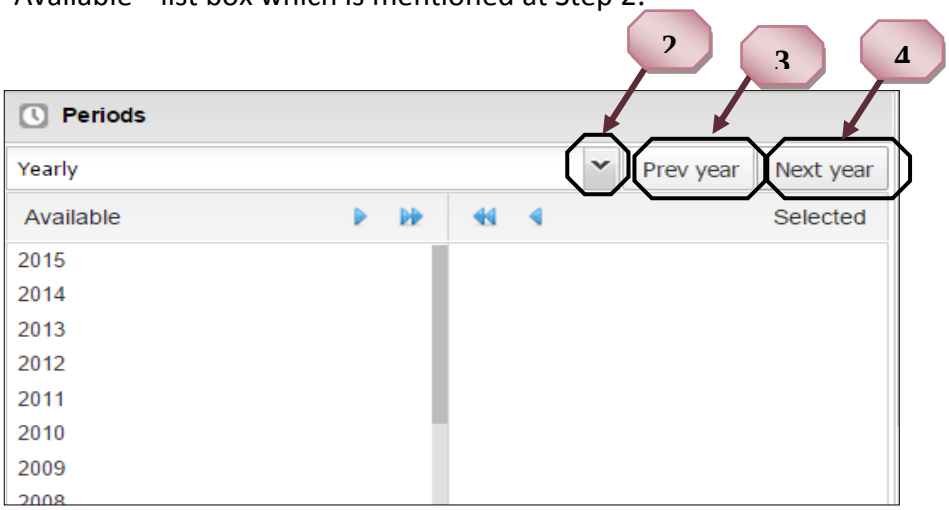
You can select different kinds of period from **"Periods"** drop down menu which is mentioned at **Step**

Below is the available value for the "Periods" drop down menu.



Yearly:

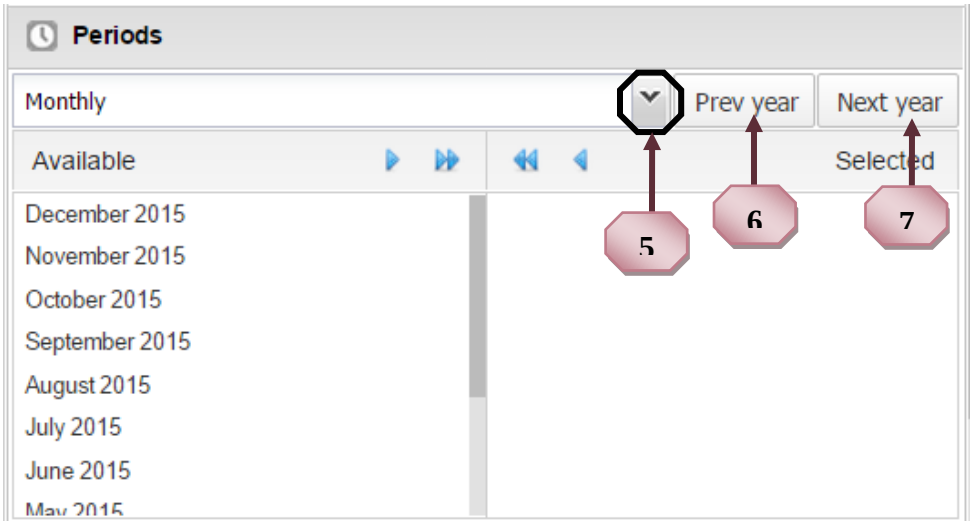
If you can select "Yearly" then from current year to last 10 years value will be populated in "Available" list box which is mentioned at Step 2.



If current year is 2015 then after select **"Yearly"** year will be 2015 and populated value will be 2015 to 2005. If you click **"Prev year"** then, current year would be the previous year and last 10 years value will be populated in **"Available"** list box which is mentioned at **Step 3**. If current year is 2015 then after clicking **"Prev year"** current year will be 2014 and populated value will be 2014 to 2004 If you click **"Next year"** then, current year would be the next year and last 10 years value will be populated in **"Available"** list box which is mentioned at **Step 4**. If current year is 2015 then after clicking **"Next year"** current year will be 2016 and populated value will be 2016 to 2006

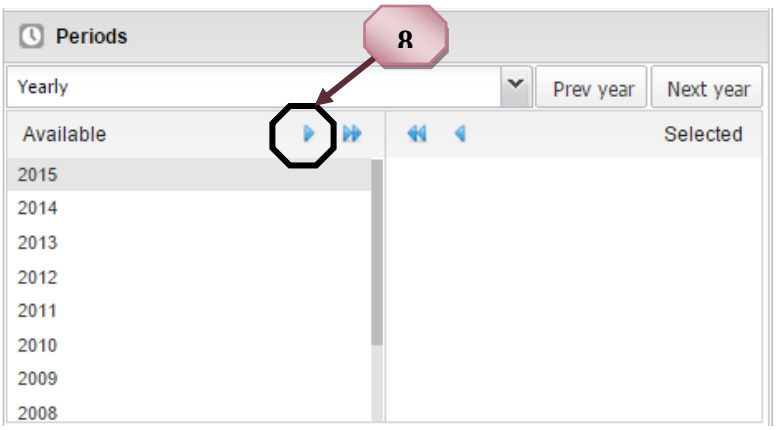
Monthly:

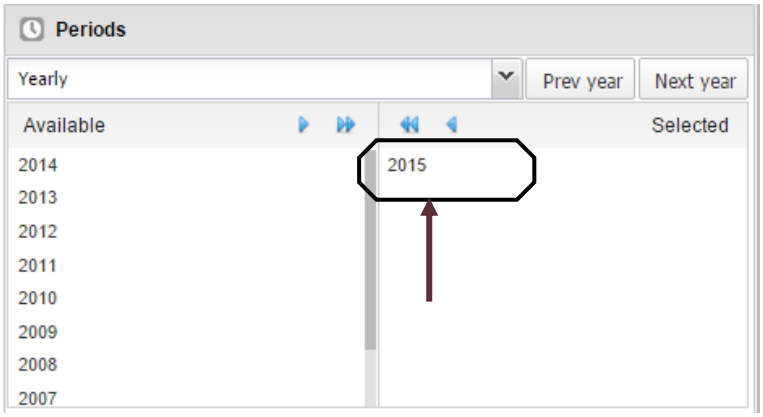
If you can select **"Monthly"** then from current year December to current year January value will be populated in **"Available"** list box which is mentioned at **Step 5**.



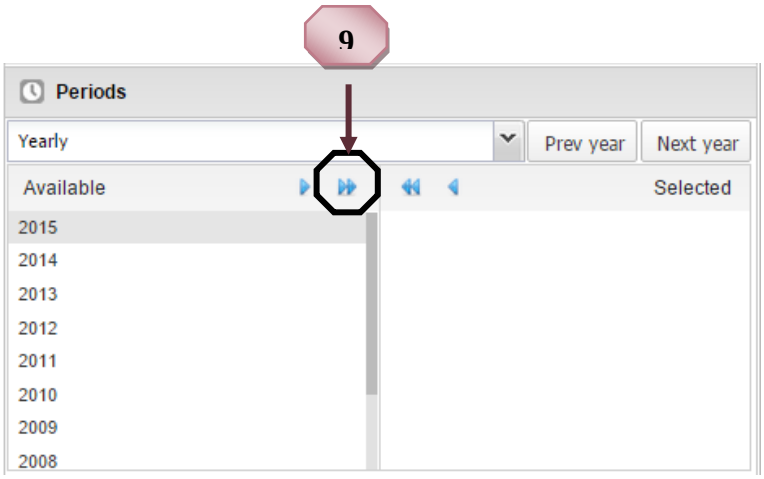
If you click "Prev year" then, current year would be the previous year and 12 months of that year value will be populated in "Available" list box which is mentioned at Step 6. If current year is 2015 then after clicking "Prev year" value will be December 2014 to January 20014 If you click "Next year" then, current year would be the next year and 12 months of that year value will be populated in "Available" list box which is mentioned at Step 7. If current year is 2015 then after clicking "Next year" value will be December 2016 to January 20016

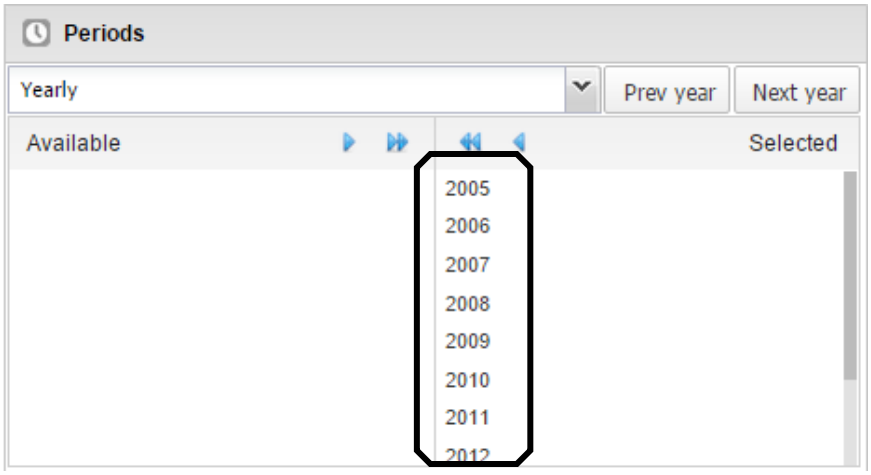
If you want to select individual "Periods" then select the "Periods" from available list box and click the button which is mentioned at Step 8. If you want select multiple "Periods" then select each "Periods" with holding CTRL button and click the button which is mentioned at Step 8. Your selected Data "Periods" (s) will be available at "Selected" list box.



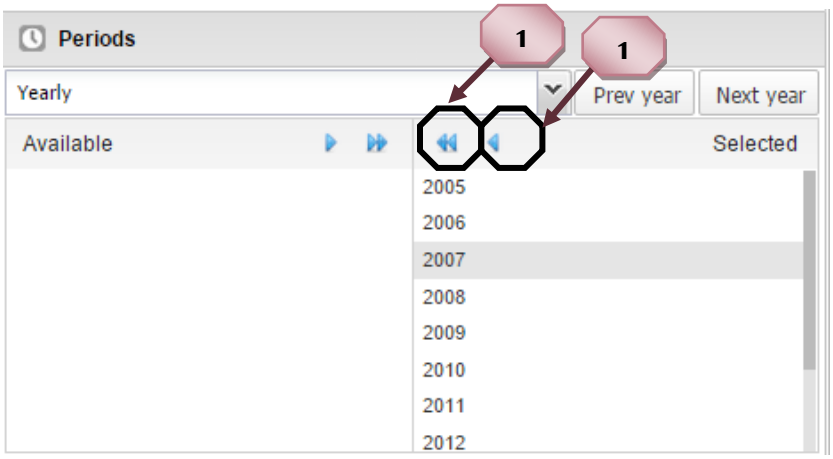


If you want to select all “Periods” then click the button which is mentioned at Step 9. All “Periods” (s) will be available at “Selected” list box.





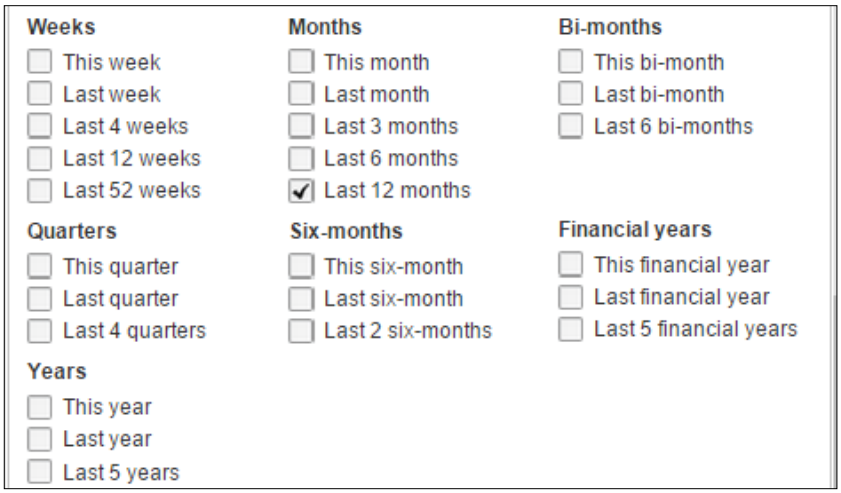
If you want to remove individual **"Periods"** then select the **"Periods"** and click the button which is mentioned at **Step 10**. If you want remove multiple **"Periods"**(s) then select each **"Periods"** with holding CTRL button and click the button which is mentioned at **Step 10**. Your selected **"Periods"**(s) will be removed from "Selected" list box.



If you want to remove all **"Periods"** then click the button which is mentioned at **Step 11**. All **"Periods"** (s) will be removed from "Selected" list box.

Relative Period

There are various types of relative period and all names are fairly self-descriptive and they are relative to the current date.



This month
If the current month is August and you select "This month", then the month August will be included in the chart.

Last month
If the current month is August and you select "Last month", then the month of July will be included in the chart.

Last 12 months
If you select "Last 12 months", then from month of August current year to month of July previous year will be included in the chart.

This year
If the current year is 2015 and you select "This year", then the year 2015 will be included in the chart.

Last month
If the current year is 2015 and you select "Last year", then the year 2014 will be included in the chart.

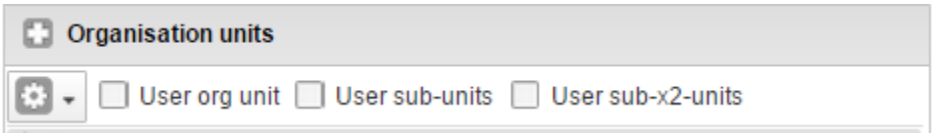
Last 5 years
If the current year is 2015 and you select "Last 5 years", then from 2015 to 2010 year will be included in the chart.

Note:
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.

Section 4.5

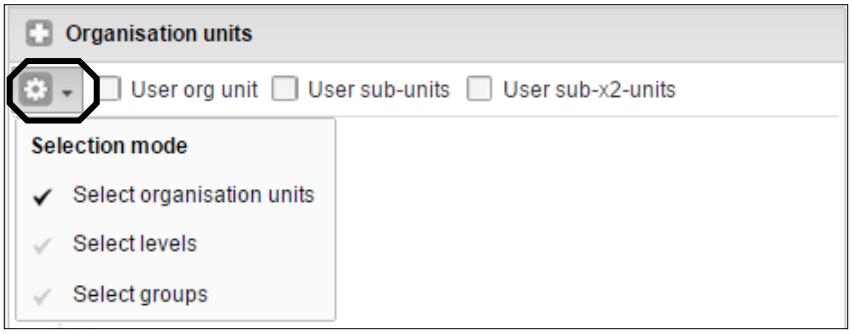
Selecting organization unit

Please click "**Organization units**" menu from left panel.



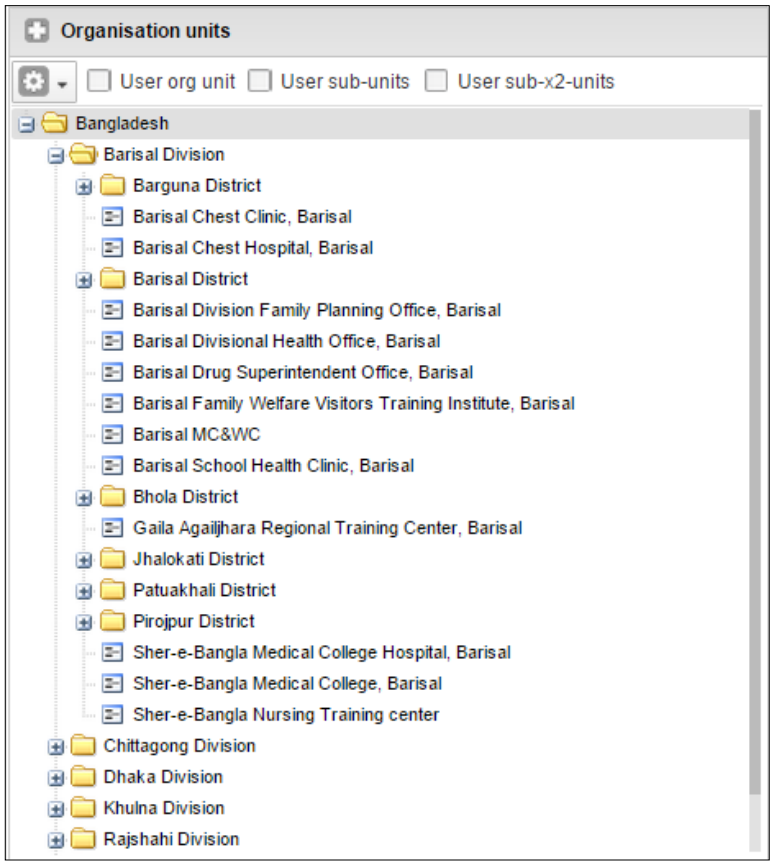
You can select "Organization units" by three ways. They are "Select Organization units", "Select levels" and "Select groups". By default it is "Select Organization units". Please click the button to select different kinds of option which is mentioned at Step 1.

After clicking the button below mentioned screen will appear.

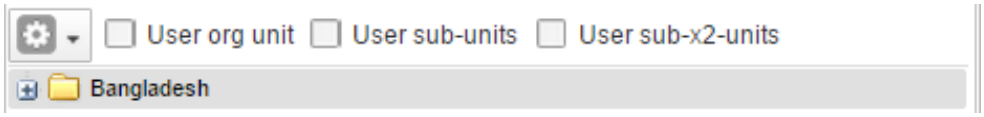


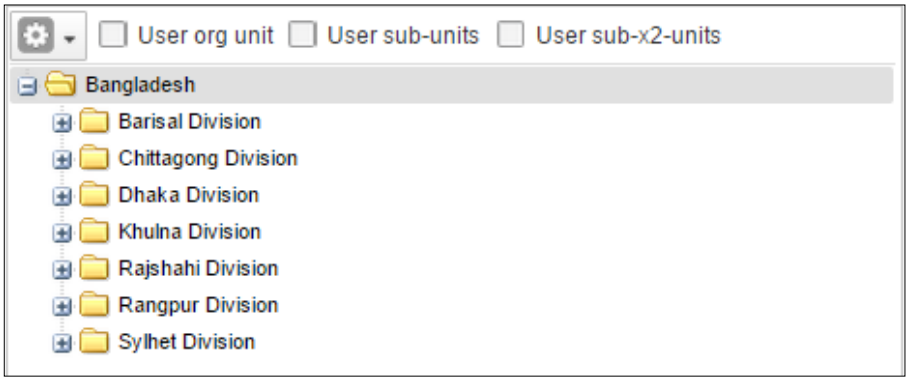
Select Organization units

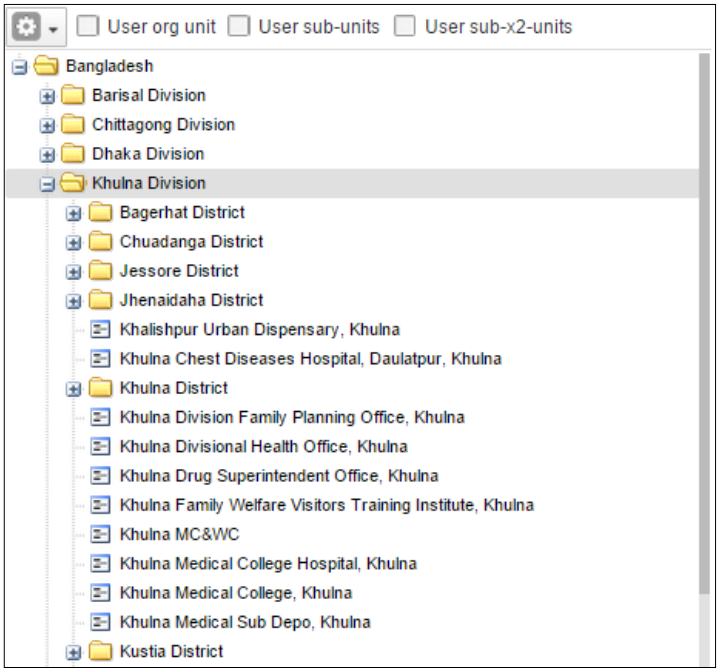
You can select your desired organization units from the tree menu.



To select organization units you click the "+" button and you can go further from tree. Please check the below mentioned image which are showing that, at first we have selected "Bangladesh" then click "+" button then select "Khulna Division". In this way you can go further like Bangladesh-> Division-> District-> Upazila-> Union-> Health Facility etc.

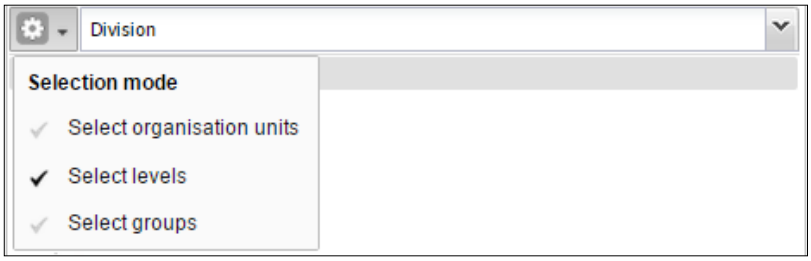






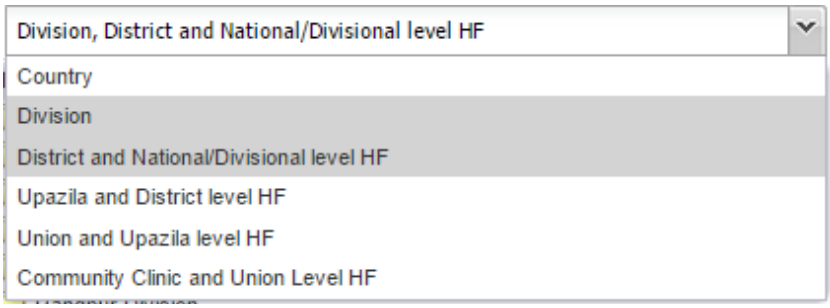
Select levels

You can select orginisation units level wise by clicking “Select levels”.



Presently there are “Country”, “Division”, “District and National/Divisional level HF”, “Upazila and District level HF”, “Union and Upazila level HF”, “Community Clinic and Union Level HF”.

You can select multiple levels by clicking items from the drop down list



Note:

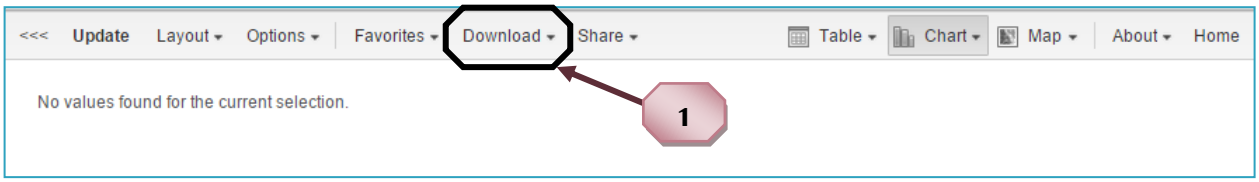
This requires that you have selected one or more elements from all of the three dimensions –

4. data (indicators, data elements, reporting rates),
5. periods (relative, fixed) and Note that "Last 12 months" from the period dimension are selected by default
6. organization units (units or groups) and Note that the root organization unit are selected by default

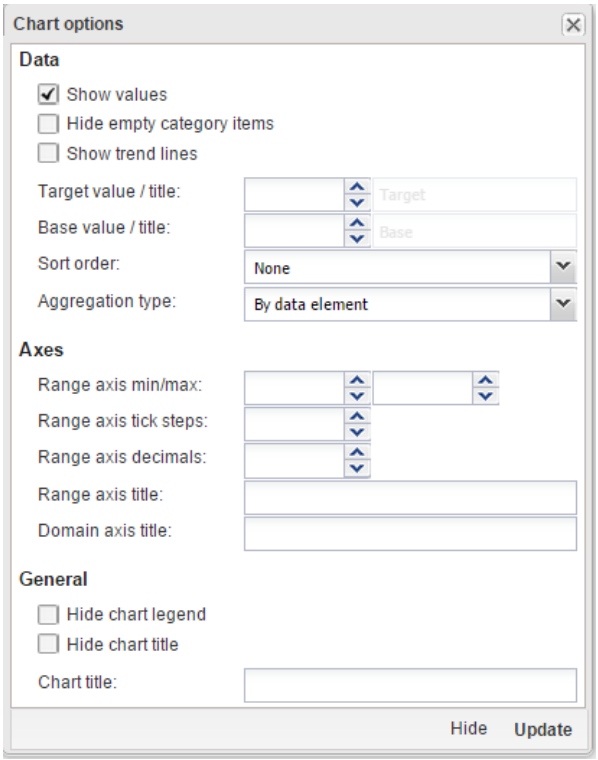
Section 4.6

Selecting chart options

Before generating then chart you can customize some options by clicking the button which is mentioned at Step 1.



After clicking the button below mentioned screen will appear.

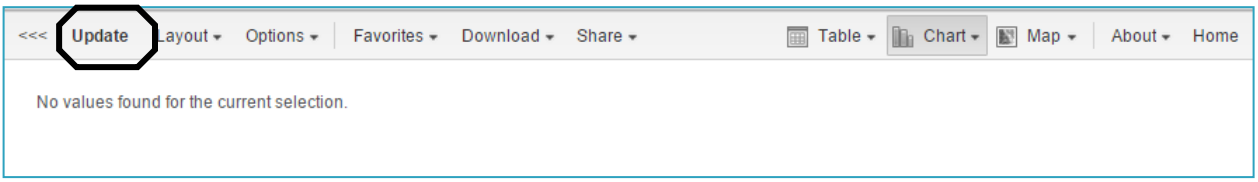


Below are the descriptions of the mentioned Chart Option.

- **Show values:** This will display the values above the series in the chart.
- **Hide empty category items:** This will hides category items where there are no data.
- **Show trend lines:** This will show how your data evolves over time so you can analyze that whether performance are improving or deteriorating.
- **Target line value/title**: This will displays a horizontal line which is useful when you want to compare your performance to the current target.
- **Base line value/title:** This will displays a horizontal line at the given domain value which is useful when you want to visualize how your performance has evolved since the beginning of a process.
- **Sort order:** Sort the values on your chart.
- **Aggregation Type:** Defines how the data elements or indicators will be aggregated within the chart.
- **Range axis max/min:** Defines the maximum and minium 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.
- **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 any title you like and it will appear above the chart.

After completing your selection please click “**Update**” .

You can display a chart based on your selections simply by clicking the "Update" button on the top centre menu.



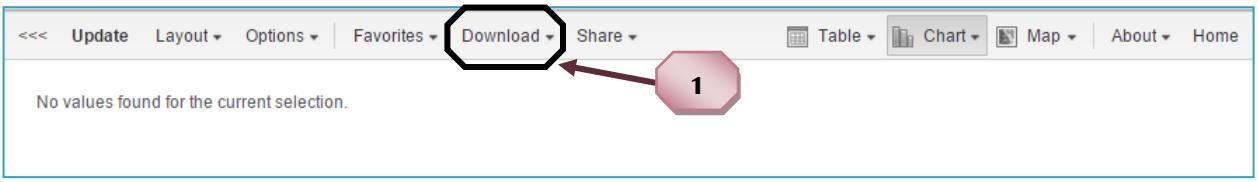
Note:

You can hide and show individual data series in the chart by clicking directly on the series label in the chart- they appear either at the top or to the right of the chart. If you want to give the chart more space on your screen you can click on the triple left-arrow button on the top centre menu which is mentioned at Step 2. This will collapse the left side menu. You can get this menu back by clicking on the same button again

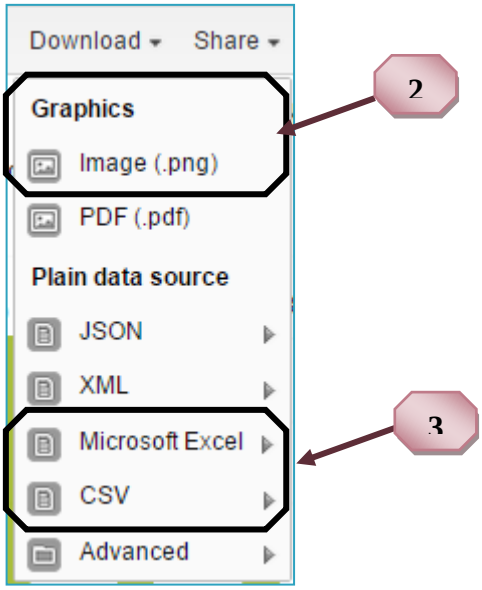
Section 4.7

Downloading chart

After you have rendered a chart you can download it to your local computer by clicking on "Download" on the top centre menu which is mentioned at Step 1.



When you click “download” button below mentioned menu will appear.

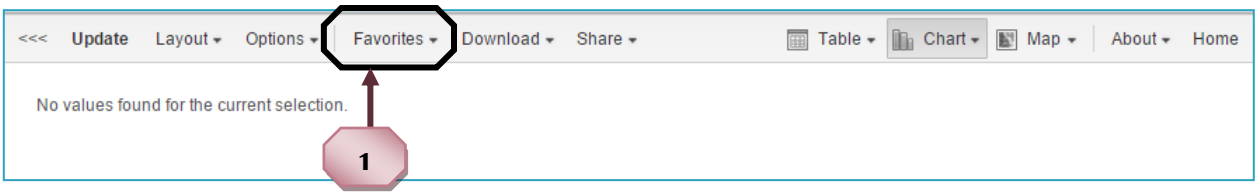


If you click “Image (.png)” or “PDF (.pdf)” then the file will be automatically downloaded to your computer which is mentioned at Step 2 Then you can embed the image file into a text document as part of a report.

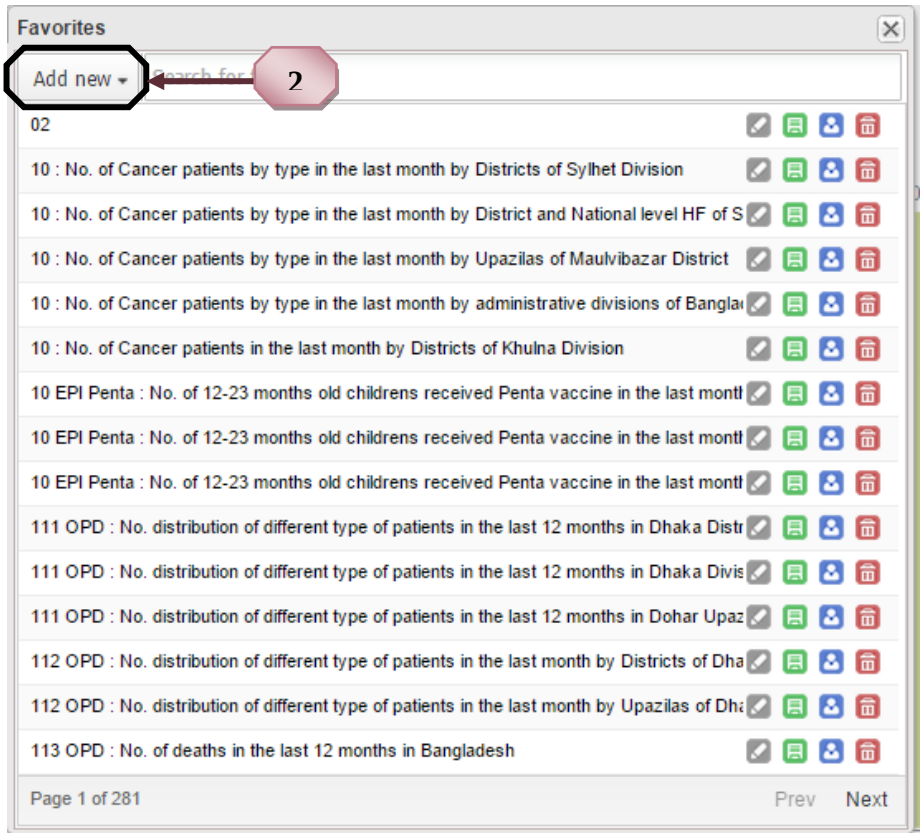
You can also download the data source behind the chart in “Microsoft Excel” or “CSV” format which is mentioned at Step 3.

Saving chart as favorite

After you have rendered a chart you can save it to the server for further use by clicking on "Favorites" on the top centre menu which is mentioned at **Step 1**.



After clicking the button below mentioned screen will appear.

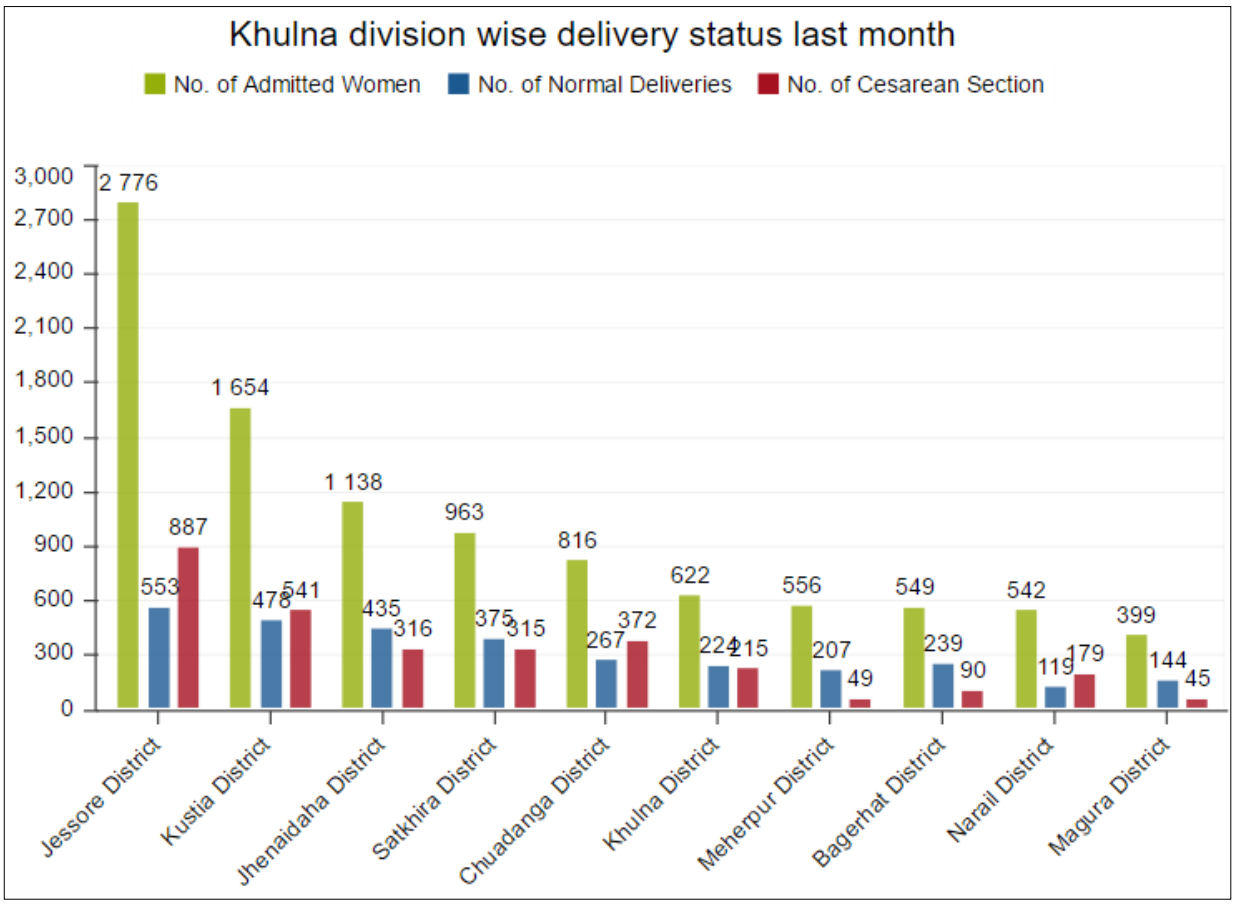


Save: To save the chart please click “Add New” button that is mentioned at “Step 2”. Then the below mentioned screen will appear. Write chart name at Step 3 and click “Create” mentioned in Step 4

Case Study

Objective:

Create a Bar chart which will show district wise delivery status (No. of admitted women, No. of normal deliveries, No. of Cesarean sections) for the period of last month in Khulna Division



Step-1: Open Data Visualizer

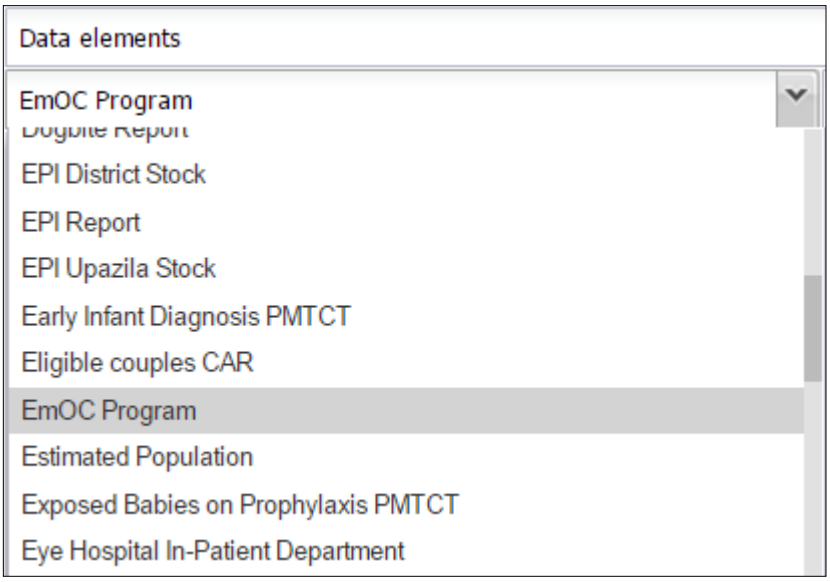
1.1 Click Apps icon

1.2 Click "Data Visualizer" icon

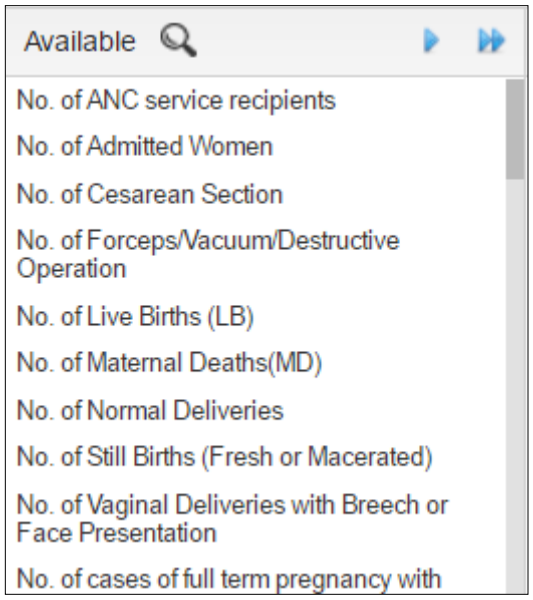
Select Data element (What)

2.1 Click down arrow and select “Data Element”

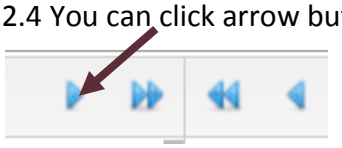
2.2 Click down arrow and select “EMoC Program”



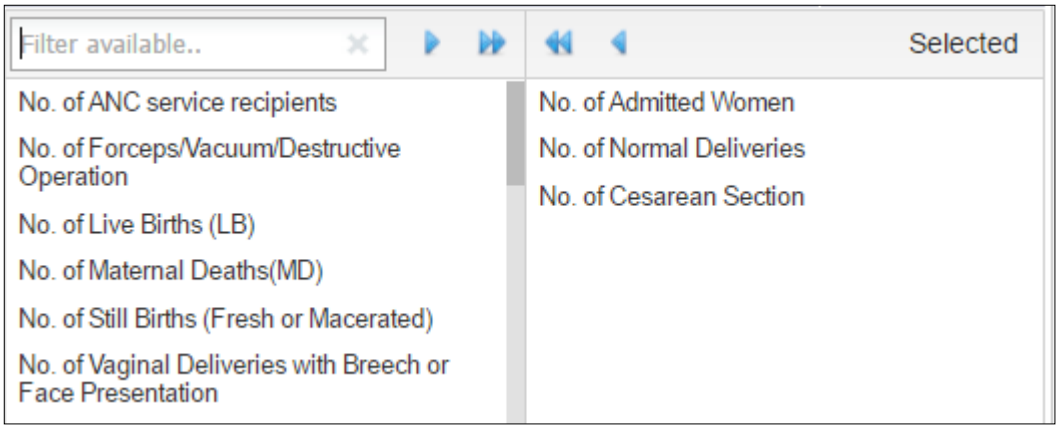
2.3 Select required field from the list. For multiple selections you have to hold CTRL button



2.4 You can click arrow button for selection

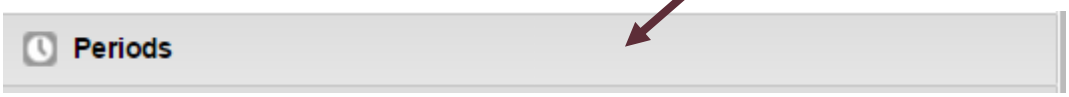


2.5 Your Data screen will look like this.

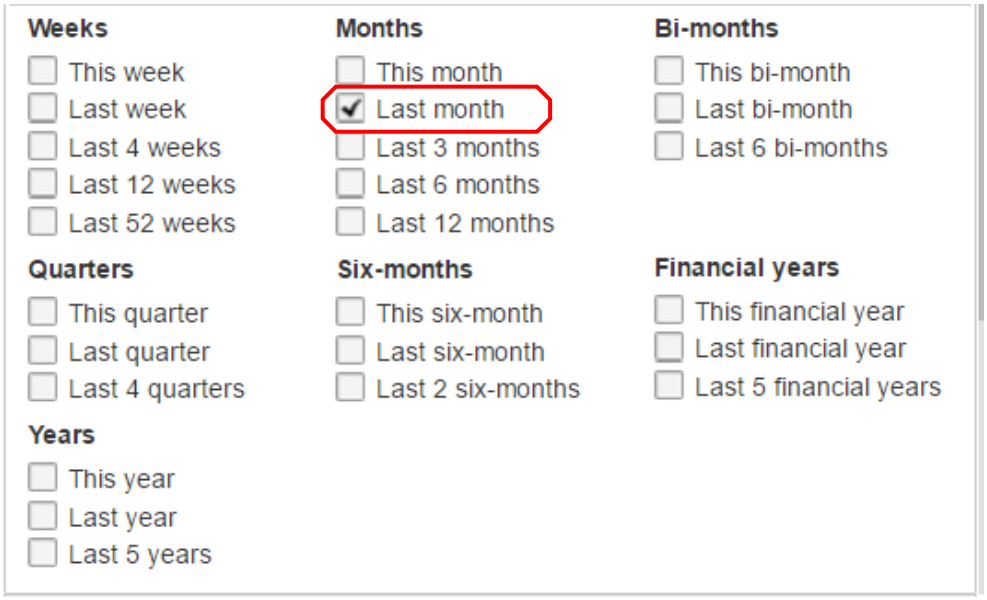


Step-3: Select Period (When)

3.1 Click Periods



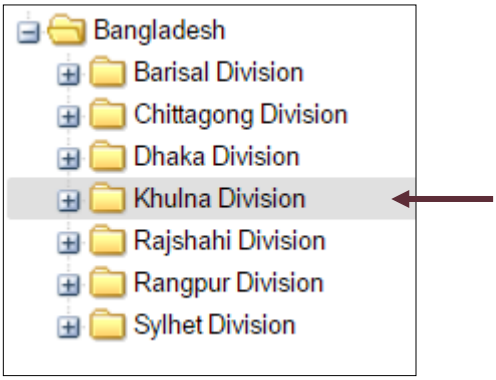
3.2 Select "Last month" from Months



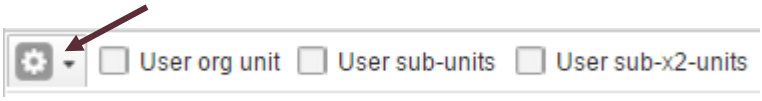
Step-4: Select Organization Unit (Where)

4.1 Click "Organisation Units" tab.

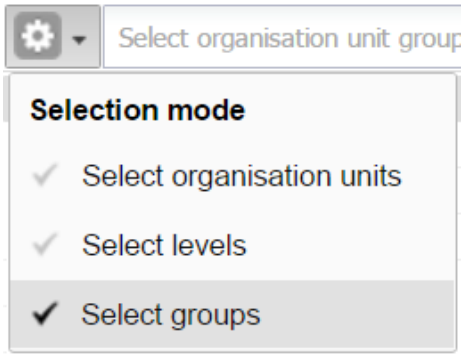
4.1 Select "Khulna Division".



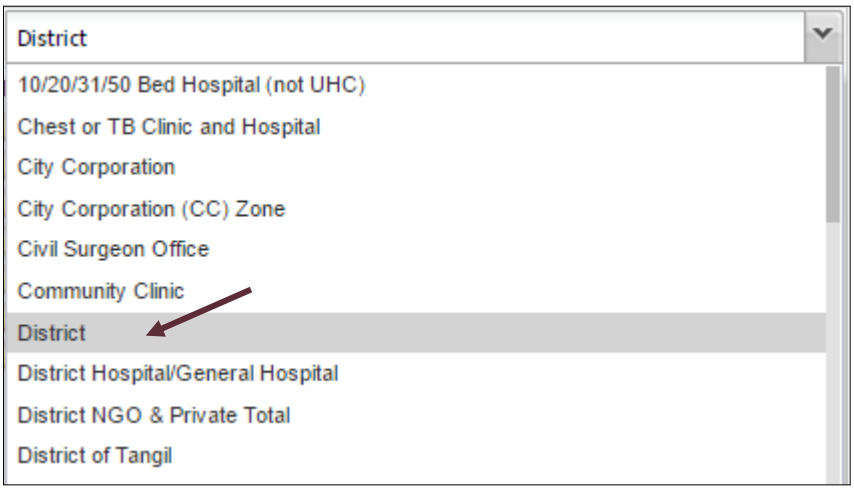
4.2 Click dropdown for selecting the selection mode



4.3 select the selection mode "**Select group**"

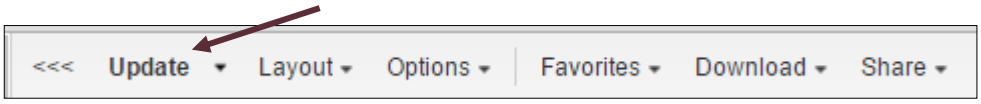


4.4 Select "**District"** from the list

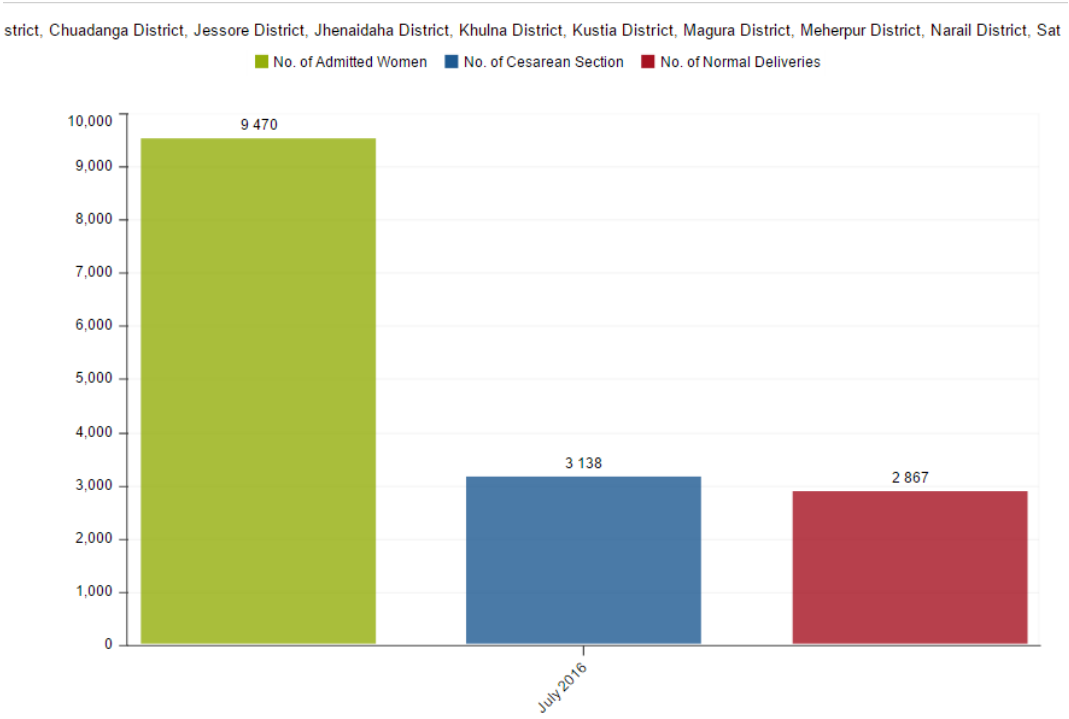


Step-5: Click Update

Click "Update" from top menu

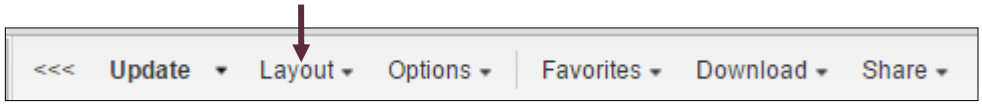


Your chart will look like this.

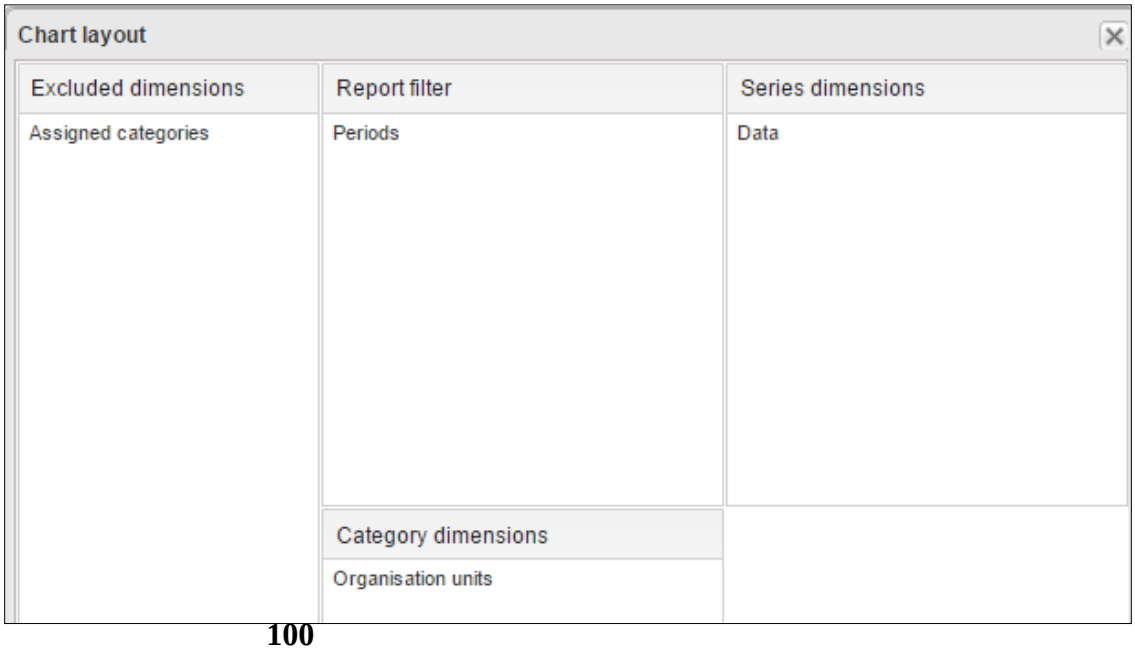


Step-6: Change Layout

6.1 Click Layout

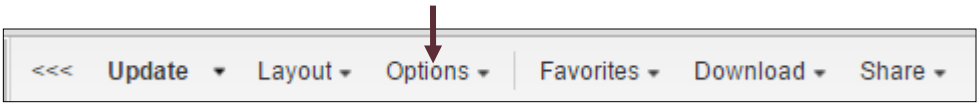


6.2 Change layout according to case study. Please drag and drop organization unit in a row and data in column and click **update** button.

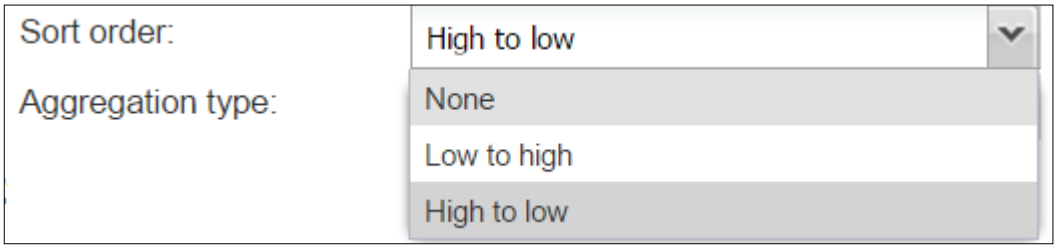


Step-7: Sort order the chart

7.1 Click Options

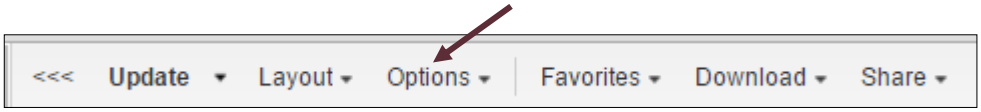


7.2 Select sort type "**High to low**" and click update

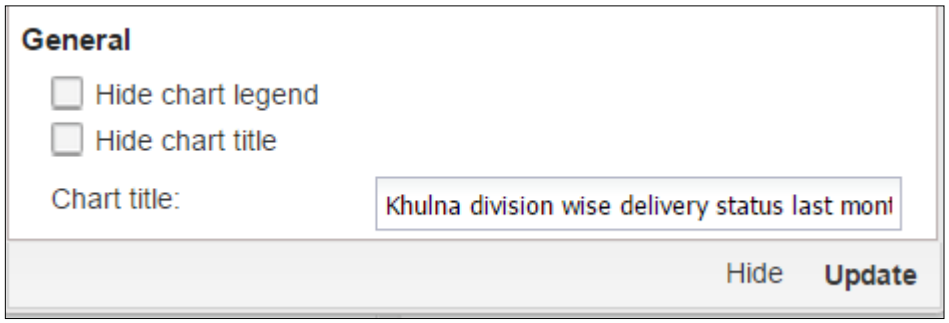


Step-8: Chart Title

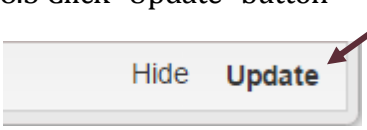
8.1 Click on Options



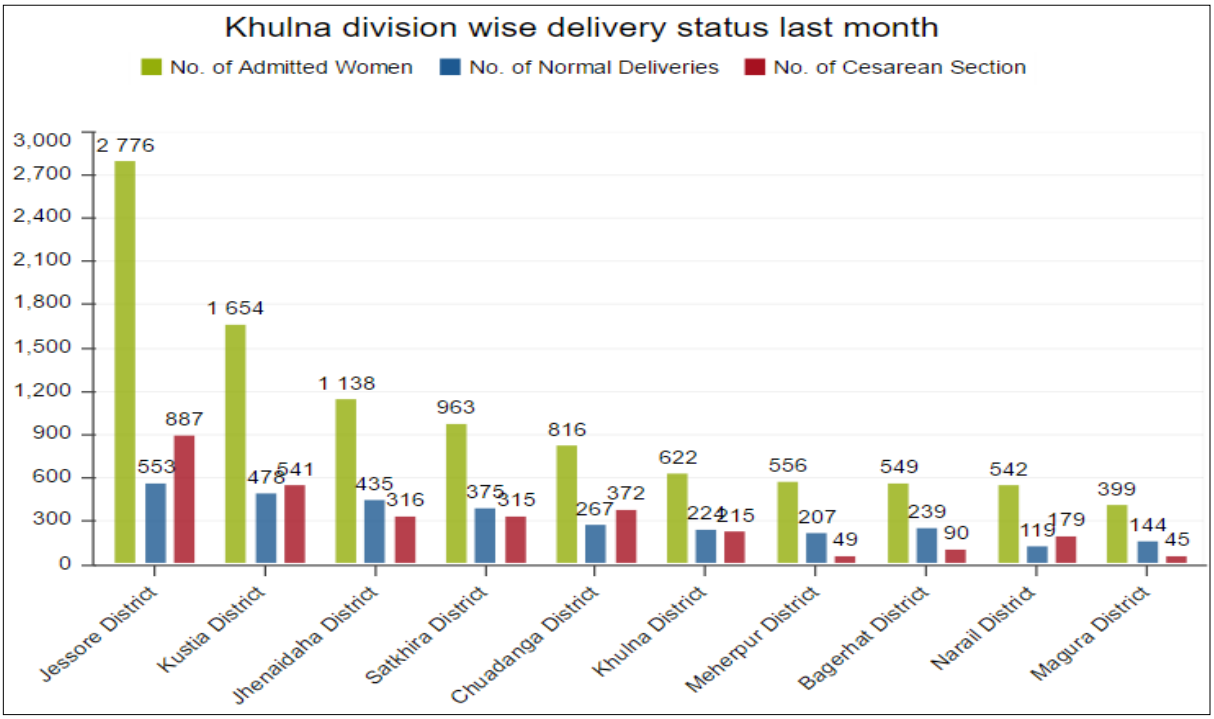
8.2 Write the title of the chart and click update. Copy the title name it will help you to save the same name for saving the cart.



8.3 Click "Update" button

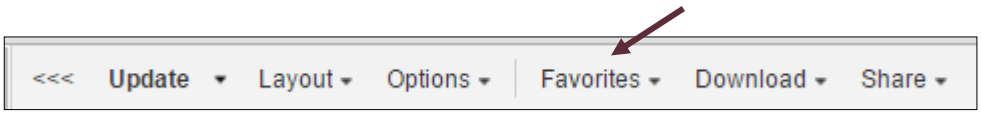


your chart will look like this.

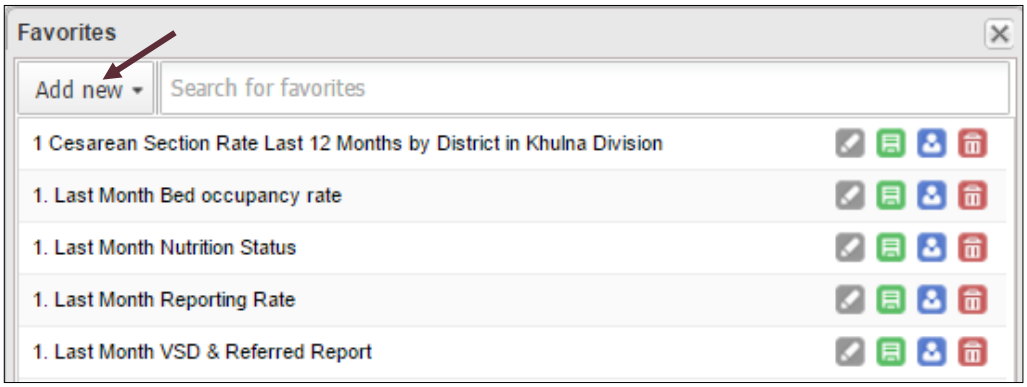


Step-9: Save chart

9.1 Click on **Favorites**



9.2 Click on **Add New** button

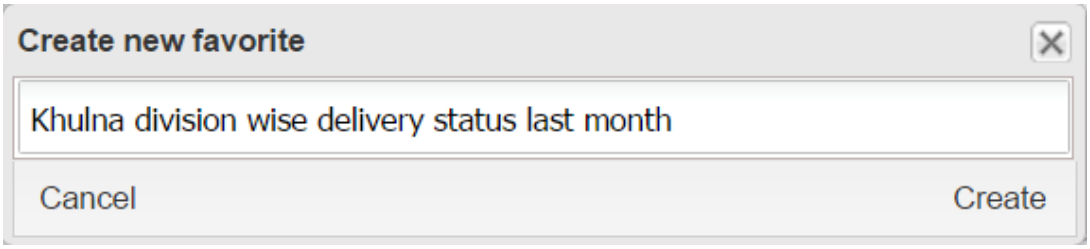


9.3 To save the pivot table writes the name; if you copy the name for the title name which was mention in **Step 9.2** then just **paste** the name.

Please follow the convention of naming title and saving data

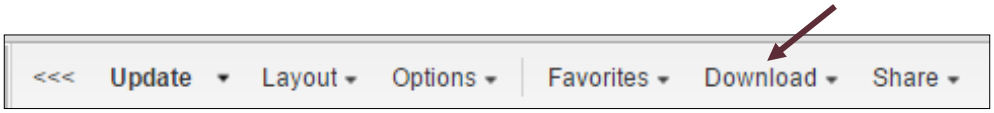
Where (Khulna) + Type (Division Wise) + **What** (Child Health) + **Period** (Last Month)

Now Click Create button to save the chart.

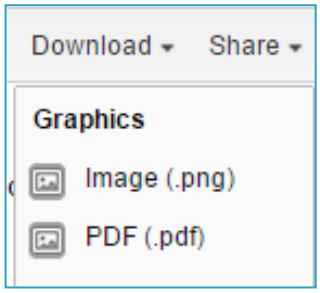


Step-10: Download Chart

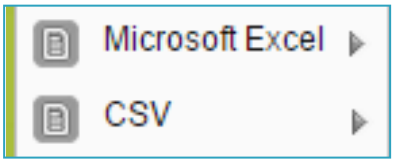
10.1 After you have rendered a chart you can download it to your local computer by clicking on "**Download**" on the top centre menu



10.2 When you click “download” button below mentioned menu will appear. If you click “Image (.png)” or “PDF (.pdf)” then the file will be automatically downloaded to your computer.



10.3 You can also download the data source behind the chart in “Microsoft Excel” or “CSV” format



Chapter 5

Using GIS

Geographical information system (GIS) is a system to analyze and display of geographically referenced information. It helps to visualize and interpret data to understand the trends, compare different region data at a glance and the facility location

SUMMARY

Overview

In DHIS2 there is a feature to create and view the GIS to analyze and visualize data on indicators, data elements, facilities according to organizational unit, period of time and boundary. You can create thematic mapping of areas and points and overlay multiple layers. After creating the GIS Map you can save it as a favorite and shared it with others and add to the dashboard.

After complete this chapter you will learn about the how to analyze data using GIS, concept of boundary layer , thematic layer and facility layer. You can create a GIS map comparing the data elements and indicators in the Map to easily visualize the health situation. You can create a facility layer map to view the facility in the map. At the end of this chapter there is a real time example of creating GIS so that you can easily create GIS Map for your desire data analysis.

Section 5.1

Analysis Concepts

TO analyze data using GIS you need to know the "**Basic Building Block**" of DHIS2 reporting. First of all you have to think about **what** you want to analyze. In this case in DHIS2 have three options indicators, data elements and reporting rates. Then you need to select **when** it was happen means the time period and finally you need to select **where** it was happen means the organization unit. See the detail of Analysis Concept in Chapter 1, Section 1.1.

For creating map in DHIS2 we have to know about the GIS layers. The GIS layers are as below and you can find more detail about those layers.

1. Event Layer
2. Facility Layer
3. Thematic Layer
4. Boundary Layer

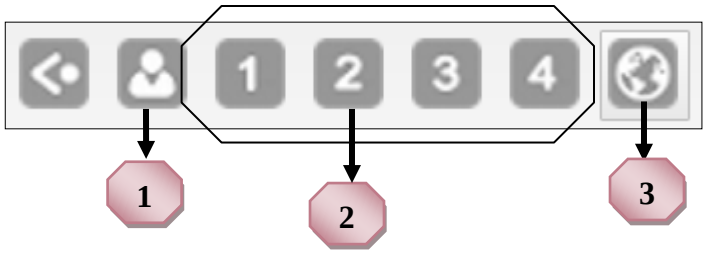
For showing data in the GIS map first select the boundary layer and then select thematic layer

1. First Select Boundary Layer
2. Select Thematic Layer
3. Select desire data elements/indicators
4. Select time period
5. Select Organization unit
6. Update and view Map

For creating a map for showing facilities

1. First Select Boundary Layer
2. Select Facility Layer
3. Update and view Map

GIS Layers:



For creating map in DHIS2 we have to know about the GIS layers. The GIS layers are as below and we can find more detail about those layers.

1. Facility Layer
2. Thematic Layer
3. Boundary Layer

Facility Layer: This layer is for showing the facilities in the GIS Map. Using this Map you can easily find out a facility within that organization unit.

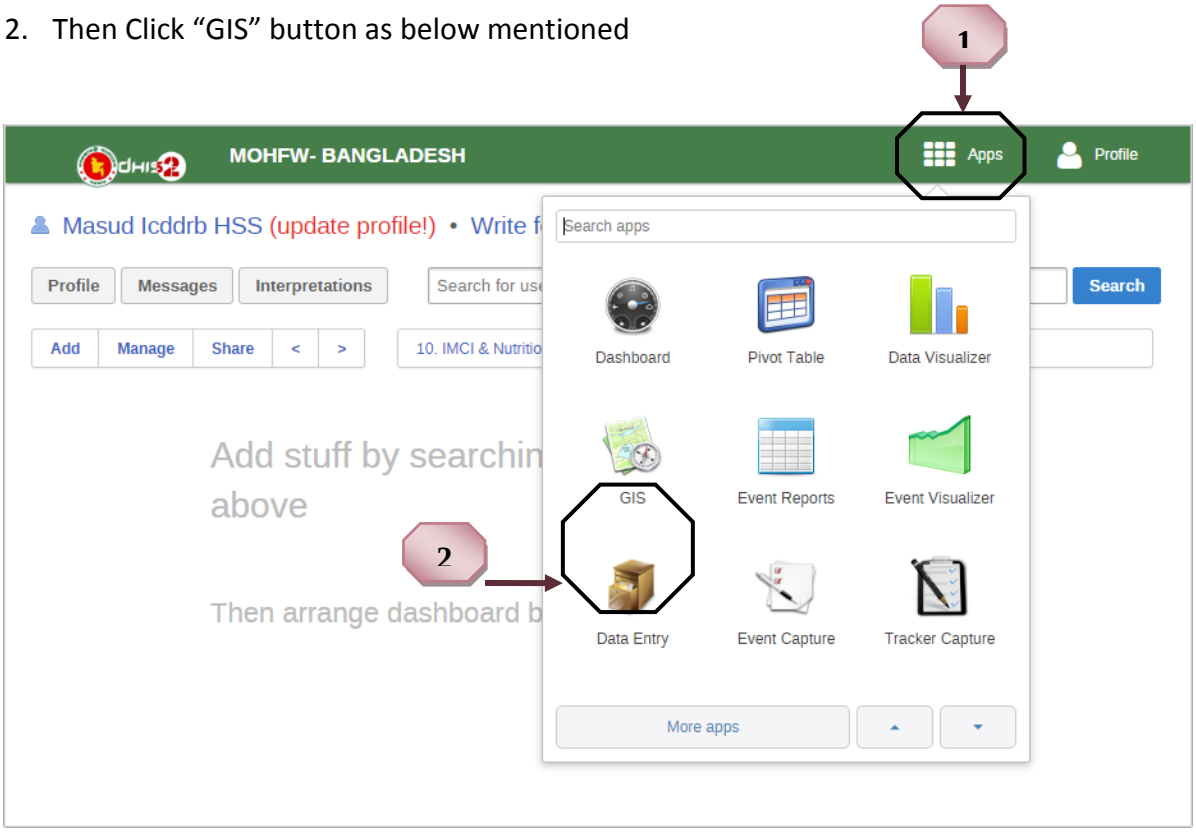
Thematic Layer: Thematic layer is using for the data analysis on data element/indicator in different period and organization in GIS map. There are four thematic layers in DHIS 2.

Boundary Layer: Thematic layer is use for the Map boundary. You have to select this layer at the beginning of the creating Map.

How to Open

To open “GIS”

1. Please at first move your cursor on Apps button under main menu
2. Then Click “GIS” button as below mentioned



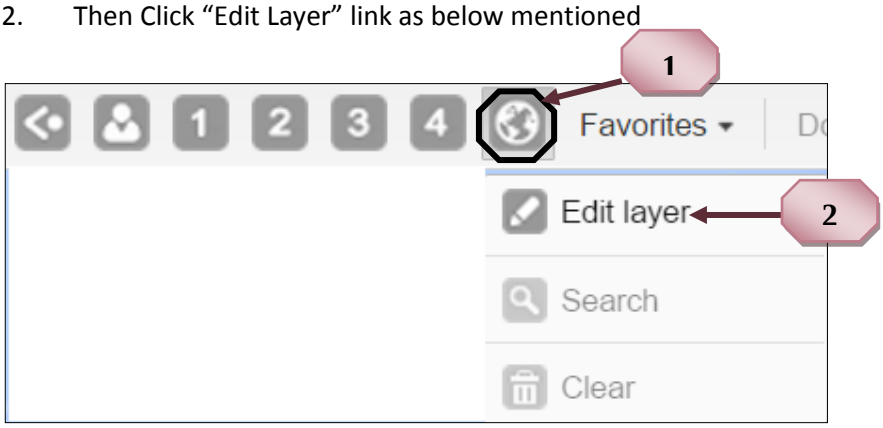
Create a Map showing Data

For showing data in the Map at first select the boundary layer and then select thematic layer

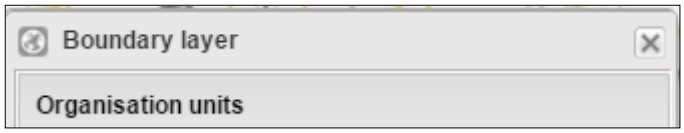
1. First Select Boundary Layer
2. Select Thematic Layer
3. Update and view Map

Step-1: Select Boundary layer

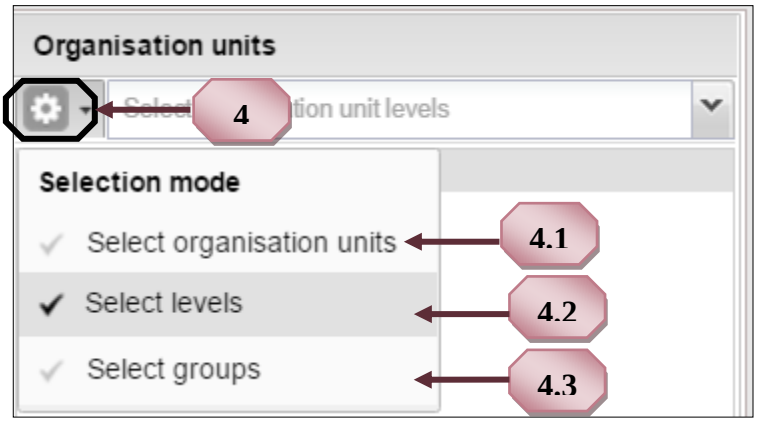
1. Click icon mention below
2. Then Click “Edit Layer” link as below mentioned



3. Please click “Organisation units” menu from left panel.



4. Select Organizational unit selection mode



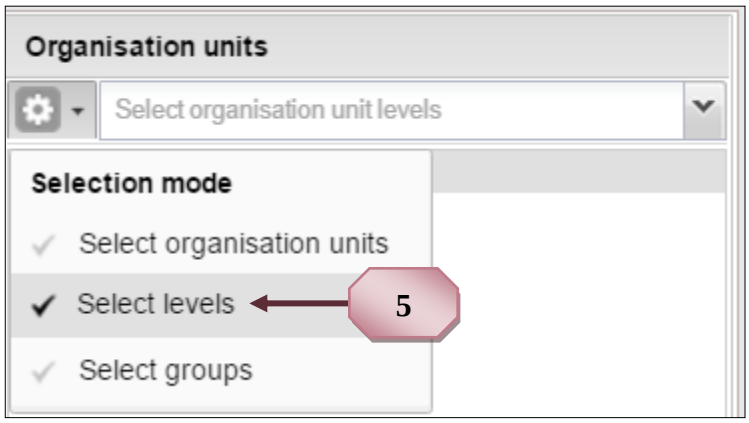
4.1 Select organizational unit

4.2 Select Level – Data will be aggregated according to the Geographic (GEO) location like Division, District, Upazila, and Union and Community Clinic.

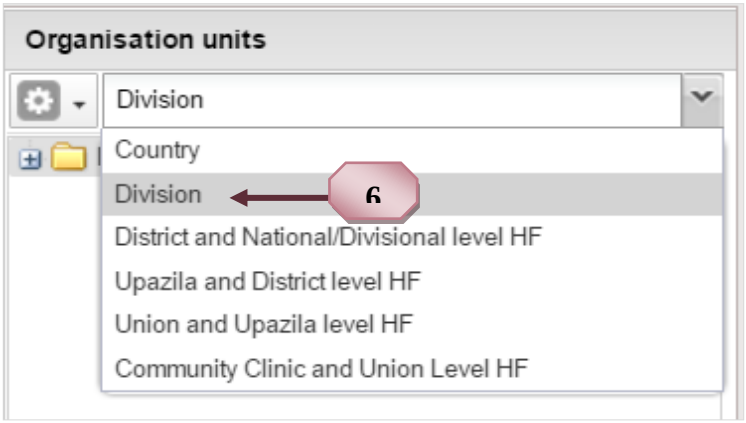
4.3 Select Group – Data will be aggregated according to the creation of group like Upazila Health Complex, District Hospital, NGO etc

Select Division Boundary:

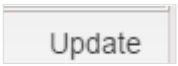
5. In selection mode Select levels



6. Select level division



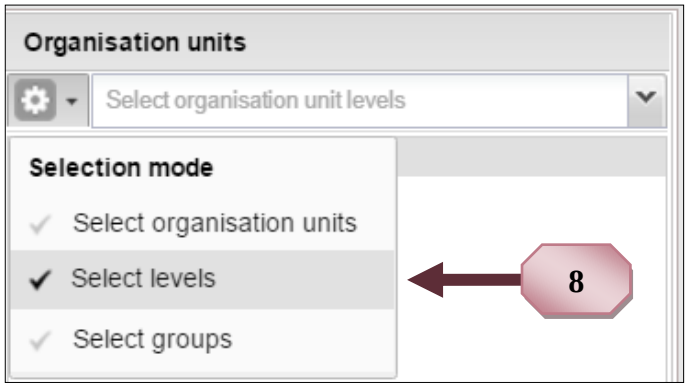
7. Click Update



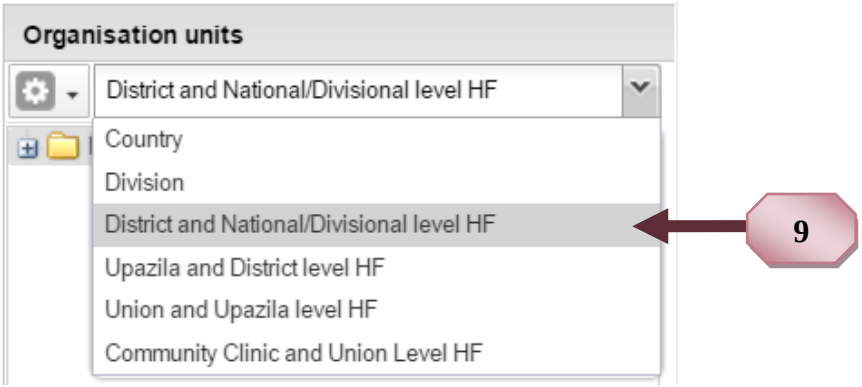
8. Now you can view the division boundary line in the GIS Map like as below

Select District Boundary:

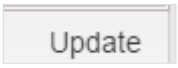
8. In selection mode Select levels



9. Select district levels



10. Click Update



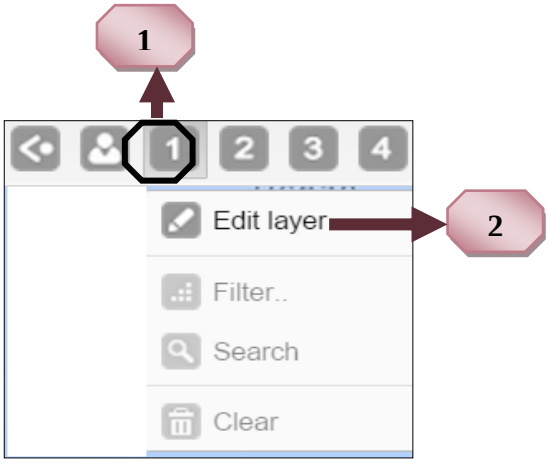
11. View district boundary

Step-2: Select thematic layer

In DHIS2 there are four thematic layers for thematic mapping. You can select the indicators, data elements, period and organizational unit. According to those selection GIS map will be display the desire output.

To open “Thematic Layer”

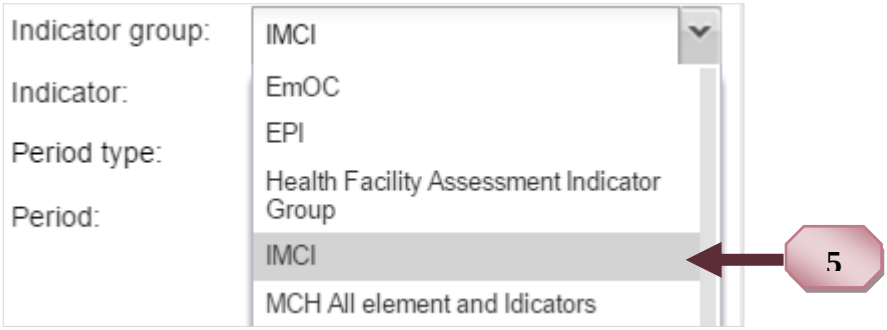
1. Click icon mention below
2. Then Click “Edit Layer” link as below mentioned



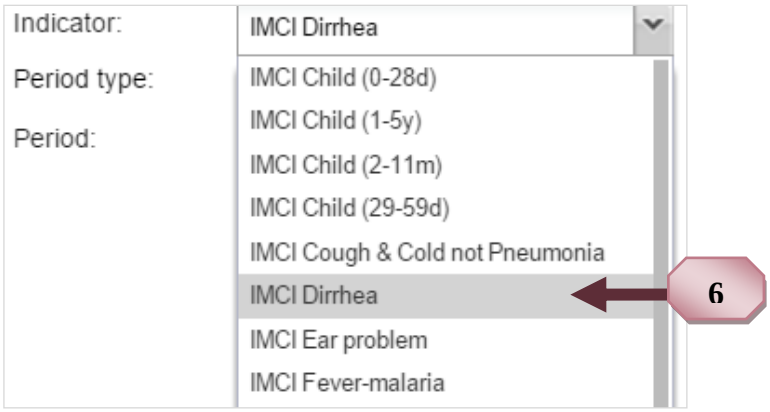
3. Now we need to Figure out what will be the output of our GIS Map. For example: We want to Display a GIS map which will show the IMCI Dirrhea all over Bangladesh in Divisional boundary for the year 2015"

4. Selecting the indicator/Data Element/Reporting Rate

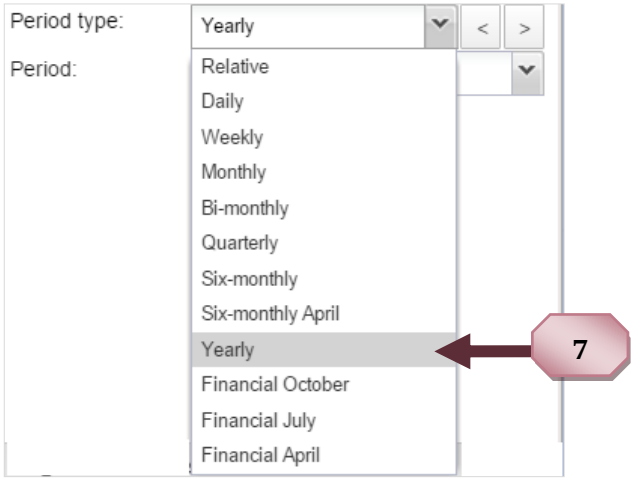
5. Selecting the indicator group as per requirement



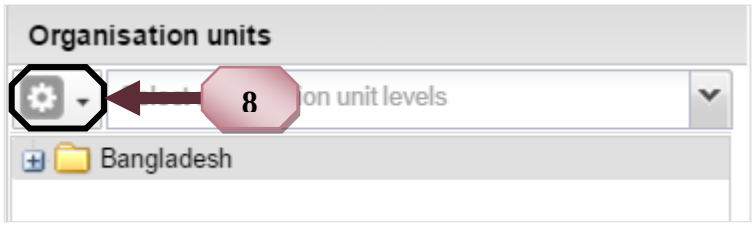
6. selecting the desire indicator from that indicator group



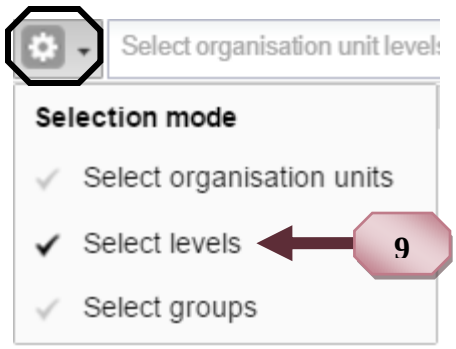
7. Selecting the Period type



8. Selecting the Organizational Unit

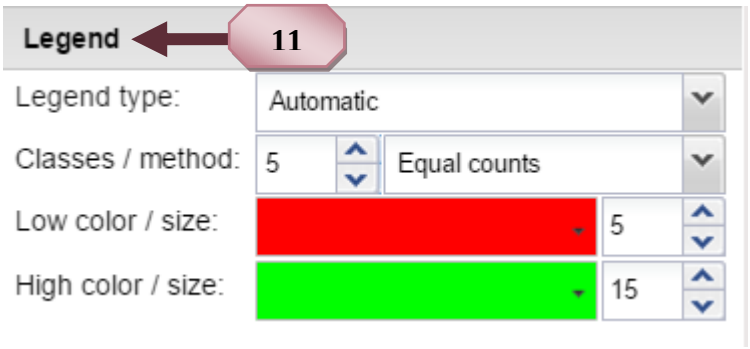


9. Selecting the selection mode

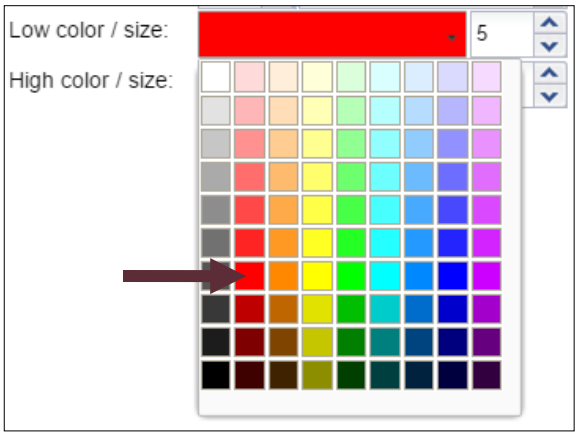


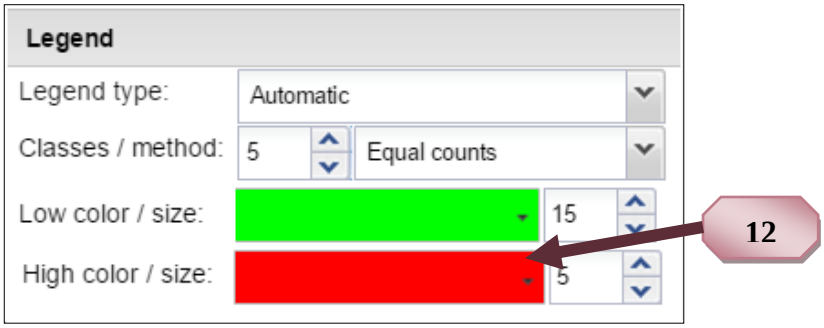
10. Selecting the level as per requirements

11. Setting Legend. By default Low Color is Red and High color set green.

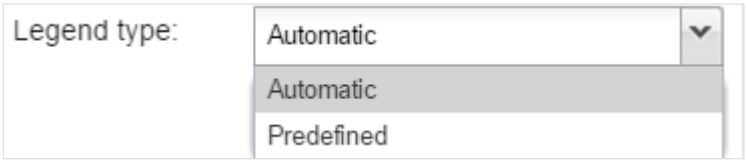


12. If you want to represent IMCI Diarrhea rate in GIS Map for each district you can change high color red and low color green so that any one can undersdand that Red identified areas Diarrhea rate is high. To change color select the list and change the color.

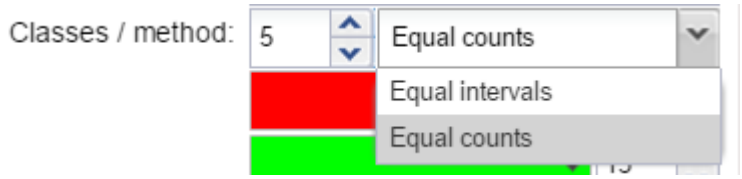




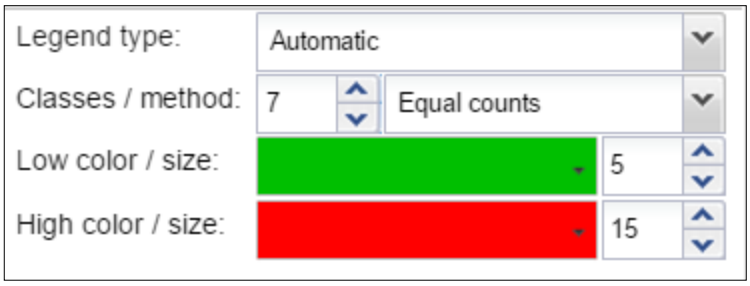
13. Select Legend Type.



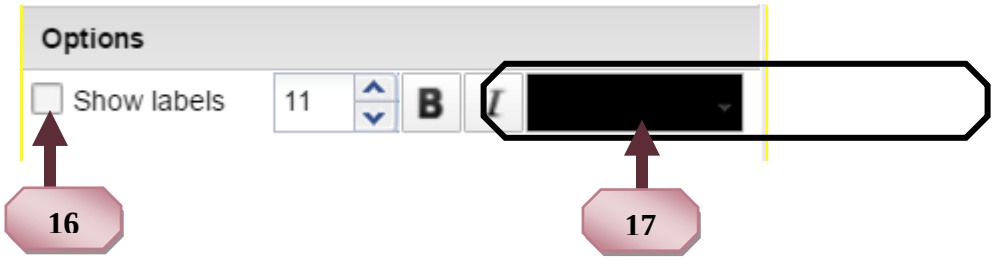
14. Select Class/method



15. Here is class/method the default count is 5 which mean that the total GIS map color will be 5. You can change count by typing the number or clicking up down arrow. Below you can change the class/method 7 so that all division has represent seven different color.

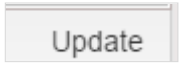


16. Click Check to show label in GIS Map
17. Change label fornt formating

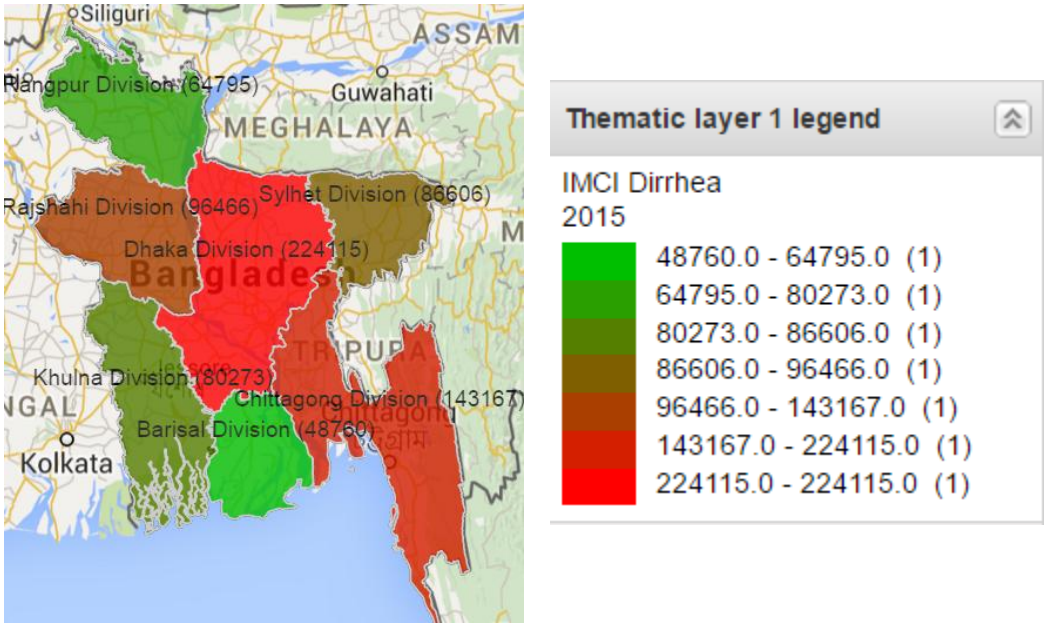


Step-3: Update and View desire GIS Map

Click Check to view the desire MAP



Now according to the requirements now display a GIS map division wise for the IMCI Dirrhea all over Bangladesh for the year 2015

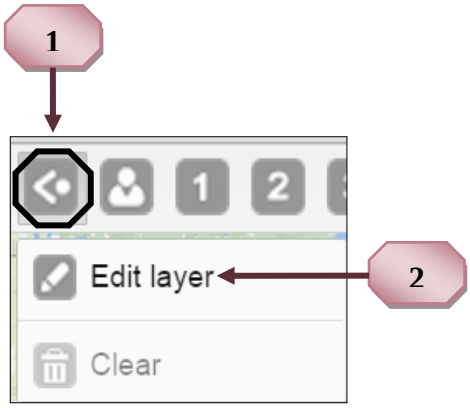


Create a Map Showing Facilities

Facility layer display the facility providers in the GIS Map. For example if we want to display the Community Clinic or Upazilla Health Complex of Bangladesh in GIS Map then you need to select the facility layer.

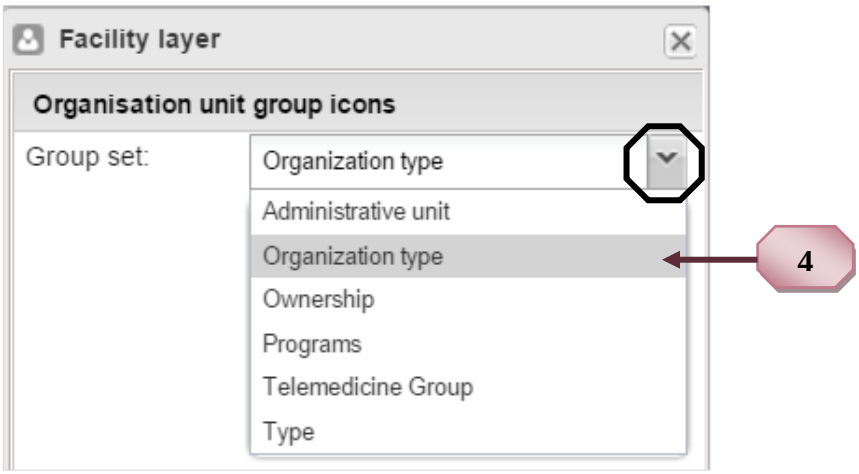
To open “Facility Layer”

1. Click icon mention below
2. Then Click “Edit Layer” link as below mentioned



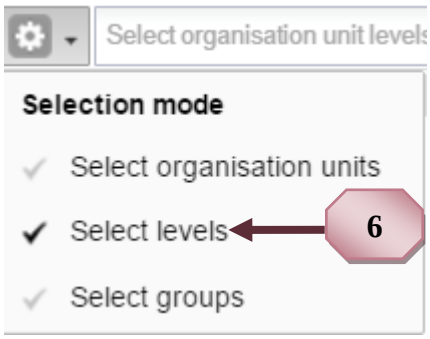
3. Figure out what will be the output of your GIS Map. For Example “Display a GIS map which will show the All Health Facility In District Level Like CS Office/District Hospital ”

4. Selecting the organisational unit group icon in Facility Layer

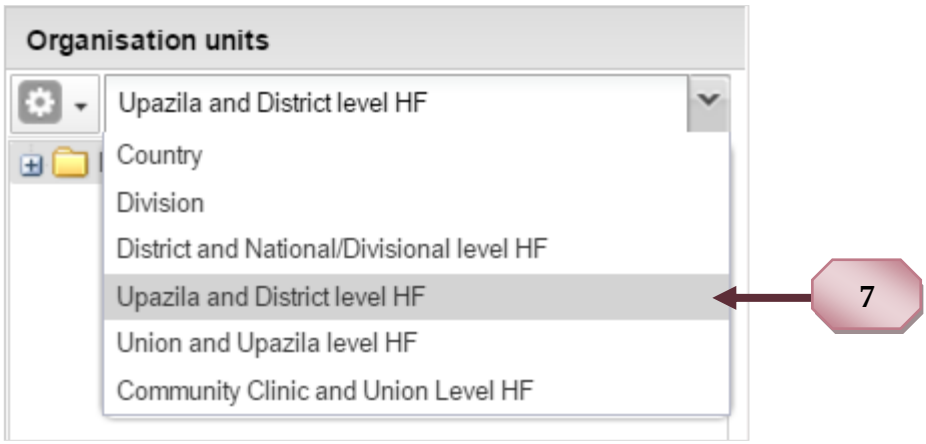


5. Selecting the organisation unit

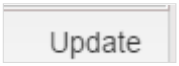
6. Selecting the selection Mode



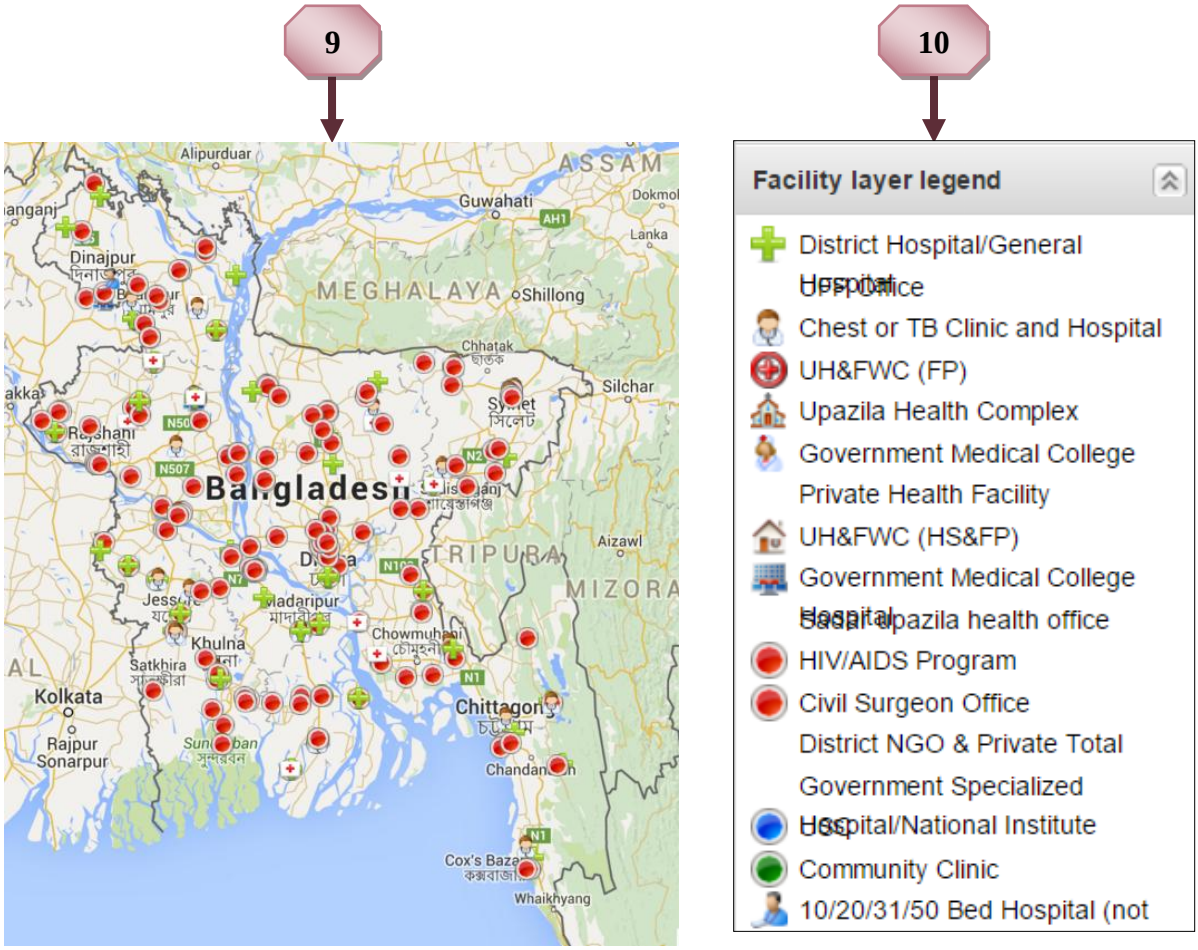
7. Select the organisation levels according to the requirements.



8. Click Update



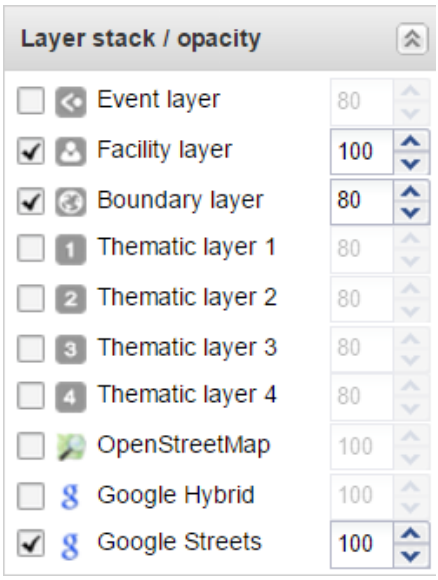
9. Now according to the requirements now GIS is showing the All Health Facility In District Level Like CS Office/District Hospital in Bangladesh.
10. Legend of facility layer

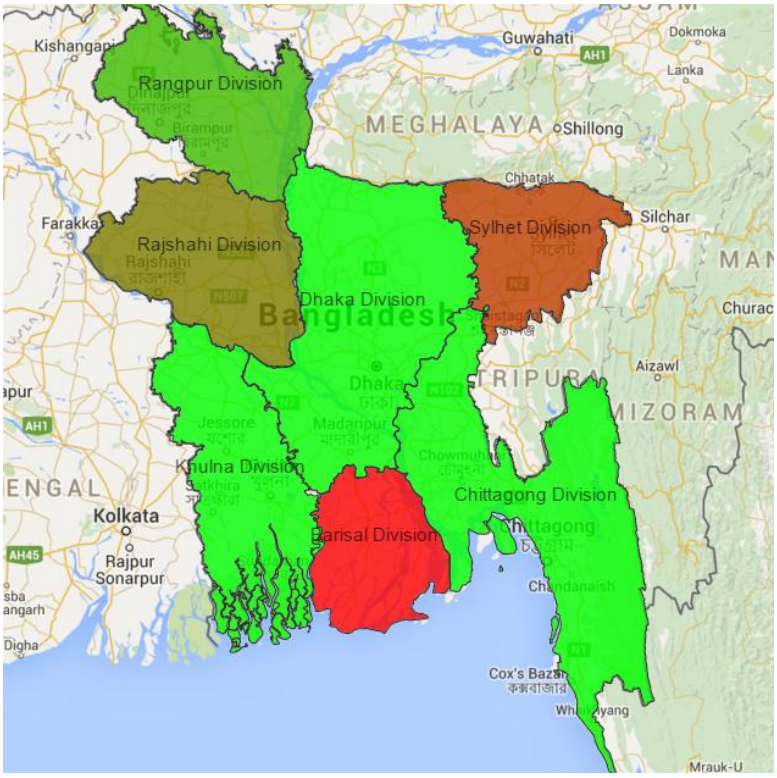


GIS Options

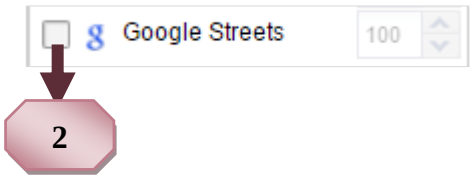
Hide/Unhide Layer

1. You can show the layer by just click the check box and hide the layer by uncheck the box is as below

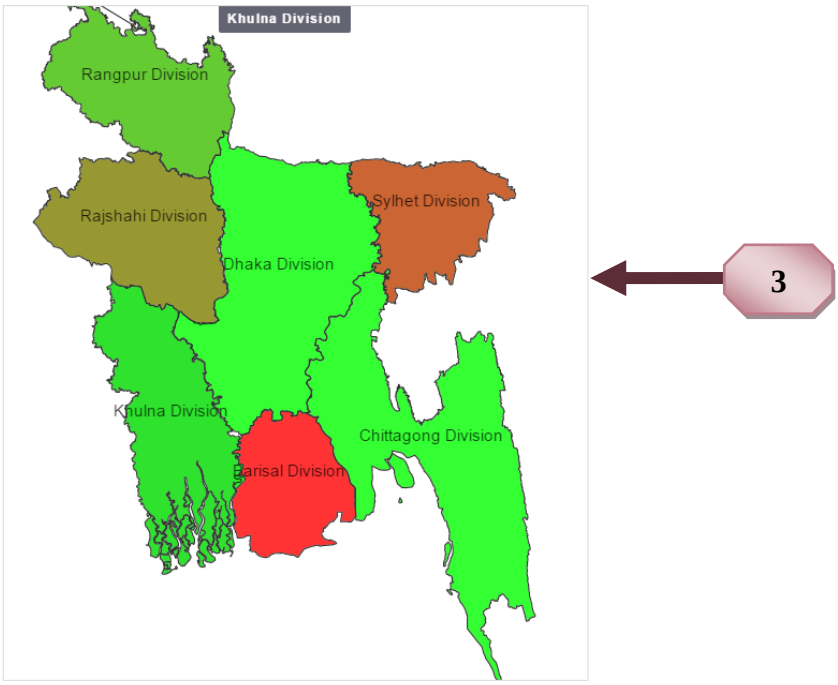




2. Unchecked google streets



3. Now there is no google streets map layer as so the background is showing white in the map is as below

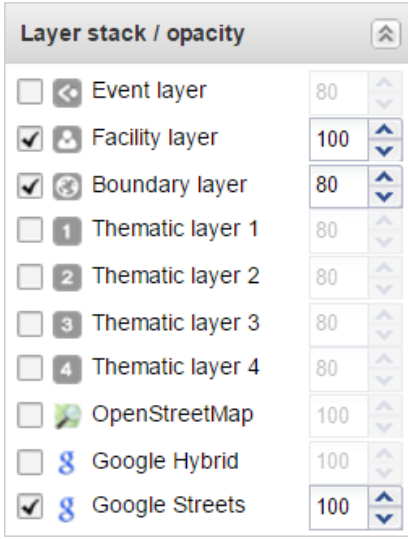


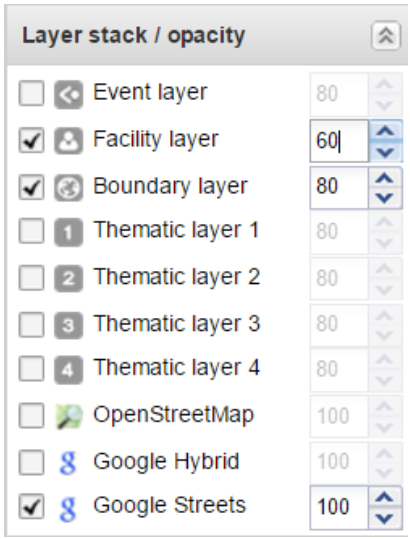
4. Like that you can add or remove all the layers in the map like Open street map, Google Hybrid etc.

Layer Opacity

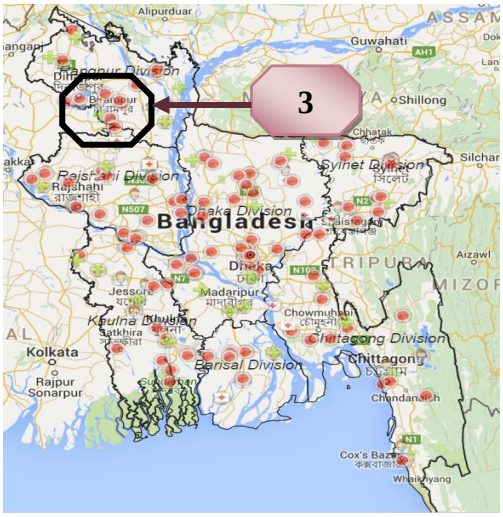
You can control all the layer opacity of the Map. Here is the below example to change the facility layer opacity and its effect.

1. Default facility layer opacity is 100
2. Change opacity of Facility layer to 60





3. After changing the opacity of facility layer you can see the effect in GIS map

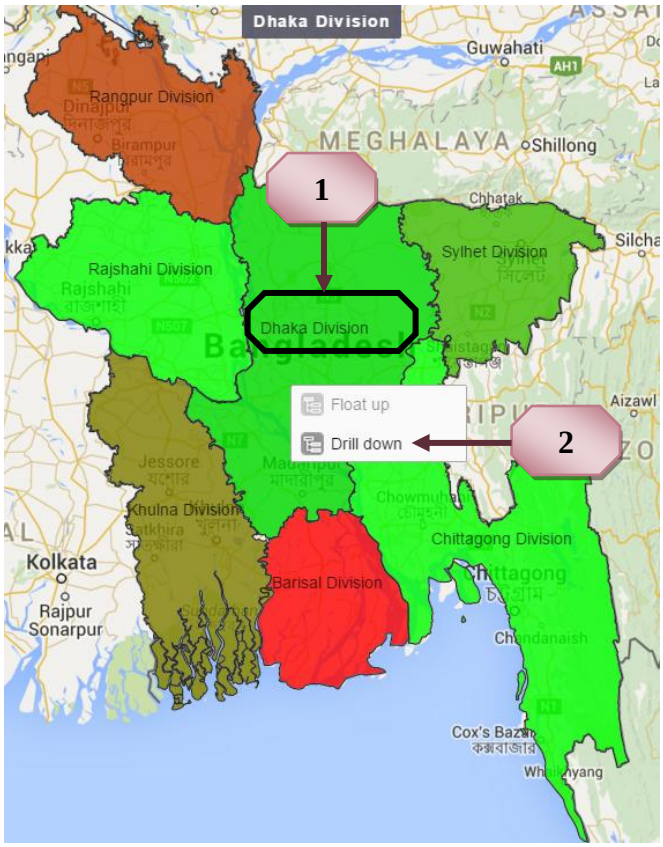


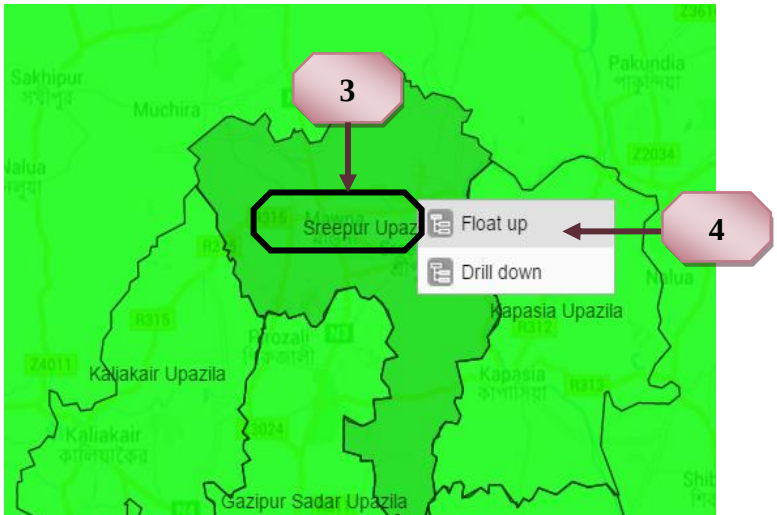
Drill Down and Float Up Map

Drill Down: you can drill down a map from the upper organisation level down to the lower organisation level.

Float Up: you can float up a map from the lower organisation level up to the upper organisation level.

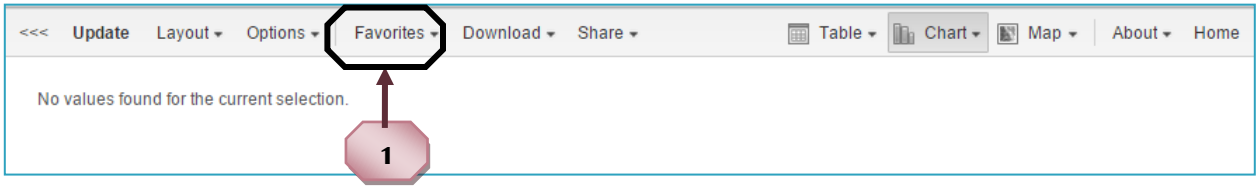
1. Write click on the Region. Here if you want to drill down dhaka division down to upzaila level then first right click on the **Dhaka Division**
2. Click Drill down to go to all the district of Dhaka division.
3. Write click on the Region. Here if you want to float up to dhaka division then right click on the **Sheerpur Upazila**
4. Click Float up to go to district of Sheerpur Upazila


Dhaka Division
Guwahati
AH1
Rangpur Division
MEGHALAYA
Shillong
1
Chhatak
Sylhet Division
Rajshahi Division
Dhaka Division
Float up
Drill down
2
Aizawl
Jessore
Khulna Division
Chittagong Division
Kolkata
Barisal Division
Rajpur
Sonarpur
Cox's Bazar

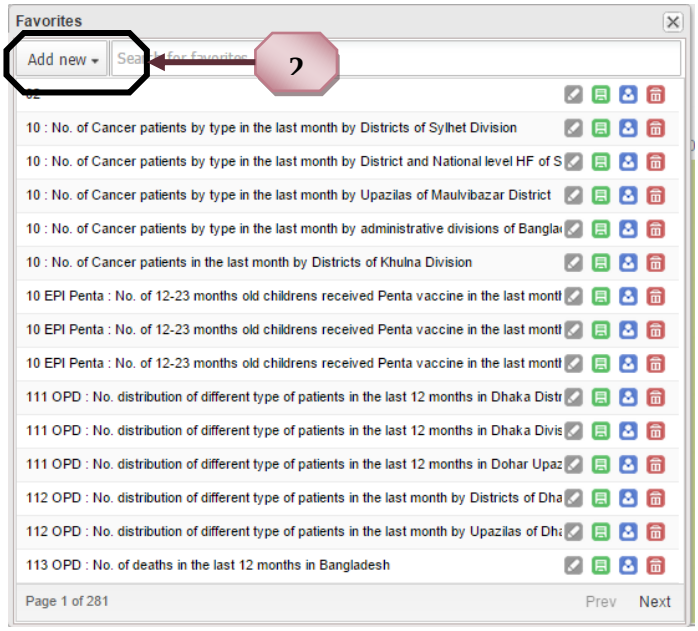

3
Sreepur Upaz
Float up
Drill down
4
Kapasia Upazila
Kaliakair Upazila
Gazipur Sadar Upazila

Saving GIS as Favorite

When we have set up a GIS map it is convenient to save it as a favorite. To do so, click "Favorites" on the top menu, click "Add new", give the favorite a descriptive name and click "Create". You can search for favorites through the search input field at the top. To load an existing favorite, simply click the name of the favorite in the list. To rename a favorite, click the grey "Rename" icon next to the favorite in the list, change the name and click "Update". To overwrite an existing favorite with the current GIS Map, click the green "Overwrite" icon. To share a favorite with everyone or a user group, click the blue "Share" icon. To delete a favorite, click the red "Delete" icon. Using GIS Map Analysis integration after you can rendered GIS Map and save it to the server for further use by clicking on "Favorites" on the top centre menu which is mentioned at Step 1.



After clicking the button below mentioned screen will appear.



Save: To save the GIS Map please click “Add New” button that is mentioned at “Step 2”. Then the below mentioned screen will appear.

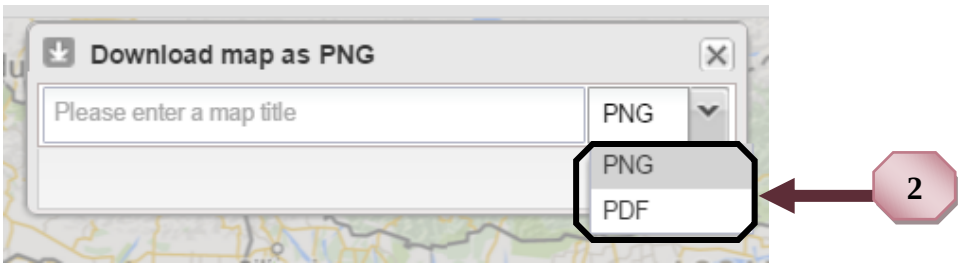
Type the proper name convention:

Ex: Location Name + Map Name + Period like “Khulna Division District wise IMCI diarrhea for the last 12 month” Write GIS Map name. Write GIS Map name which is mentioned in Step 3 and click “Create” mentioned in Step 4

Downloading Data

You can download GIS Map to local computer by clicking on "Download" on the top centre menu which is mentioned at Step 1.

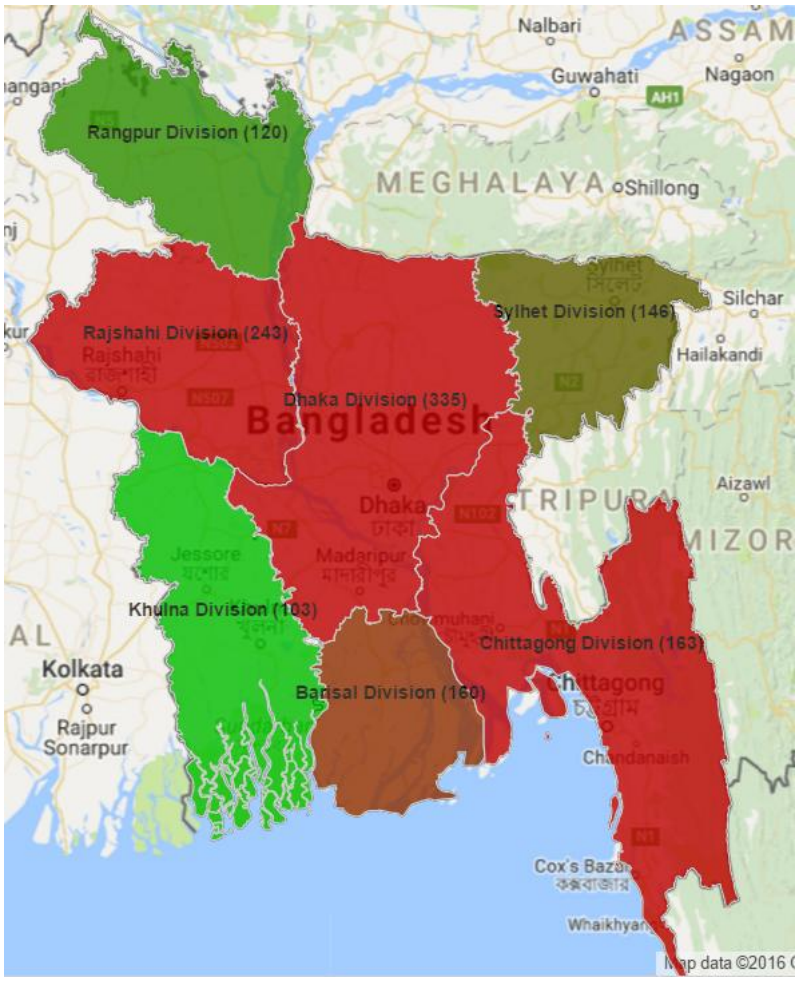
When we click “download” button below mentioned menu will appear.



If we click “Image (.png)” or “PDF (.pdf)” then the file will be automatically downloaded to computer

Case Study - 1

Objective: Create a GIS map which will show division wise Maternal Death in Bangladesh for the period of last year.



Step-1: Open GIS

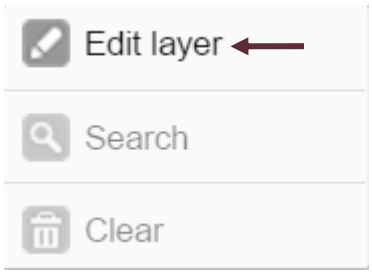
1.1 Click **Apps** icon

1.2 Click "GIS" icon

Step-2: Select Boundary Layer

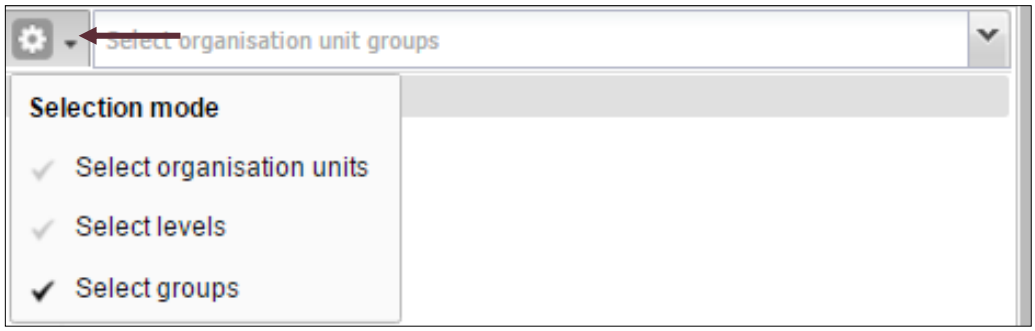
2.1 Click **Boundary** icon

2.2 Click **Edit Layer** icon

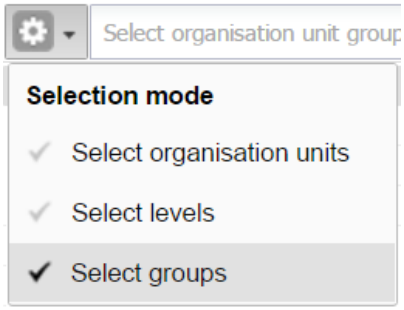


2.3 Select the location according to the case study GIS boundary will come from whole Bangladesh so you just select Bangladesh. By default Bangladesh is selected.

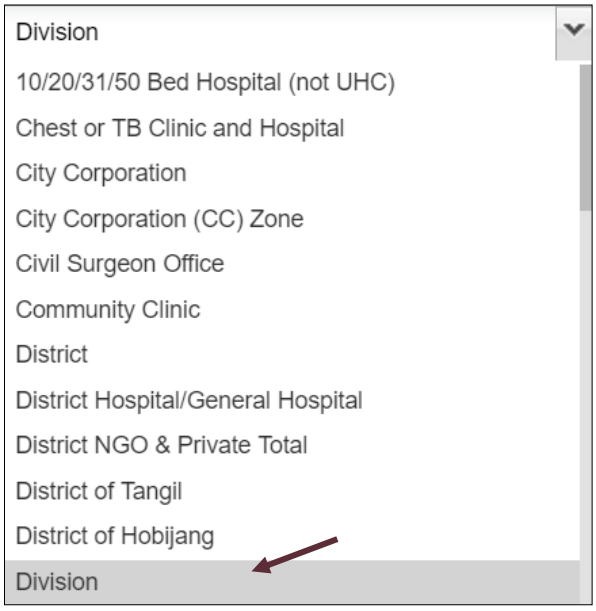
2.4 Click dropdown for selecting the selection mode



2.5 select the selection mode "**Select group**"



2.6 Select groups **Division** from the list

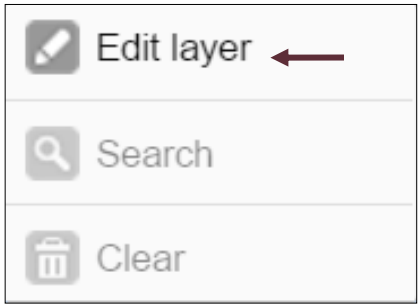


2.7 Then Click Update will show the division boundary of Bangladesh

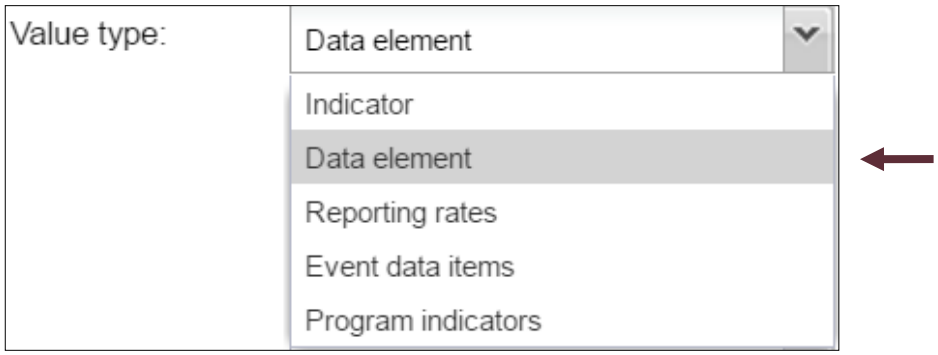
Step-3: Select Thematic Layer

3.1 Click one of the thematic layer (1) icons

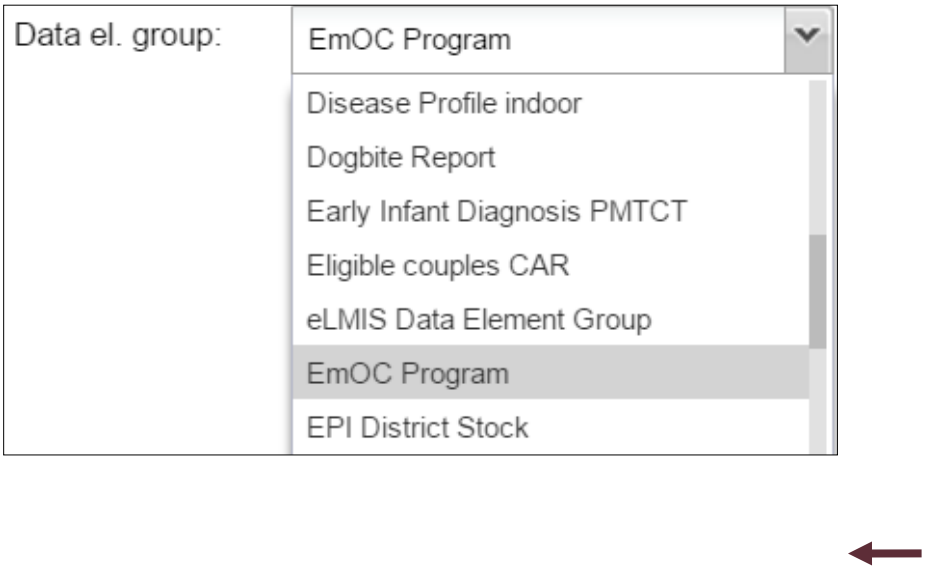
3.2 Click **Edit Layer** icon



3.2 Then data and period selection window will appear. Select value type as Data Elements

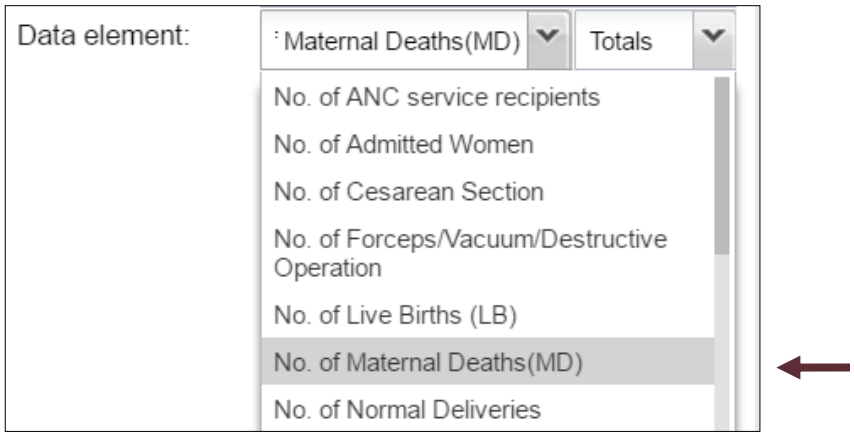


3.3 Select data element group “EMoC Program”

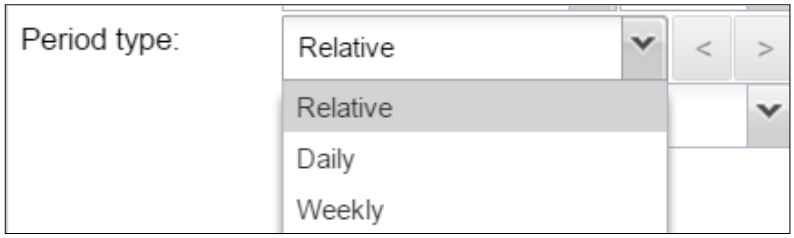


3.4 Select data element “No. of Maternal Death(MD)”

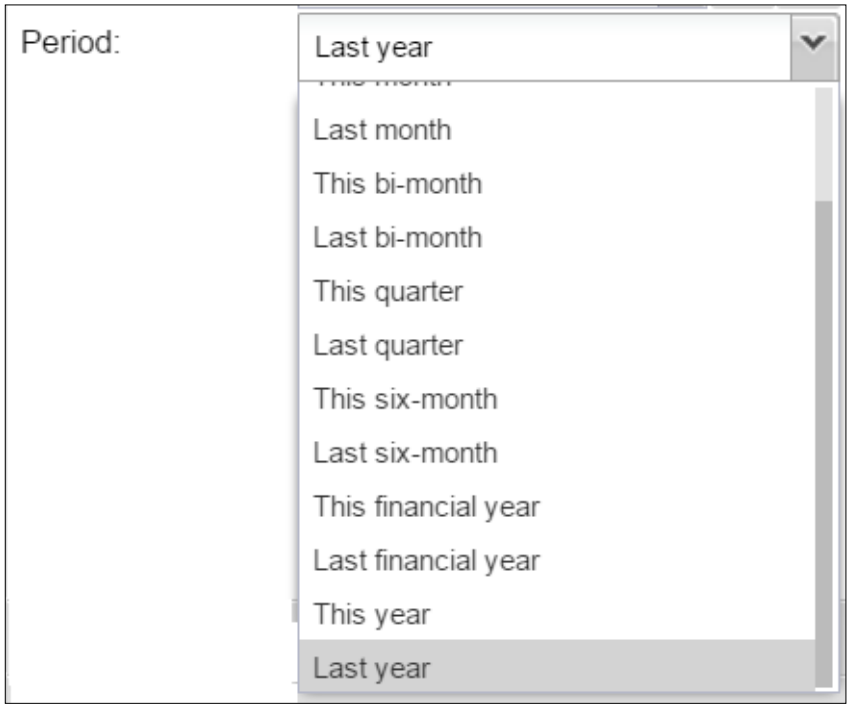
3.4 Then select "No. of Maternal Deaths(MD) from the list



3.5 Select period type “Relative”



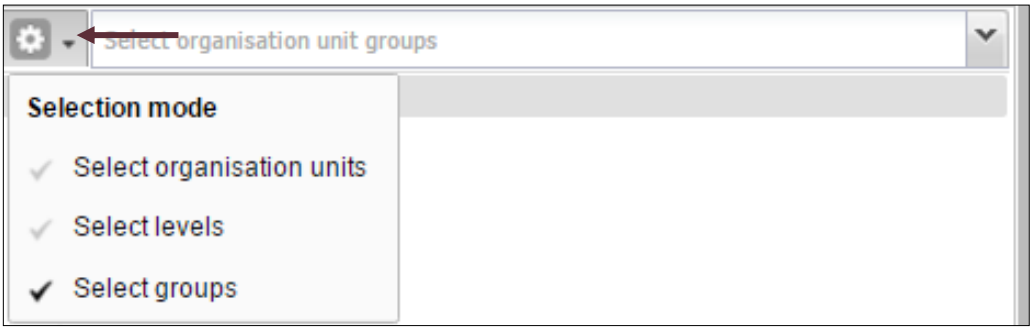
3.6 Select period type “Last Month” according to the requirements of case study



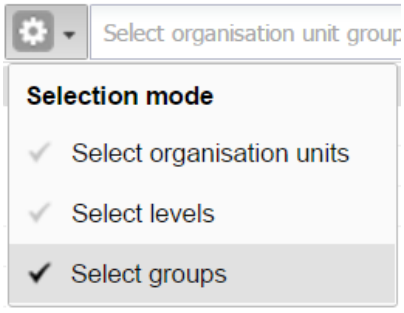
Step-4: Select Organization Unit (Where)

4.1 Select the location according to the case study GIS boundary will come from whole Bangladesh so you just select Bangladesh. By default Bangladesh is selected.

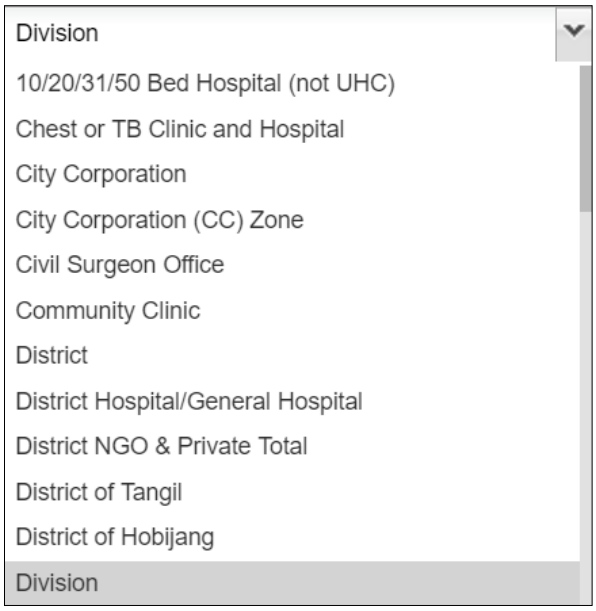
4.2 Click dropdown for selecting the selection mode



4.3 Select the selection mode "**Select group**"

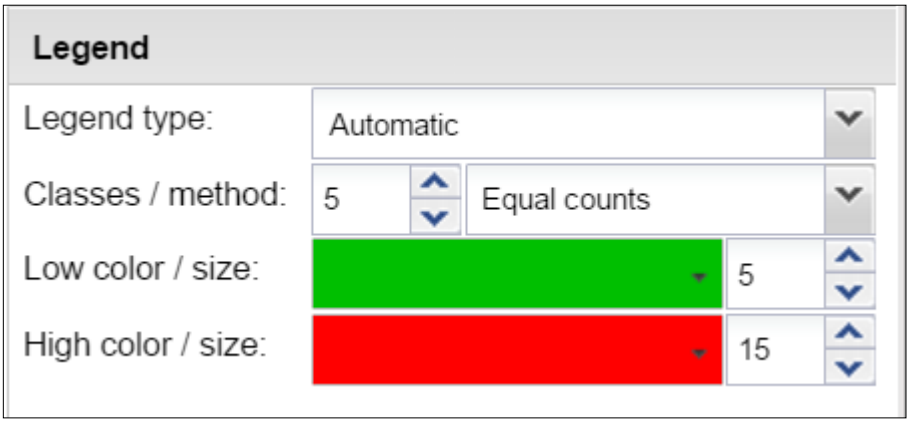


4.4 Select groups **Division** according to the case study



Step-5: Change Legend

Change the low color/size to green and high color/size to red which mean that the area maternal death is high will shows red and downwards the value will gradually goes to the color green.

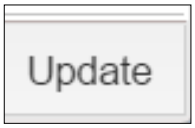


Step-6: Change Options

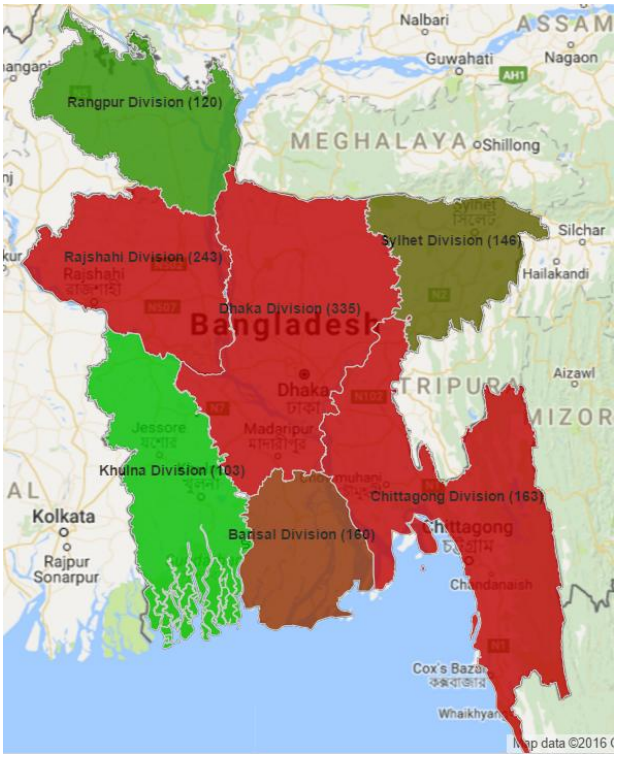
To show the label in map checked “Show labels” and also you can change the color and size of that label. Click “**B”** to bold the label font.

Step-7: Click Update

Click update button

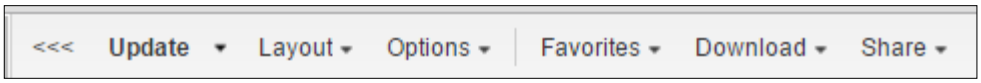


Your GIS will look like this

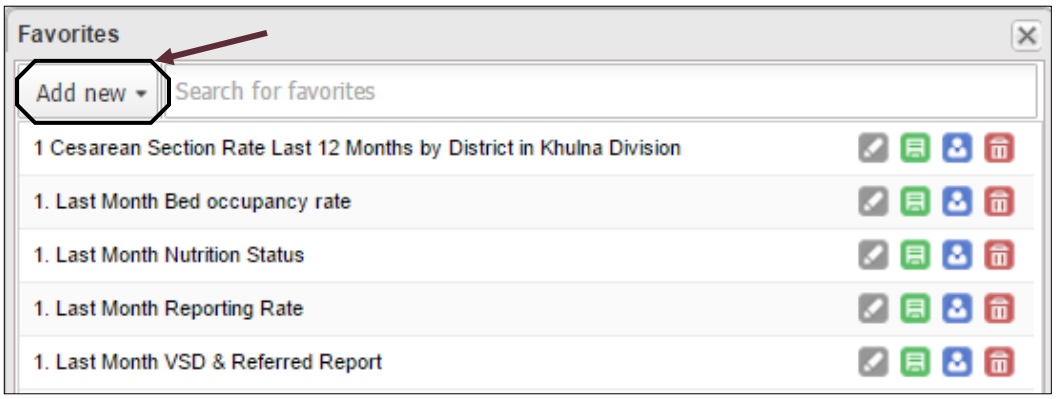


Step-8: Save GIS

8.1 Click on **Favorites**

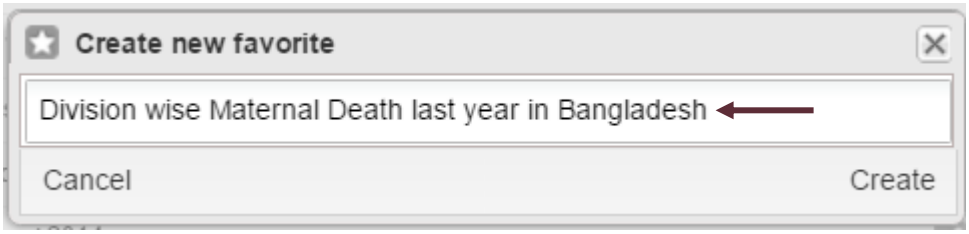


8.2 Click Add new button



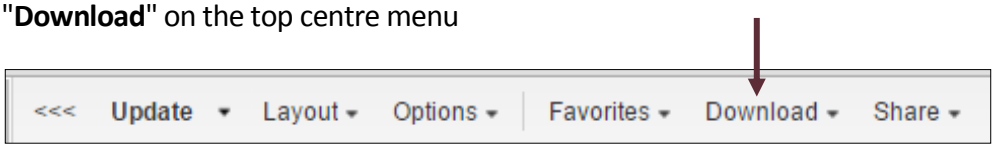
8.3 To save the pivot table writes the name; please follow the convention of naming

Create button to save the data.

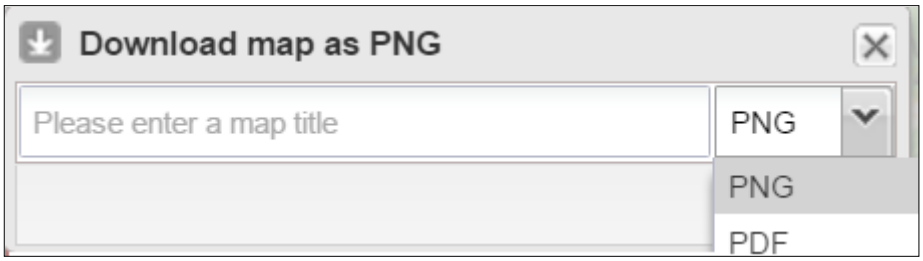


Step-9: Download GIS

9.1 After you have rendered a pivot table you can download it to your local computer by clicking on "**Download**" on the top centre menu

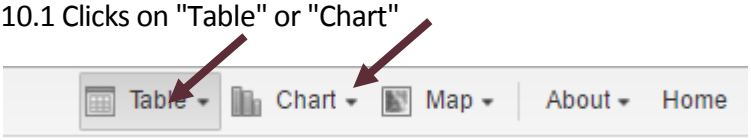


9.2 When you click “download” button below mentioned menu will appear. If you click “Image (.png)” or “PDF (.pdf)” then the file will be automatically downloaded to your computer.

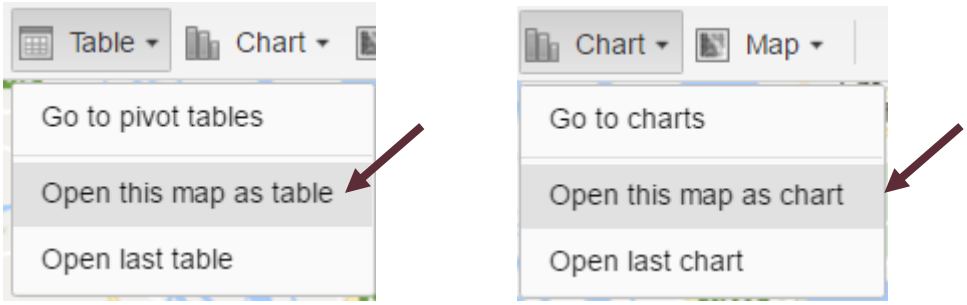


Step-10: Convert this Map as table or chart

10.1 Clicks on "Table" or "Chart"

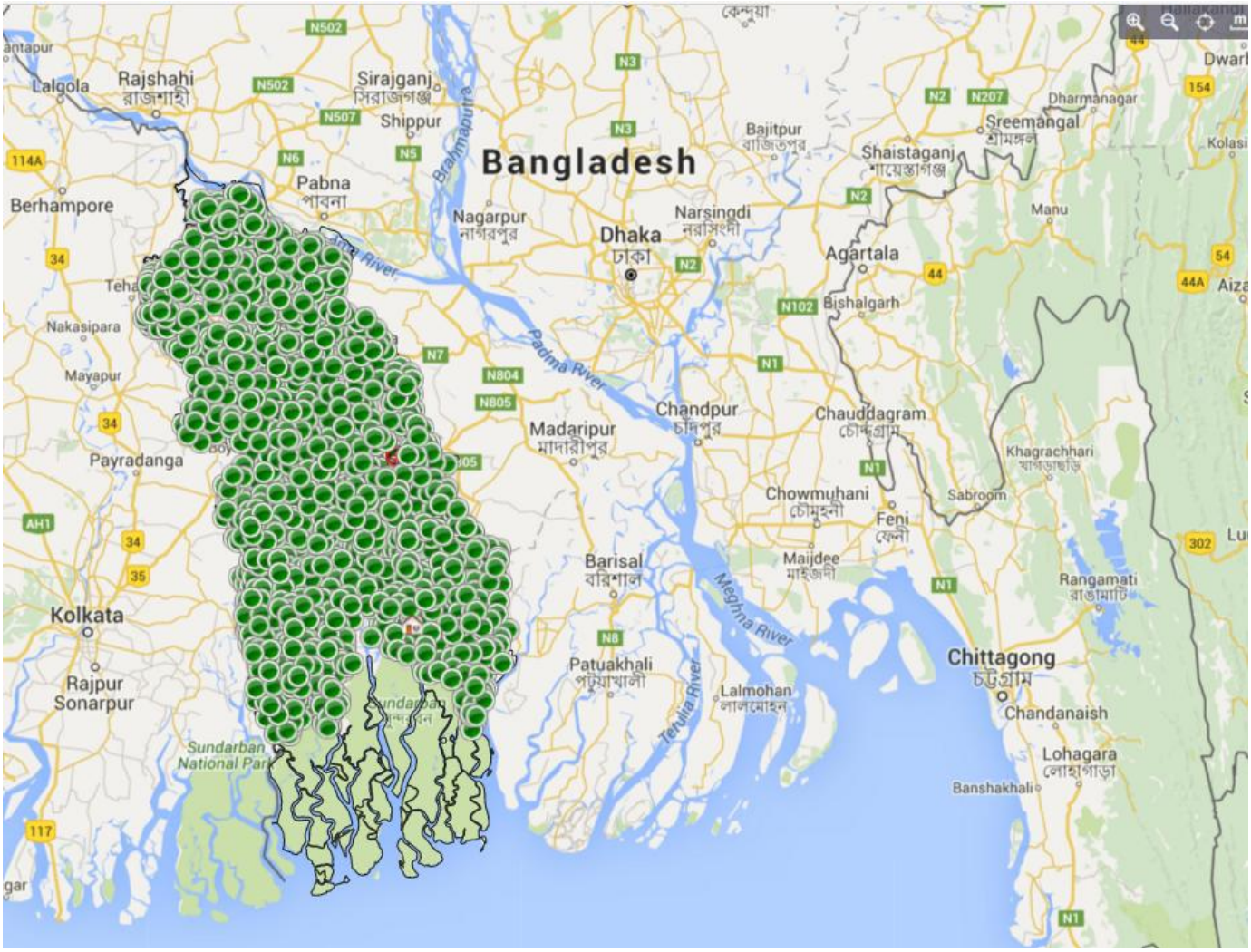


10.2 If you want convert as table "Open this map as table" or click "Open this map as chart"

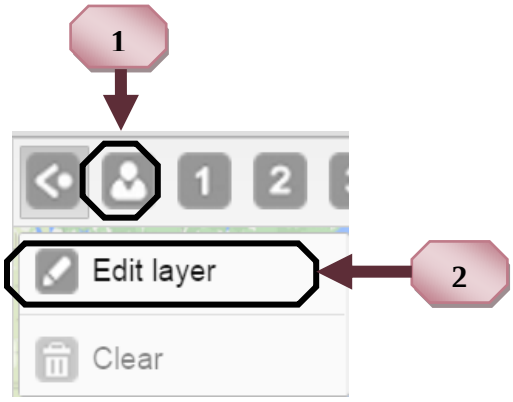


Case Study 2

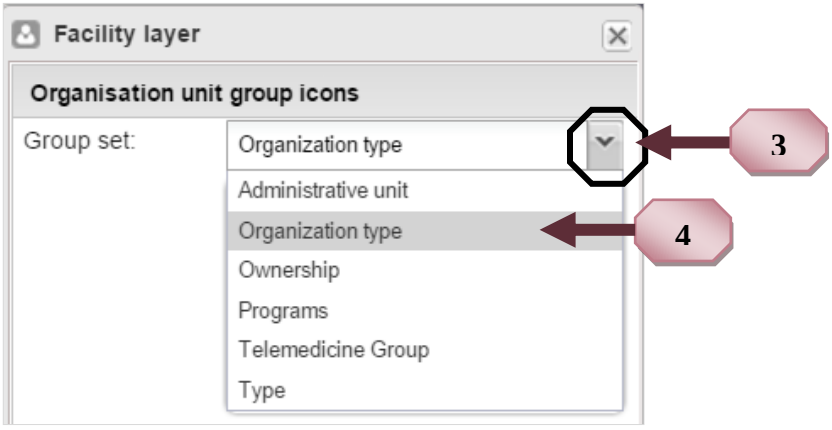
Create a GIS Map for Community Clinic in Khulna Division. Please check the below mentioned image.



1. Click facility layer icon mention below
2. Then Click “Edit Layer” link as below mentioned

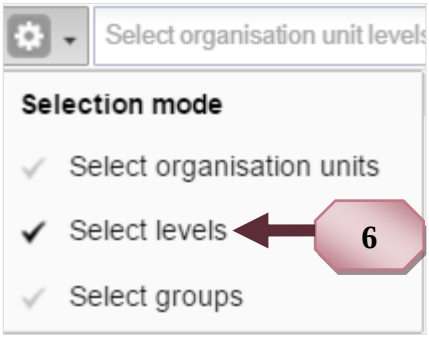


3. Figure out what will be the output of your GIS Map
4. selecting the organisational unit group icon in Facility Layer. Select organization type from the group set list.

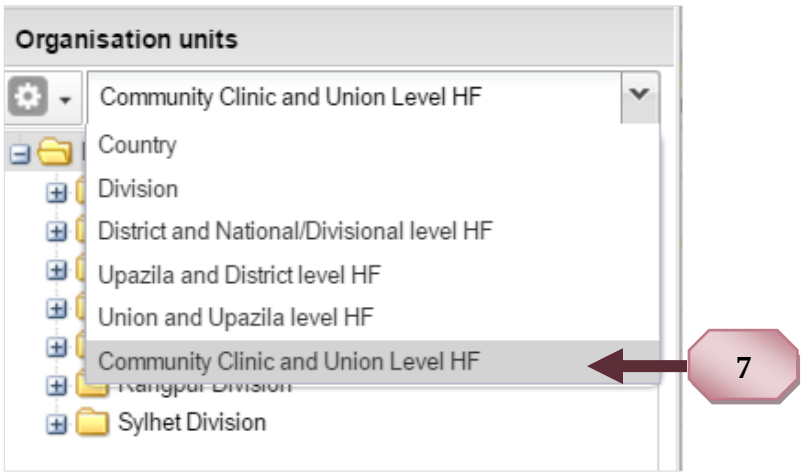


5. Selecting the organisation unit

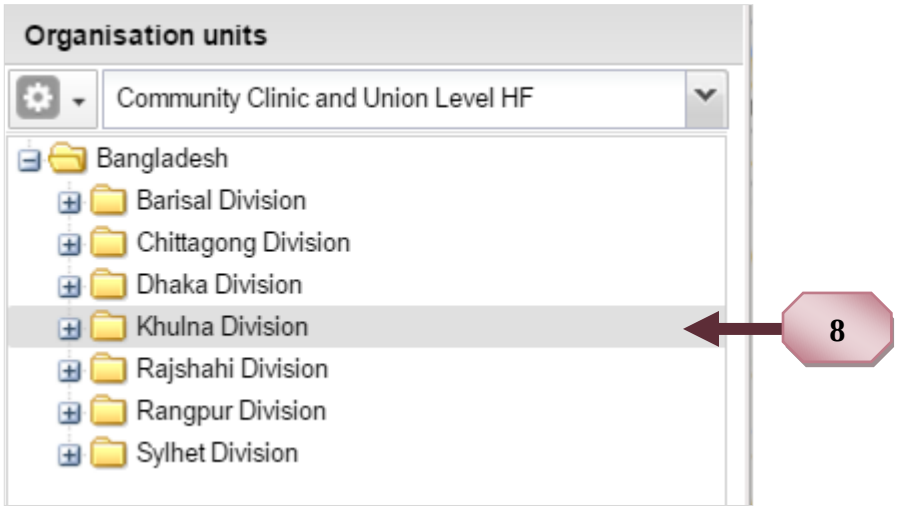
6. Selecting the selection Mode



7. Select the organisation levels according to the requirements.

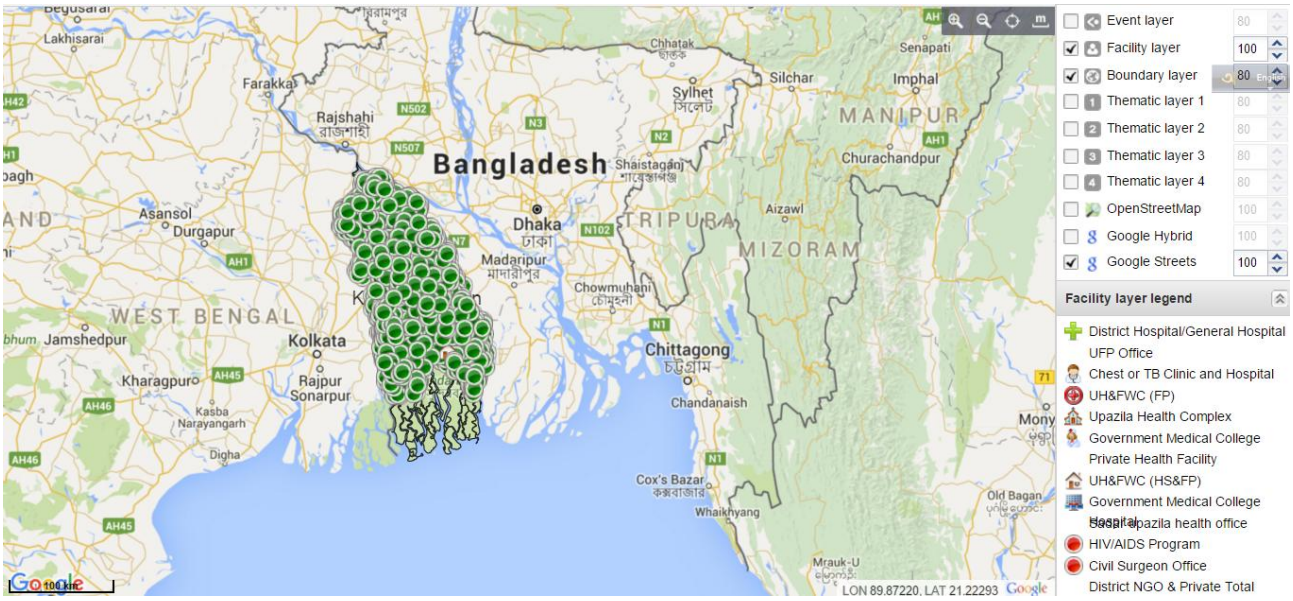


8. Select the Khulna Division according to the requirements.



9. Click Update

10. Now the GIS Map will appear is as below. You can drag the map according to fit the window



11. You can zoom in the map at the top right corner
12. You can zoom out the map

13. After zoom in you can see the map like below

Chapter 6

Reporting Functionality

DHIS2 reporting functionality provides some reporting options. Using those reports you can view and analyze data according to the data set, period and organizational units. In this chapter you will learn all the reporting tools options and their uses.

SUMMARY

Overview

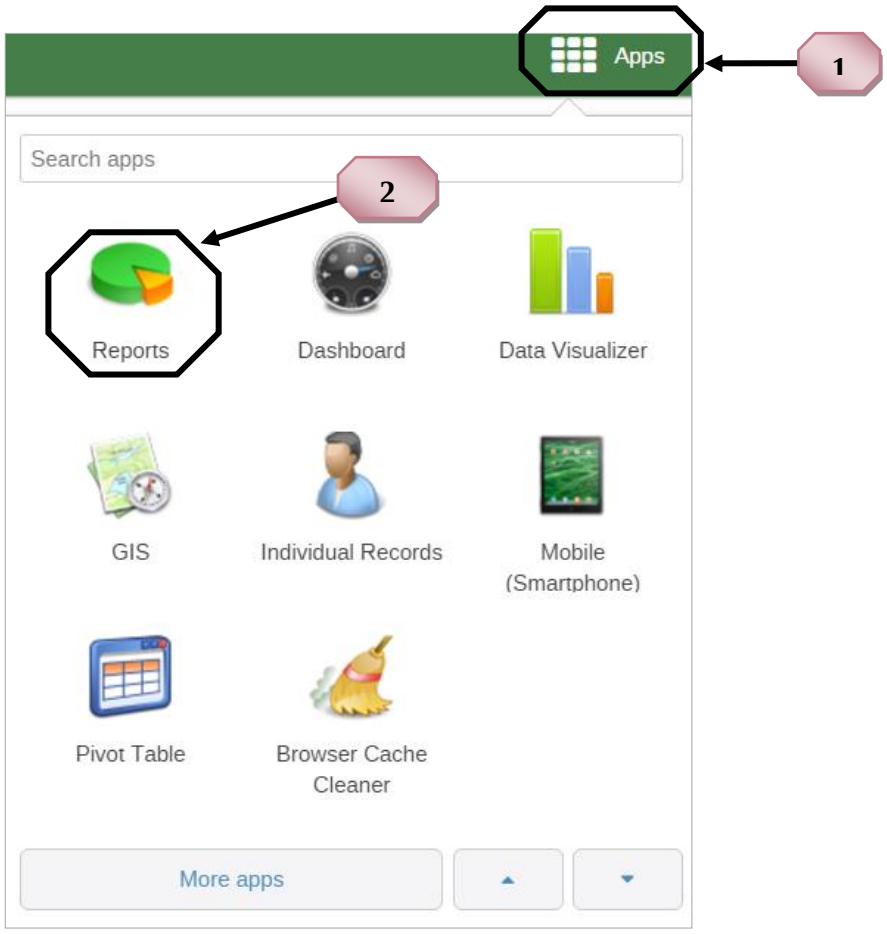
The reporting module in DHIS 2 provides a range of reporting alternatives, and this section will explain how to use them to view and analyze data. Standard reports are built on pivot tables and can also combine multiple tables and charts in the same report and be made available as one-click report that are very easy to use. These reports can be downloaded as PDF files which make them ideal for printing as well as sharing offline. Dataset reports are simply a way to look at the data entry forms with either raw or aggregated data. The design used in data entry will be used also in the data set reports. This will work only for data sets that has a custom data entry form set up.

After complete this chapter you will learn about the how to analyze data using reporting functionality using standard report, data set report, reporting rate summary, organization unit distribution report.

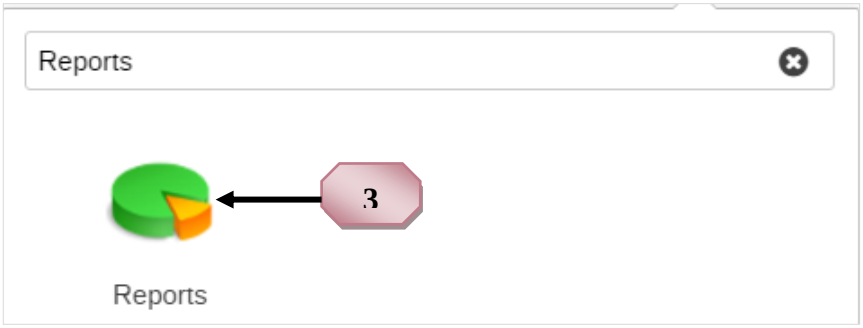
How to Open

To open “Reports”

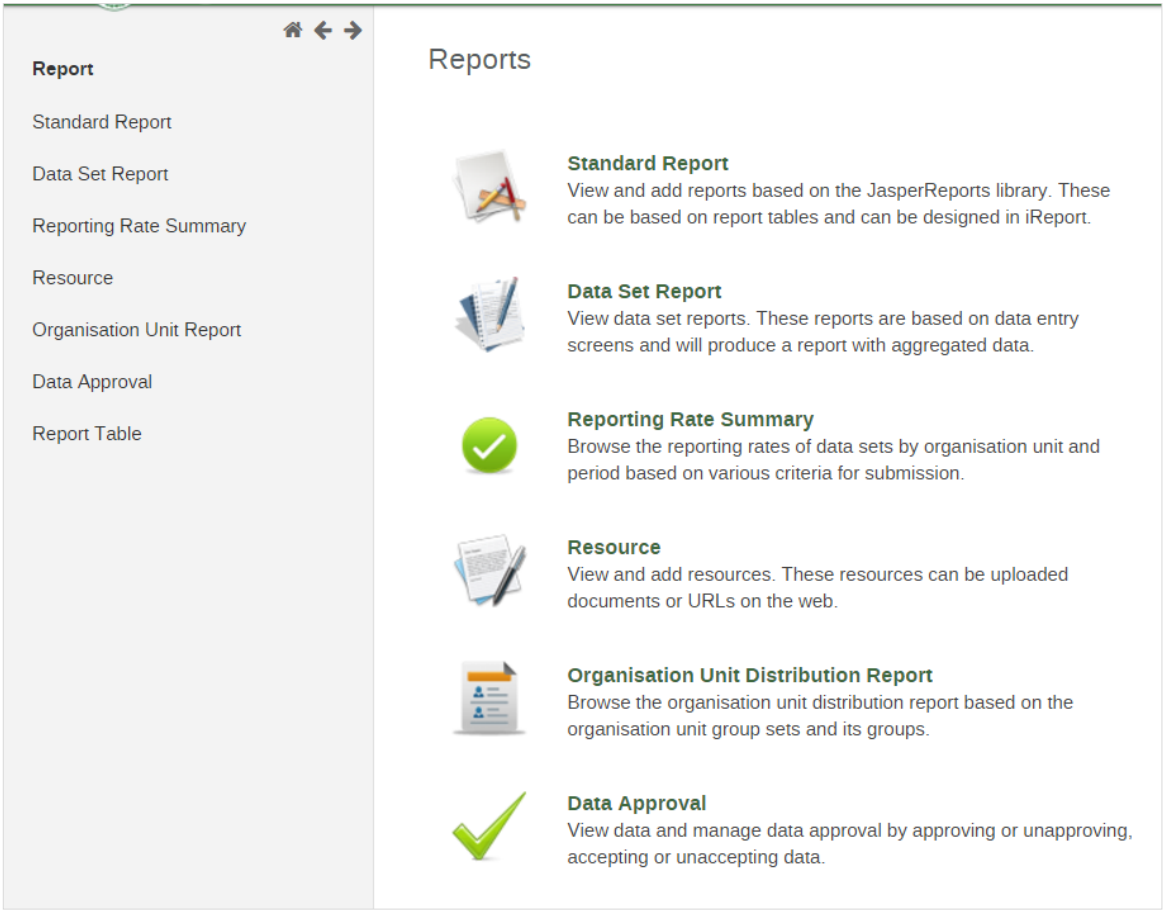
1. At first move the cursor on Apps button under main menu
2. Then Click “Reports” button as below mentioned



3. If the button is not appear in the list you can search to find the “Report” Button



After click the button below mentioned screen will appear. This is the home screen for Reports.

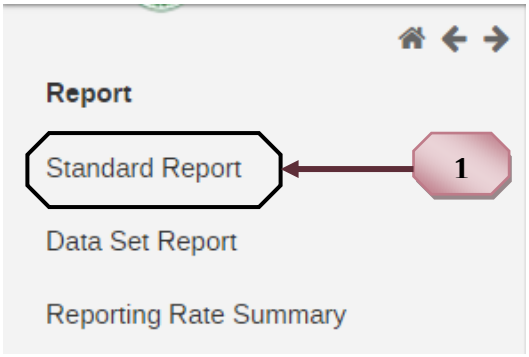


Create Standard Reports

Standard reports are built on pivot tables and can also combine multiple tables and charts in the same report and be made available as one-click reports that are very easy to use. These reports can be downloaded as PDF files which make them ideal for printing as well as sharing offline.

To open “Standard Report”

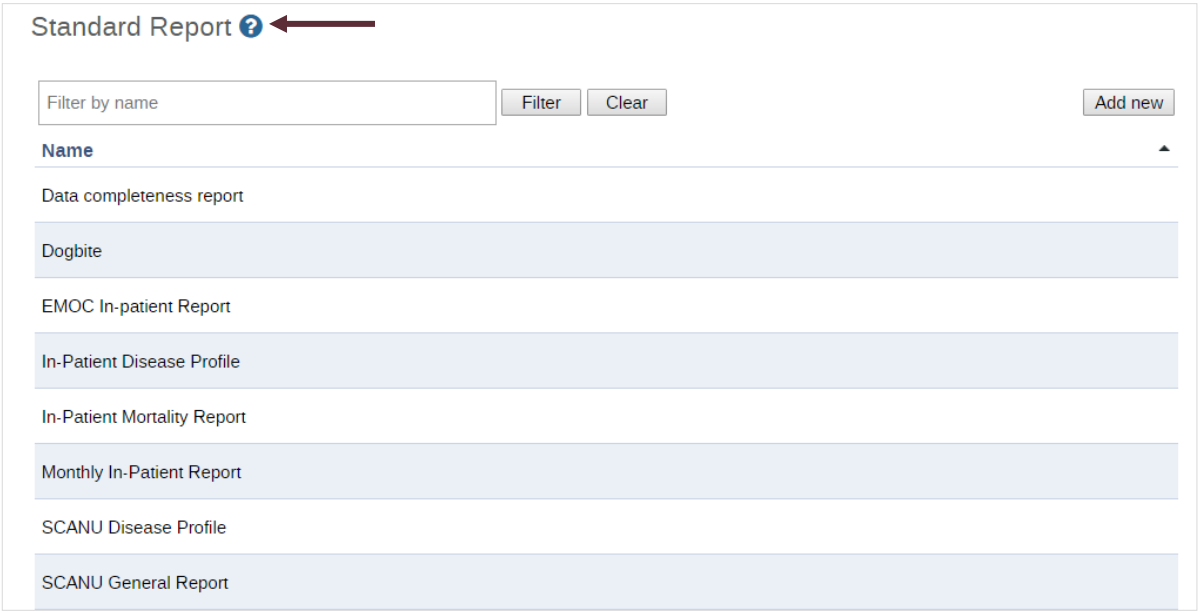
1. After Click “Report” mention above in Step 1-3 click on the “standard report” from left panel



Or

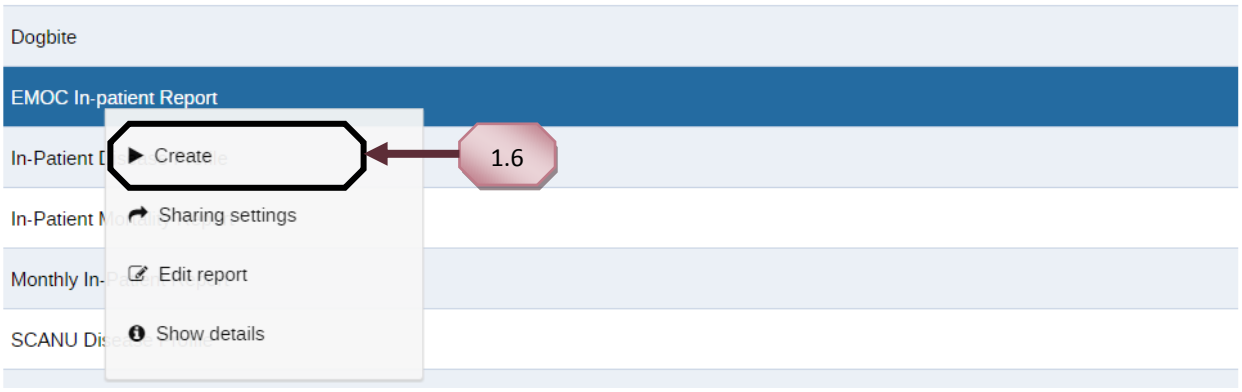
2. Click Below link to open standard report

3. After click the button standard report page will appear

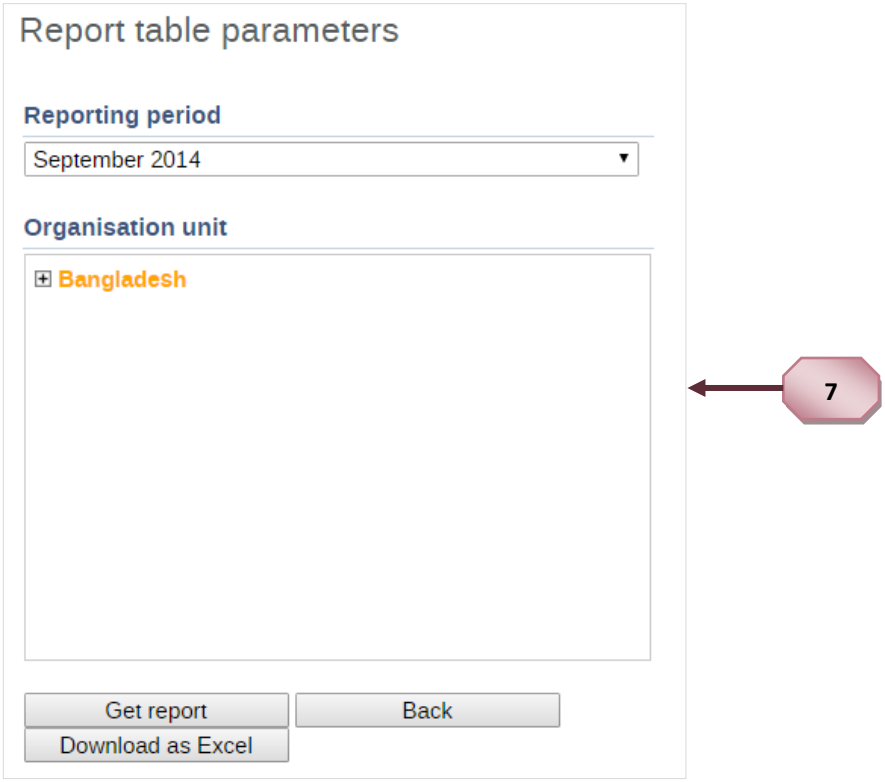


4. You can Filter by the report name
5. Clear the filter name

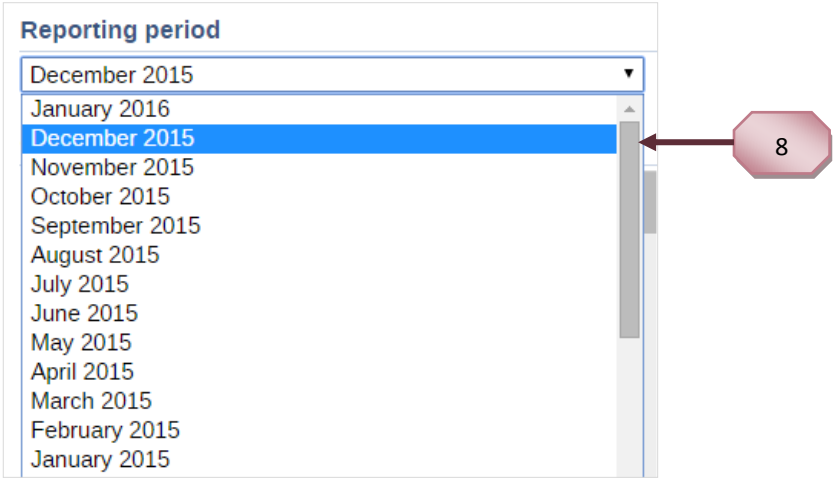
6. Click on the report name and click "**Create**" to create the report. For example to open the EMOC In-Patient report click create



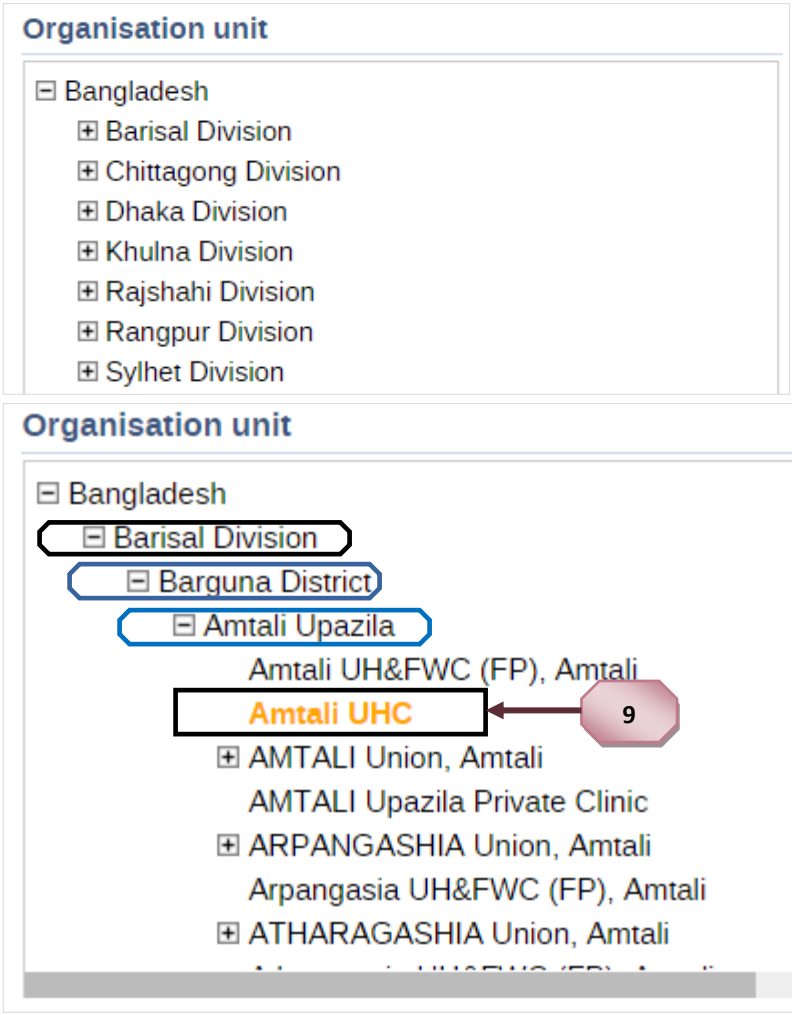
7. After click "Create" in mention above the following page will appear



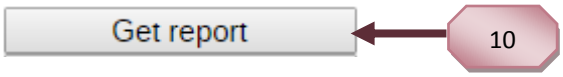
8. Select Reporting period



9. Select Organization unit

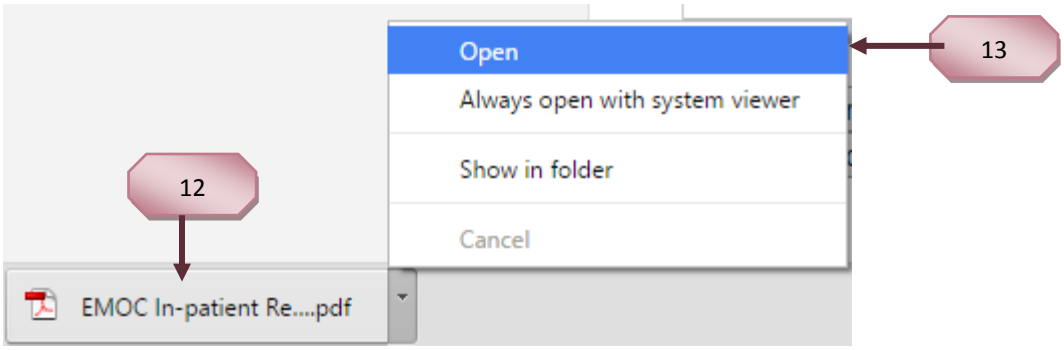


10. Now click “Get Report”



11. After click the report will take some time to proceed. After completion of proceed you can see a message is as below

12. The report will save as pdf file
13. Click Open to view the report in pdf file



14. View the report in pdf

Government of the People's Republic of Bangladesh

MIS-Health, Directorate General of Health Services

Mohakhali, Dhaka-1212, Bangladesh

EMOC Monthly Indoor Report

Reporting Unit	Amtali UHC	Reporting	December 2015

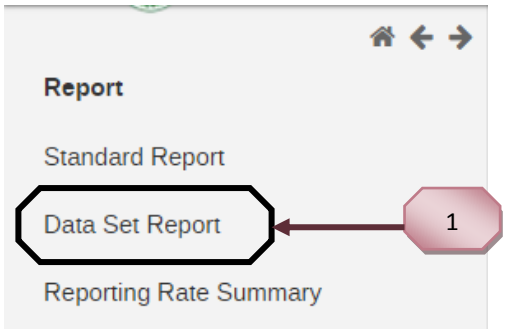
Item/Catagory	Number	Percentage
No. of ANC service recipients	82	
No. of Normal Deliveries	3	
Total Deliveries	3	
No. of Patients Referred In	0	
No. of PNC service recipients	15	
No. of Safe Blood Transfusions	8	
No. of Pregnant woman received Misoprostol tablets	3	
No. of normal deliveries with Misoprostol	3	
No. of normal deliveries with AMTSL at facility level	3	
EMOC Disease Profile		

Create Data Set Reports

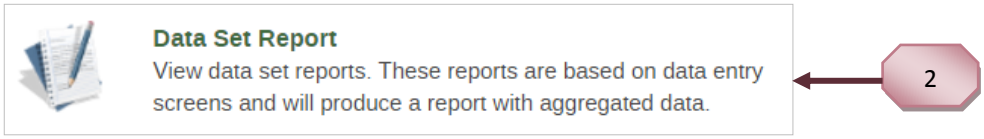
Dataset reports are simply a way to look at the data entry forms with either raw or aggregated data. The design used in data entry will be used also in the data set reports.

To open “Dataset Report”

1. After Click “Report” mention above in Step 1-3 click on the “Data Set report” from left panel

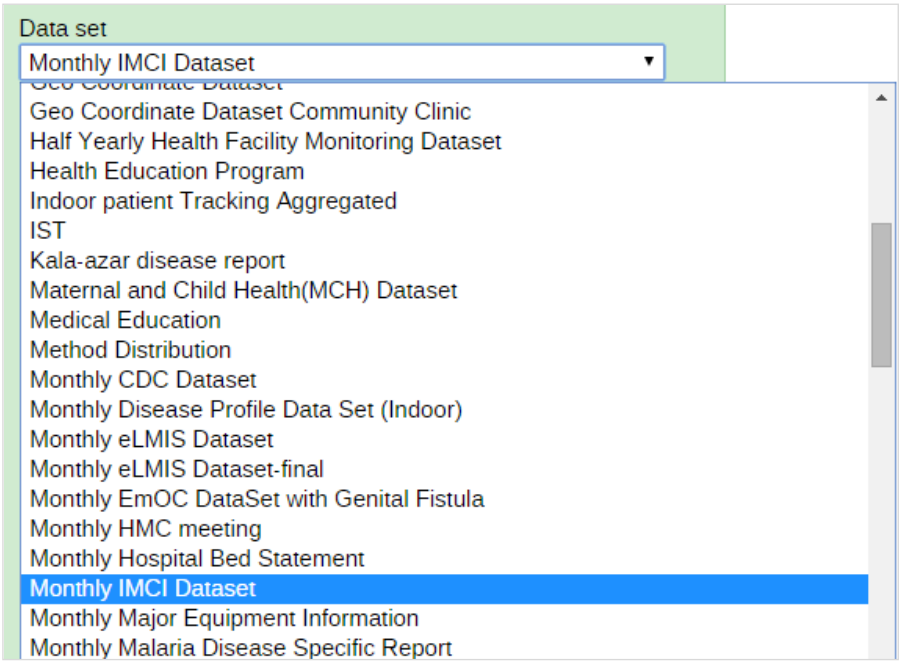


2. Or Click Below link to open standard report

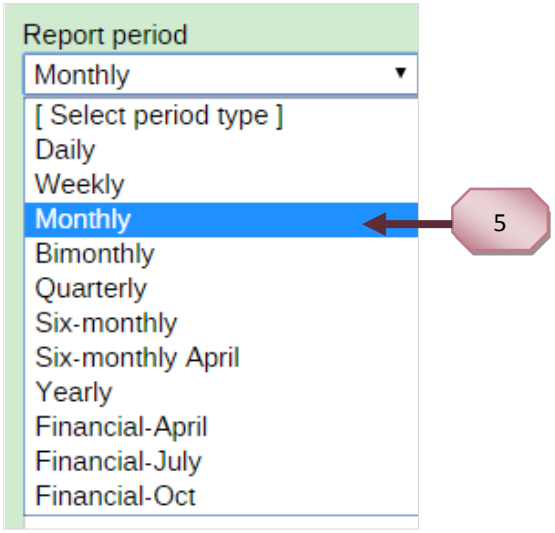


3. After click the button standard report page will appear

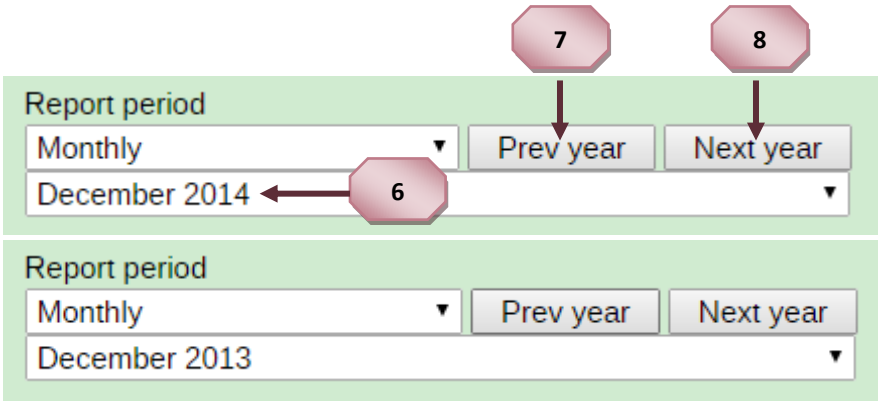
4. Select data set to view the report



5. Select report period

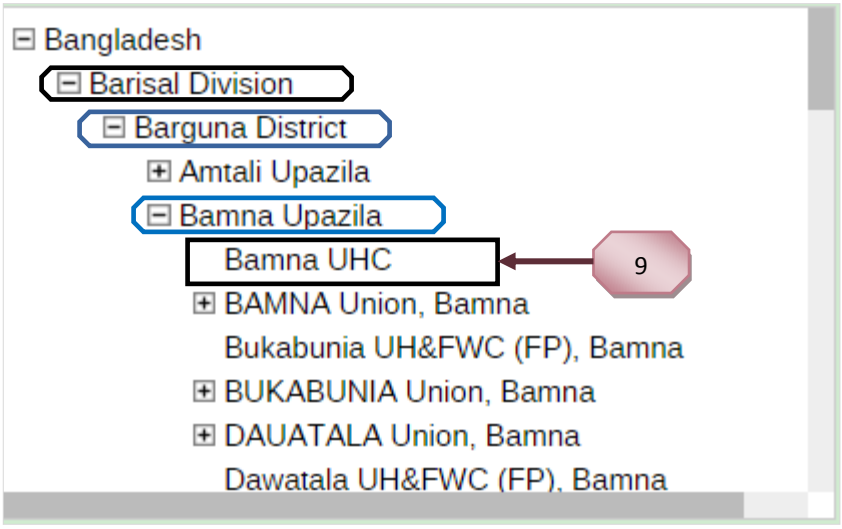


6. Select month of the year
7. Click Previous Year button to change the selected month of the year as previous year is as below

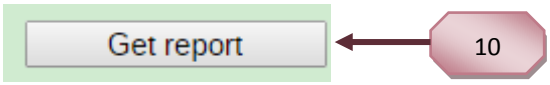


8. Click Next Year button to change the selected month of the year as Next year is as below

9. Select Organization unit



10. Click Get Report to view the report



11. Now you can view the desire data set report

Data Set Report

Data criteria | Download as Excel | Download as PDF | Print

Bamna UHC - December 2014

Completed by: bamna

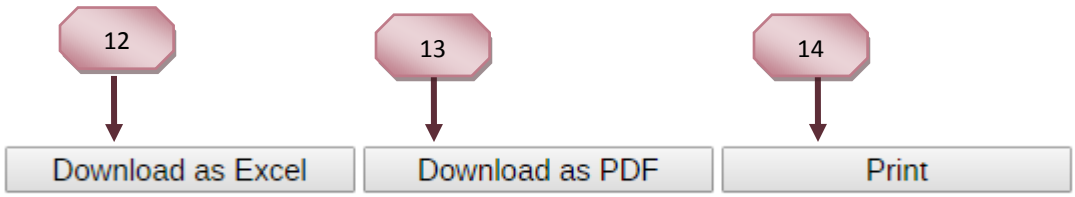
Write a comment, question or interpretation of this report

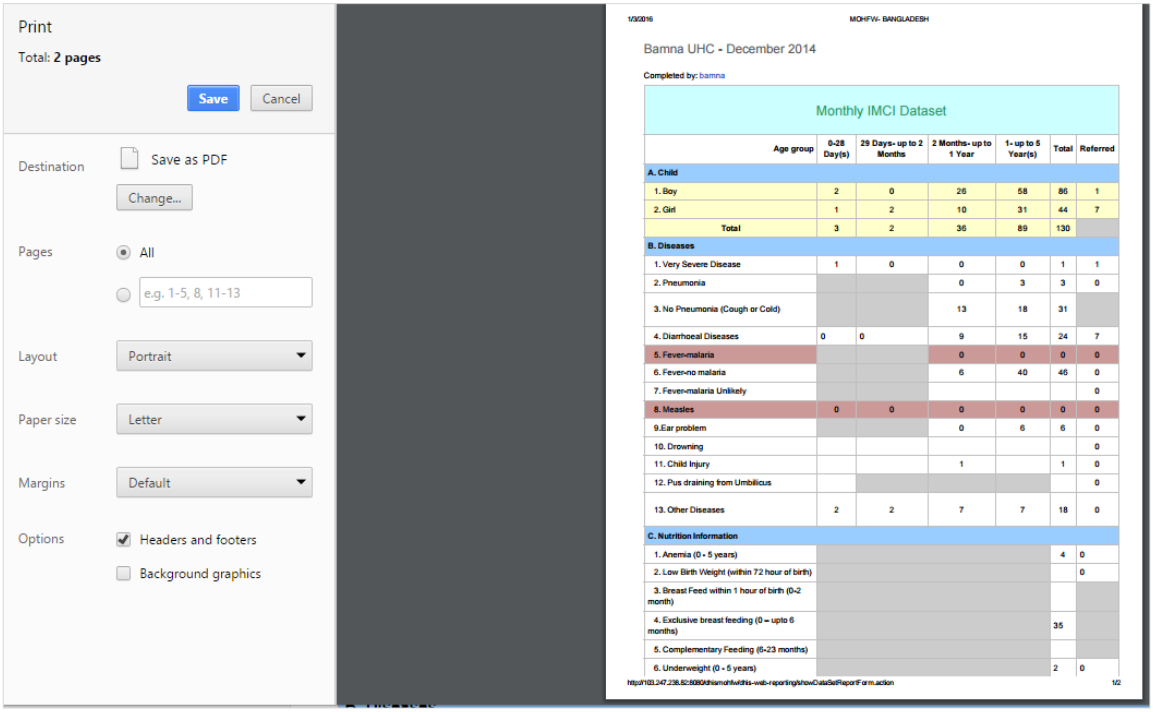
Share

Monthly IMCI Dataset

Age group	0-28 Day(s)	29 Days- up to 2 Months	2 Months- up to 1 Year	1- up to 5 Year(s)	Total	Referred
A. Child						
1. Boy	2	0	26	58	86	1
2. Girl	1	2	10	31	44	7
Total	3	2	36	89	130	
B. Diseases						
1. Very Severe Disease	1	0	0	0	1	1
2. Pneumonia			0	3	3	0

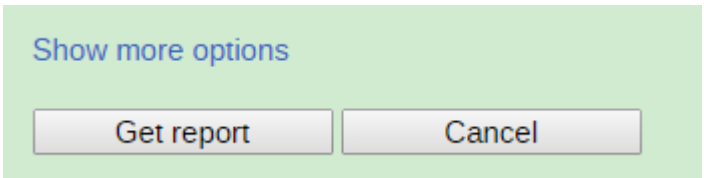
12. You can download report as Excel file in your computer
13. You can download report as PDF file in your computer
14. You can print the report is as below



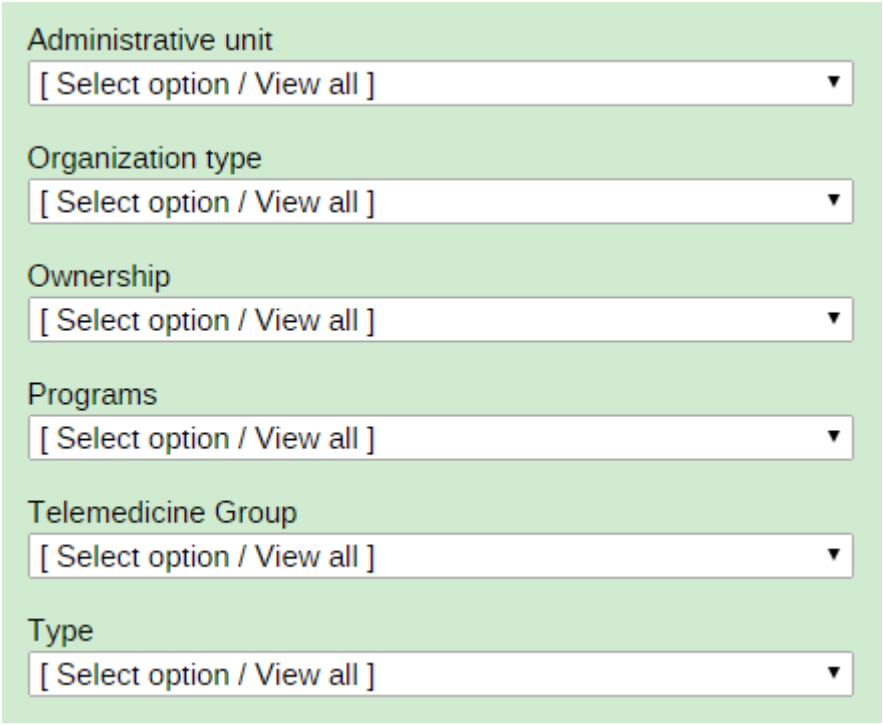


Age group	0-28 Day(s)	29 Days- up to 2 Months	2 Months- up to 1 Year	1- up to 5 Year(s)	Total	Referred
A. Child						
1. Boy	2	0	26	58	86	1
2. Girl	1	2	10	31	44	7
Total	3	2	36	89	130	
B. Diseases						
1. Very Severe Disease	1	0	0	0	1	1
2. Pneumonia			0	3	3	0
3. No Pneumonia (Cough or Cold)			13	18	31	
4. Diarrhoeal Diseases	0	0	9	15	24	7
5. Fever-malaria			0	0	0	0
6. Fever-no malaria			6	40	46	0
7. Fever-malaria Unlikely						0
8. Measles	0	0	0	0	0	0
9.Ear problem			0	6	6	0
10. Drowning						0
11. Child Injury			1		1	0
12. Pus draining from Umbilicus						0
13. Other Diseases	2	2	7	7	18	0
C. Nutrition Information						
1. Anemia (0 - 5 years)					4	0
2. Low Birth Weight (within 72 hour of birth)						0
3. Breast Feed within 1 hour of birth (0-2 month)						
4. Exclusive breast feeding (0 – upto 6 months)					35	
5. Complementary Feeding (6-23 months)						
6. Underweight (0 - 5 years)					2	0

15. For Selecting more option click "**Show More option"**



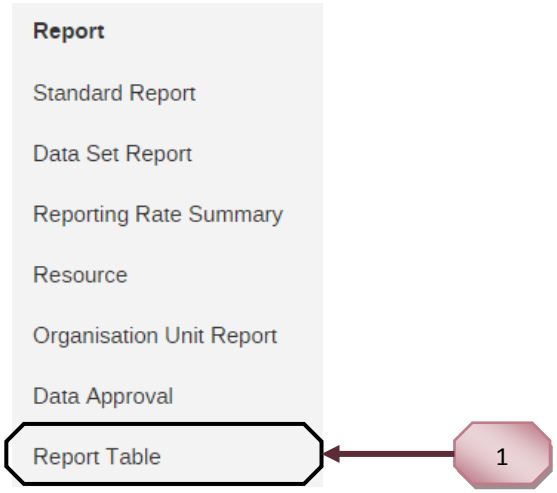
16. After click more option link the option will come as below


Administrative unit
[Select option / View all]
Organization type
[Select option / View all]
Ownership
[Select option / View all]
Programs
[Select option / View all]
Telemedicine Group
[Select option / View all]
Type
[Select option / View all]

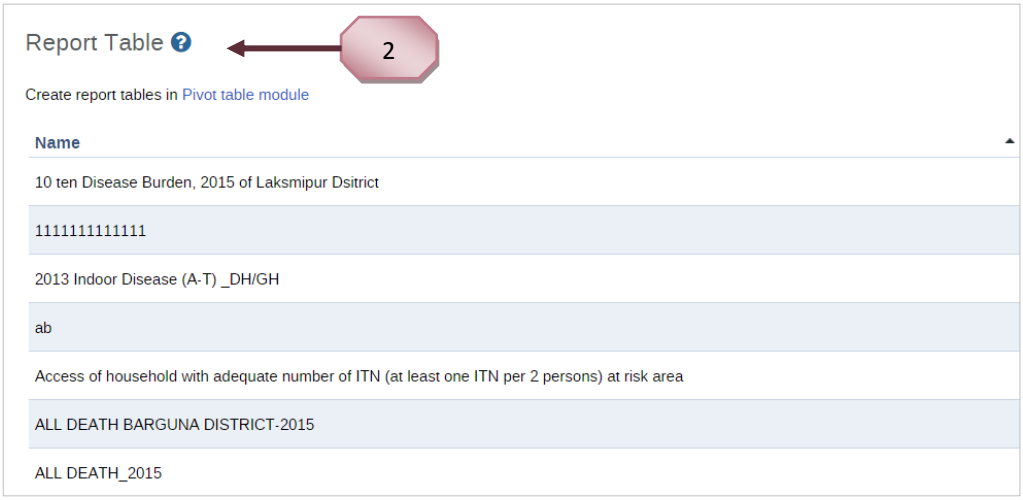
Create Report Table

Report table shows aggregated data, and indicator data. In create report tables there is an option to download the reports as PDF files and also have option to share interpretation.
To open “Report Table”

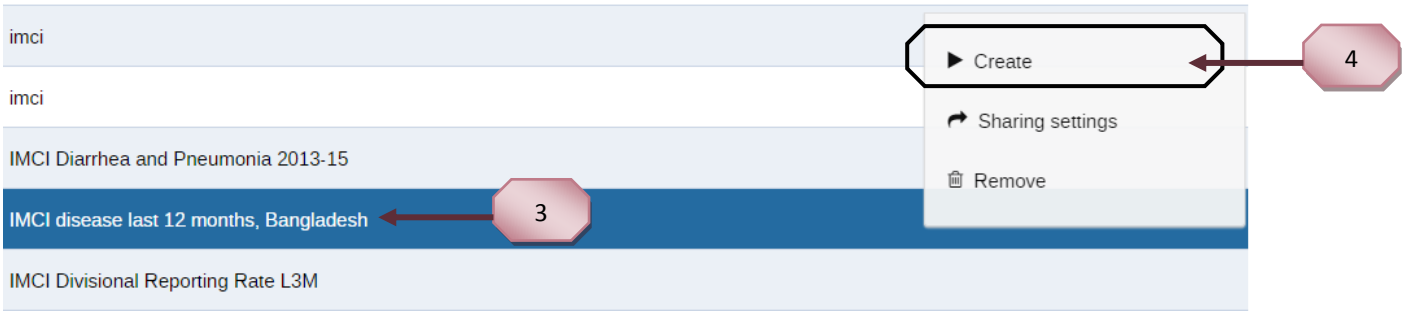
1. Click on the “Report table” from left panel



2. After click on “Report Table” button following screen will appear



3. Click on the desire report
4. Click on the Create link



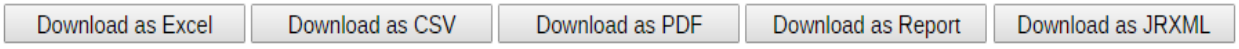
5. After click create button then you can view the report

IMCI disease last 12 months, Bangladesh

Bangladesh

Period	IMCI Diarrhea	IMCI V.SevereDisease	IMCI Pneumonia	IMCI CoughColdnoPneu	IMCI Fever NoMalaria	IMCI Fever-malaria	IMCI Measles	IMCI Other Disease	IMCI Ear problem	IMCI PEM	IMCI Referred Child
February 2015	57415	15091	38096	173253	95920	673	657	100095	15604		
March 2015	62555	18789	39805	182381	103247	801	1401	103493	16430		
April 2015	64698	14822	36565	167210	100873	344	435	103983	15959	0	

6. You can download the report in different format is as below.

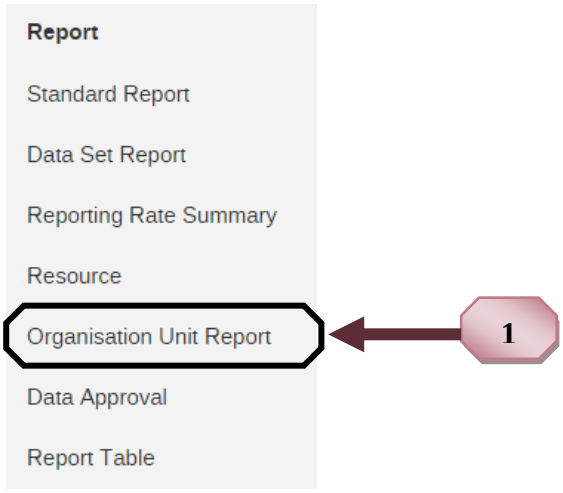


Organisational Unit Distribution Report

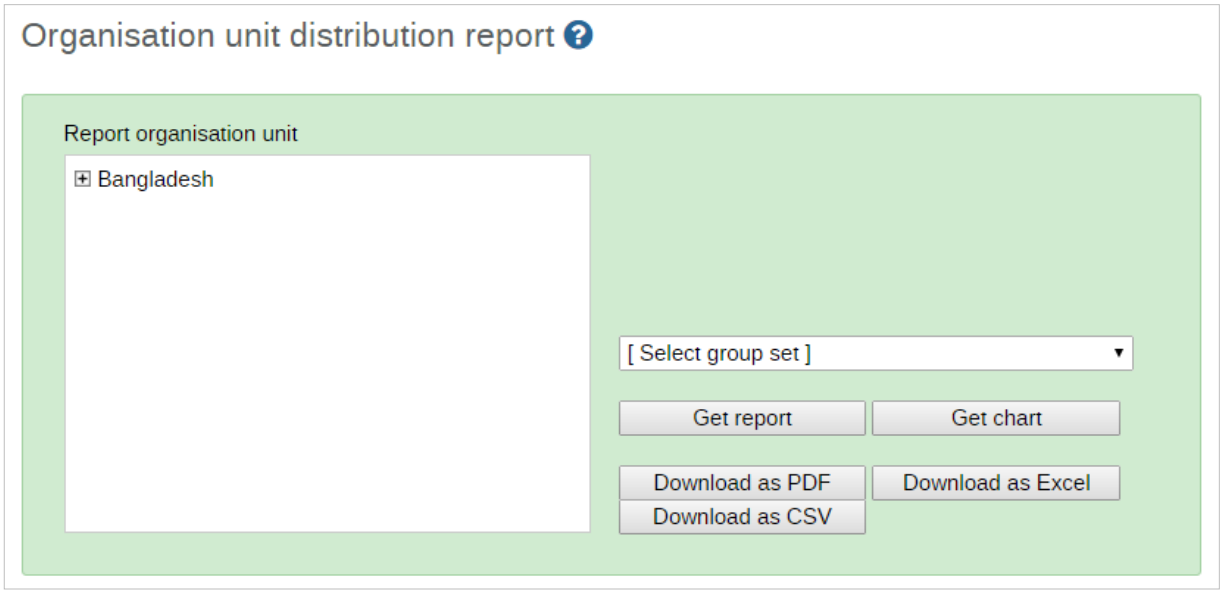
Organizational unit distribution report provides the facility to browse the organisation unit distribution information based on the organisation unit group sets and its groups.

To open “Organisational Unit Distribution Report”

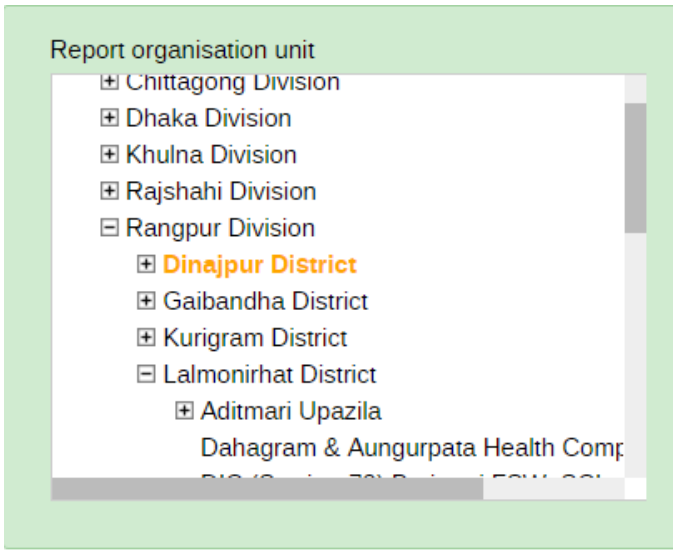
1. Click on the “**Organisation Unit report**” from left panel



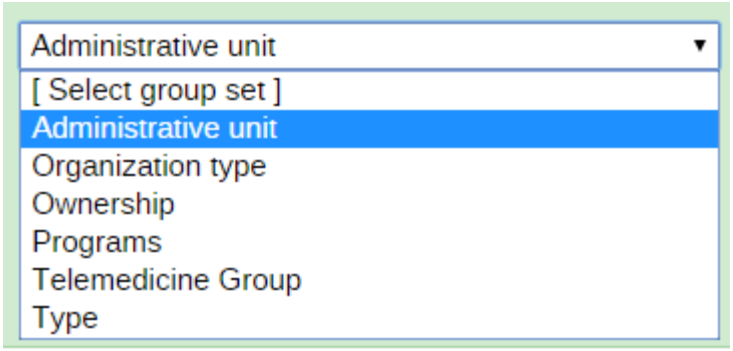
2. After Click on the “Organisation Unit report” then the following screen will appear



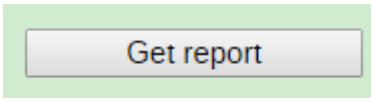
3. Select Organisational unit



4. Select Group Set



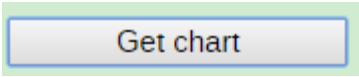
5. Click Get Report Button



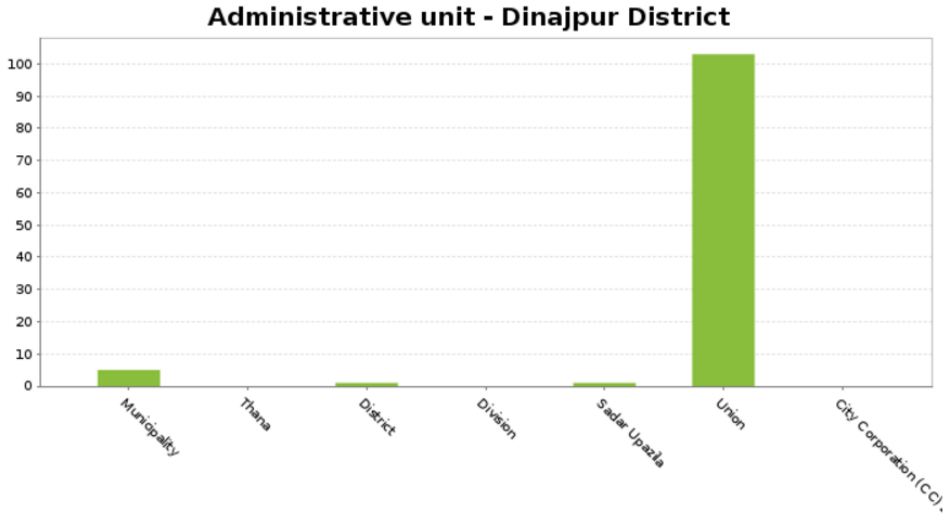
6. View the Administrative unit report. This report shows up to down ward organization unit from the selected location

Organisation unit	City Corporation (CC) Zone	District	Division	Municipality	Sadar Upazila	Thana	Union	Upazila	Total
Biral Upazila	0	0	0	0	0	0	10	1	11
Birampur Mun	0	0	0	1	0	0	0	0	1
Birampur Upazila	0	0	0	0	0	0	7	1	8
Birganj Upazila	0	0	0	0	0	0	11	1	12
Bochaganj Upazila	0	0	0	0	0	0	7	1	8
Chiribandar/LAMB, Dinajpur	0	0	0	0	0	0	0	0	0
Chirir Bandar Upazila	0	0	0	0	0	0	12	1	13
DIC (Shongi-21) Dinajpur IDU, SCI	0	0	0	0	0	0	0	0	0
DIC (Shongi-22) Khanpur IDU, SCI	0	0	0	0	0	0	0	0	0

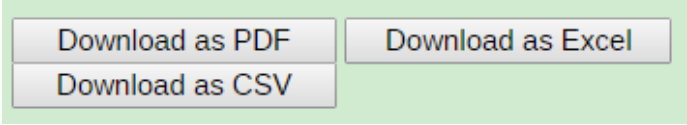
7. Click Get Chart Button



8. After Click Get Chart Button below screen will appear which shows the administrative unit chart of a particular location



9. Download report file as following formats



Chapter 7

Dashboard Management

Dashboard is the central display board for you information. Each user has his own dashboard and it is highly customizable. After your login your home screen is your dashboard.

SUMMARY

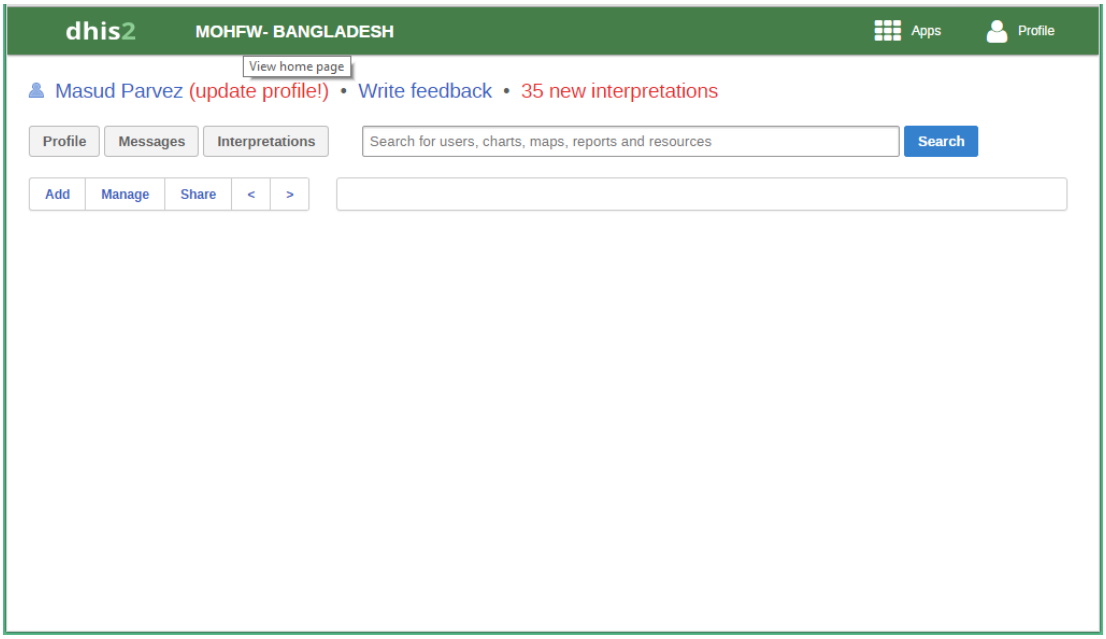
Overview

DHIS 2 provides a personal dashboard where you can put your favorite charts, maps and reports for fast access. You can search directly from the dashboard for analysis related to a particular subject or for other people. The dashboard features integrated messaging functionality which lets you communicate directly with other users. From the dashboard you can view the data interpretation feed - data interpretations shared from the various analytics modules will appear here so that you can better understand your data and your organization. From the feed you can comment on other people's interpretations and start discussions.

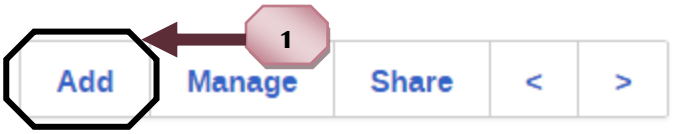
After complete this chapter you will learn about the how to manage and arrange pivot table, chart and GIS to your dashboard.

Create Dashboard Tab

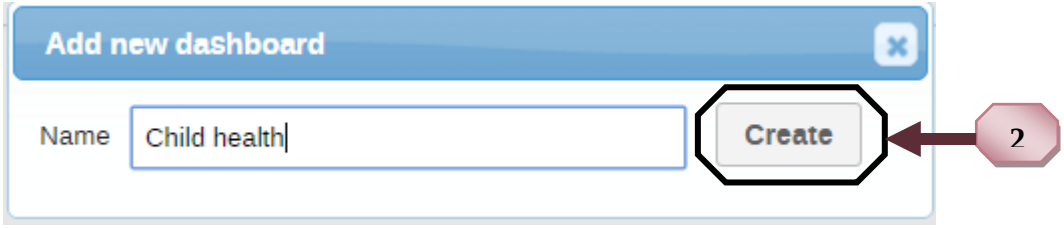
Dashboard is the central display board for you information. Each user has his own dashboard and it is highly customizable. After your login your home screen is your dashboard.



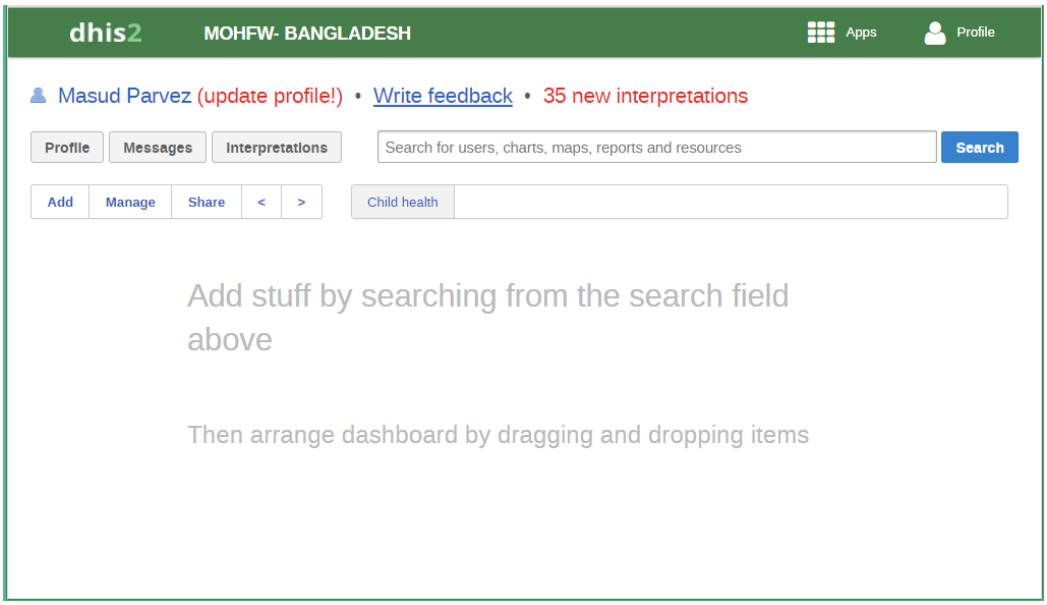
If you want to create a new dashboard please click "Add" button which is mentioned below.



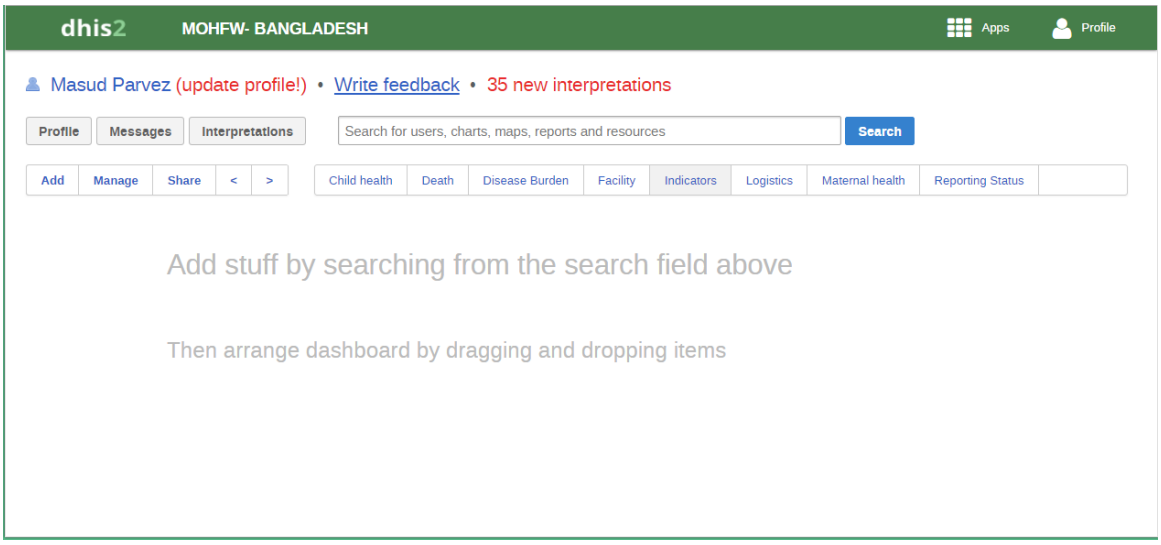
Write the name of the dashboard. Then click "Create" button



Then your home screen will look like below mentioned picture

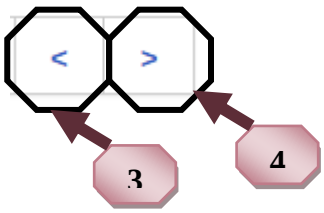


Now please add "Maternal health", "Reporting Status", "Death", "Disease Burden", "Facility", "Logistics", "Indicators" dashboard as described earlier. Now your home screen will like this



Navigate Dashboard Tab

If you have more than 10 dashboard then your dashboard list will be in next bar which you can navigate through below mentioned button.

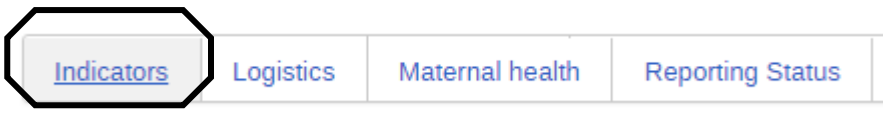


If you click left arrow button  then you will see

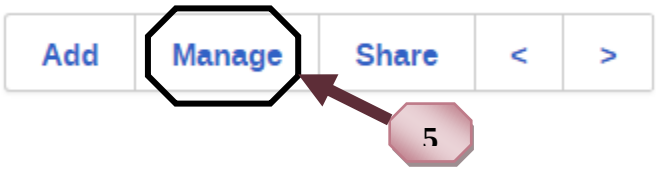
And if you click right arrow button  then you will see

Rename Dashboard Tab

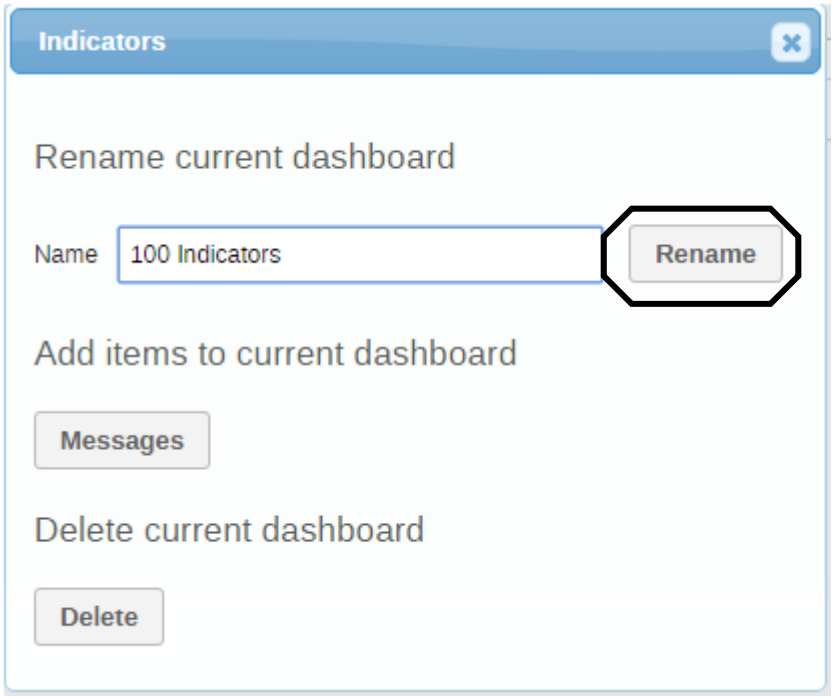
At first please select the dashboard you want to rename.



Then click "Manage" button.



Then write your desired new dashboard name in "Name" textbox and click "Rename" button.



Now your dashboard has been renamed.

Sorting Dashboard Tab

You will notice that all dashboard has been created in alphabetic order. Currently if you need to serialize then you have to add number as prefix such as

1. Child Health
2. Maternal health
3. Reporting Status
4. Death

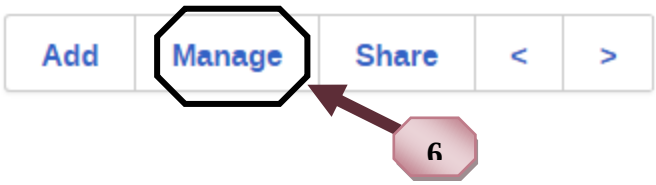
5. Disease Burden
6. Facility
7. Logistics
8. Indicators

Please select each dashboard and rename as described earlier. Now your dashboard will look like this.

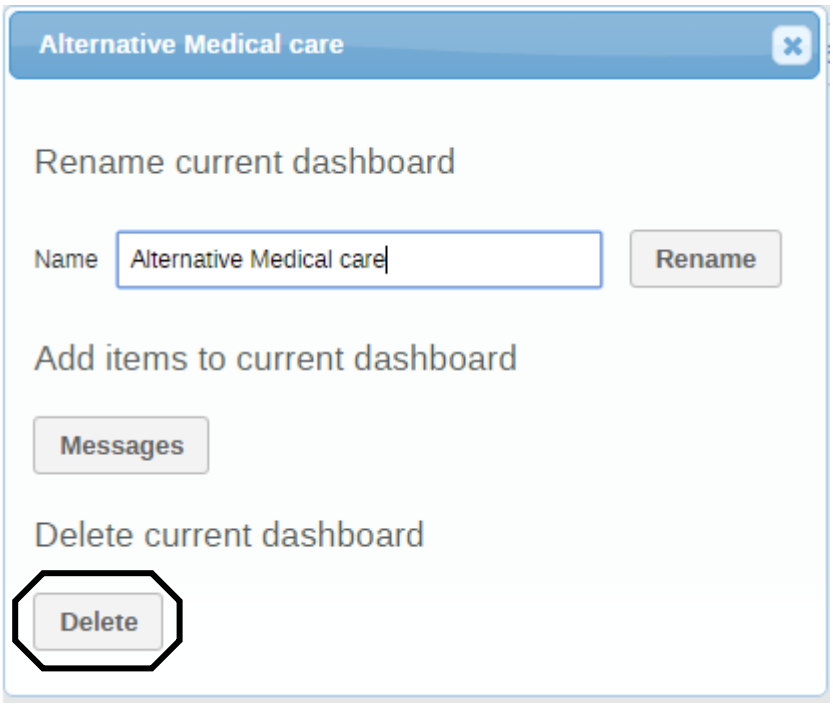
Delete Dashboard Tab

At first please select the dashboard you want to delete.

Then click "Manage" button.



Then click "Delete" button.



Now your dashboard has been removed.

Note: **Please remember all your existing graph, chart, map within that dashboard will be removed.**

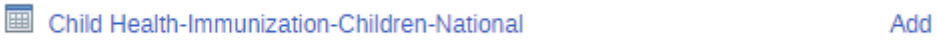
Add graph, chart, map in Dashboard

Now after creating all the dashboard it's time to assign graph, chart and map in their corresponding dashboard. At first please select the dashboard where you want to assign your graph, chart and map.

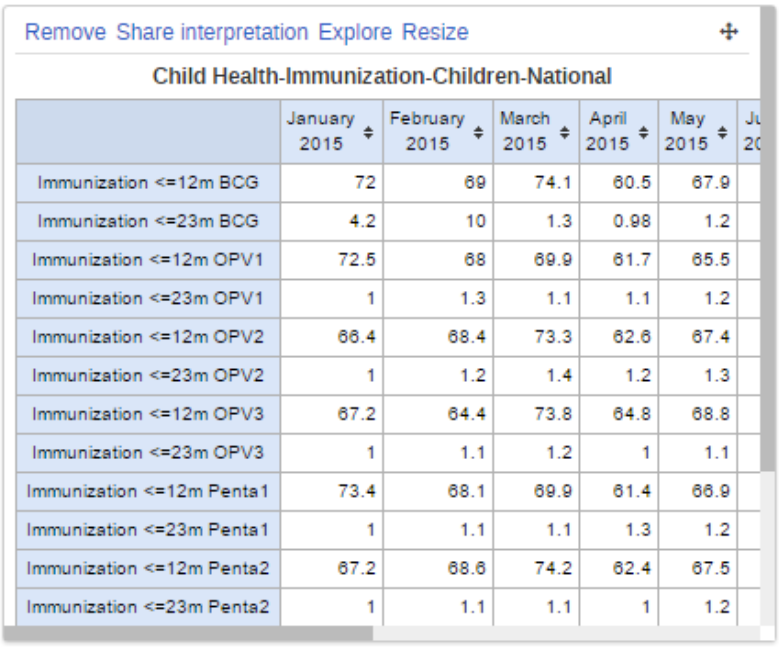
Then go to the search area to add

Write your desired graph, chart or map name. System will search as you type.

Select the item and click "Add" button.



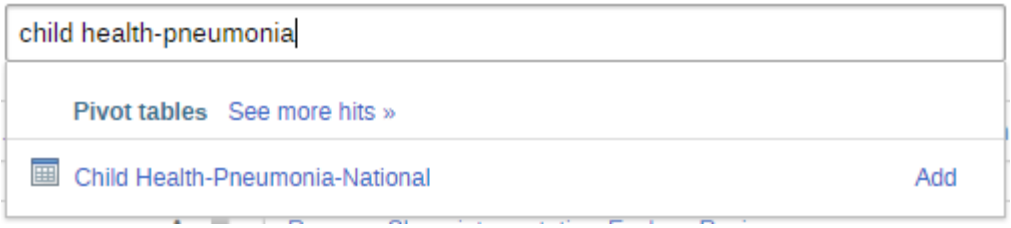
It will add your chart in "Child Health" dashboard.

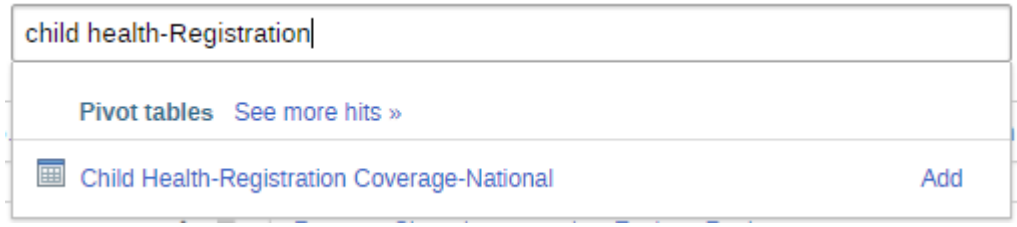


	January 2015	February 2015	March 2015	April 2015	May 2015	Ju 20
Immunization <=12m BCG	72	69	74.1	60.5	67.9	
Immunization <=23m BCG	4.2	10	1.3	0.98	1.2	
Immunization <=12m OPV1	72.5	68	69.9	61.7	65.5	
Immunization <=23m OPV1	1	1.3	1.1	1.1	1.2	
Immunization <=12m OPV2	66.4	68.4	73.3	62.6	67.4	
Immunization <=23m OPV2	1	1.2	1.4	1.2	1.3	
Immunization <=12m OPV3	67.2	64.4	73.8	64.8	68.8	
Immunization <=23m OPV3	1	1.1	1.2	1	1.1	
Immunization <=12m Penta1	73.4	68.1	69.9	61.4	66.9	
Immunization <=23m Penta1	1	1.1	1.1	1.3	1.2	
Immunization <=12m Penta2	67.2	68.6	74.2	62.4	67.5	
Immunization <=23m Penta2	1	1.1	1.1	1	1.2	

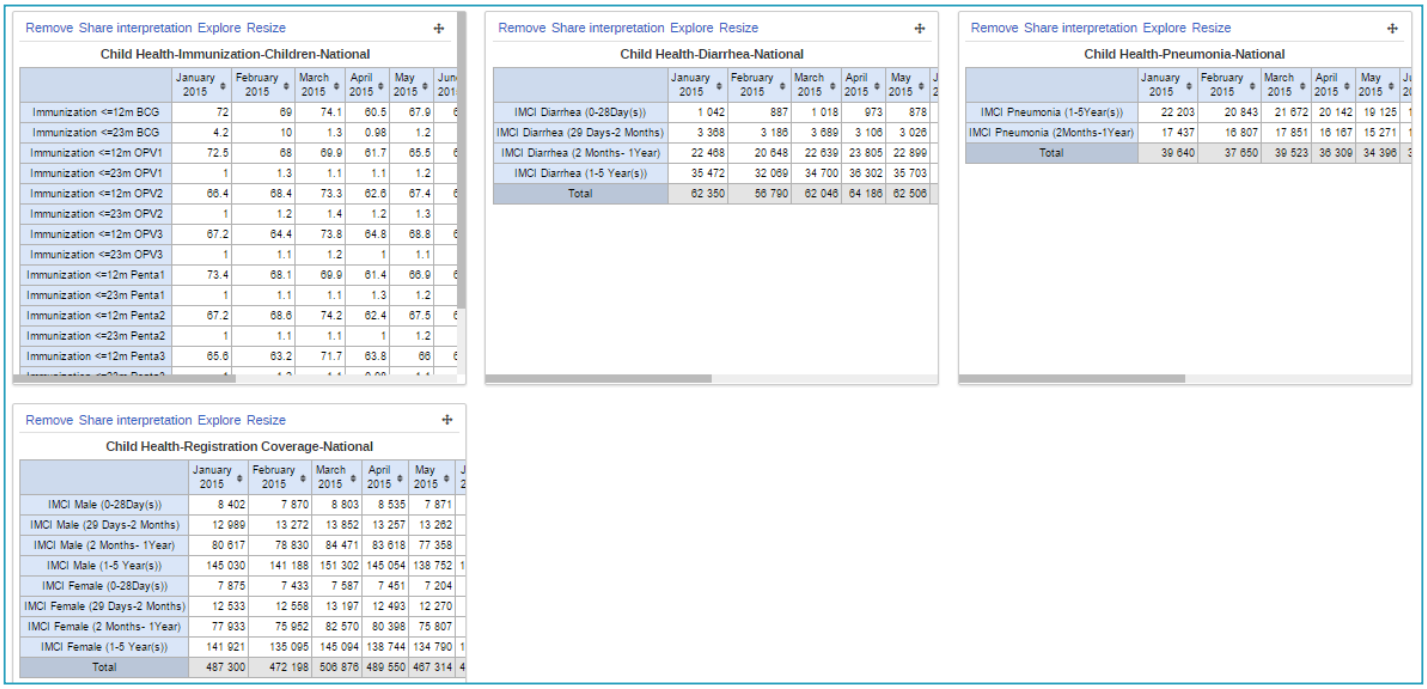
Again write "Child Health-Diarrhea-National" under search box which was mentioned earlier and click "Add" button

In this way please add



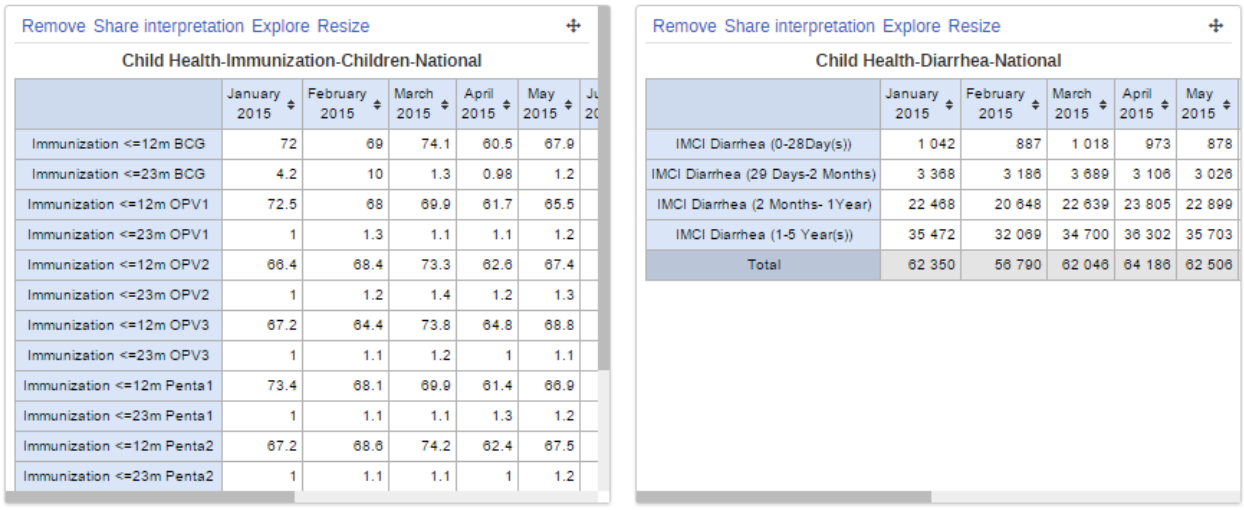


After adding this chart in your dashboard your dashboard will look like this



Rearrange graph, chart, map within Dashboard

If you want to rearrange you graph, chart and map position within the dashboard then at first select your desired you graph, chart or map by selecting the item and holding left button of the mouse.



Remove Share interpretation Explore Resize

Child Health-Immunization-Children-National

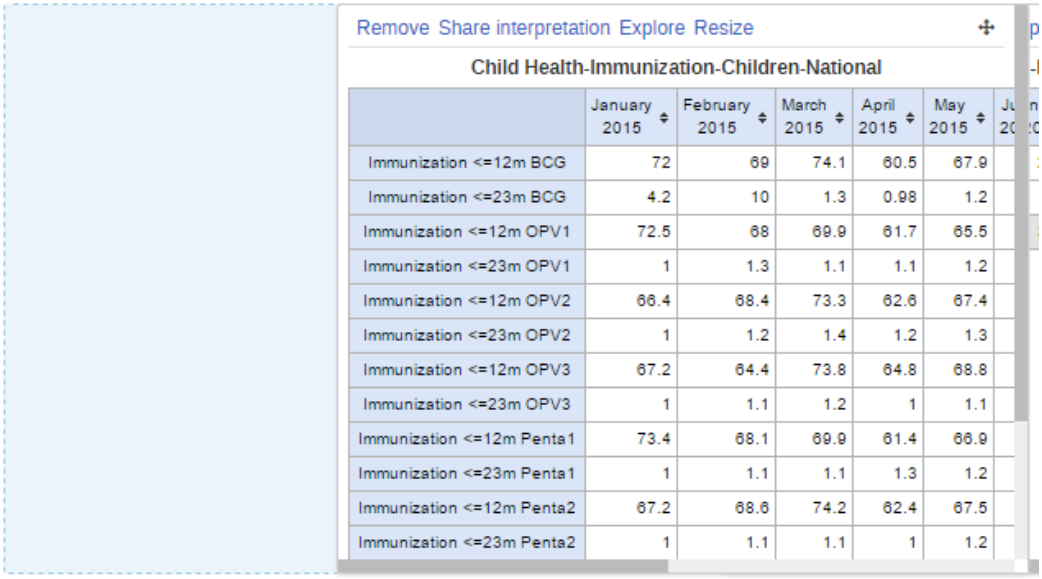
	January 2015	February 2015	March 2015	April 2015	May 2015	Ju 20
Immunization <=12m BCG	72	69	74.1	60.5	67.9	
Immunization <=23m BCG	4.2	10	1.3	0.98	1.2	
Immunization <=12m OPV1	72.5	68	69.9	61.7	65.5	
Immunization <=23m OPV1	1	1.3	1.1	1.1	1.2	
Immunization <=12m OPV2	66.4	68.4	73.3	62.6	67.4	
Immunization <=23m OPV2	1	1.2	1.4	1.2	1.3	
Immunization <=12m OPV3	67.2	64.4	73.8	64.8	68.8	
Immunization <=23m OPV3	1	1.1	1.2	1	1.1	
Immunization <=12m Penta1	73.4	68.1	69.9	61.4	66.9	
Immunization <=23m Penta1	1	1.1	1.1	1.3	1.2	
Immunization <=12m Penta2	67.2	68.6	74.2	62.4	67.5	
Immunization <=23m Penta2	1	1.1	1.1	1	1.2	

Remove Share interpretation Explore Resize

Child Health-Diarrhea-National

	January 2015	February 2015	March 2015	April 2015	May 2015
IMCI Diarrhea (0-28Day(s))	1 042	887	1 018	973	878
IMCI Diarrhea (29 Days-2 Months)	3 368	3 186	3 689	3 106	3 026
IMCI Diarrhea (2 Months- 1Year)	22 468	20 648	22 639	23 805	22 899
IMCI Diarrhea (1-5 Year(s))	35 472	32 069	34 700	36 302	35 703
Total	62 350	56 790	62 046	64 186	62 506

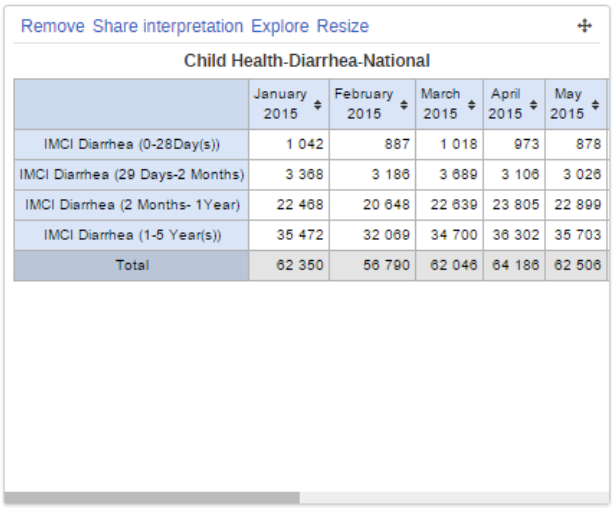
Then drag the item in their new location and drop. It will sit on the new location and existing item will move to the source location.



Remove Share interpretation Explore Resize

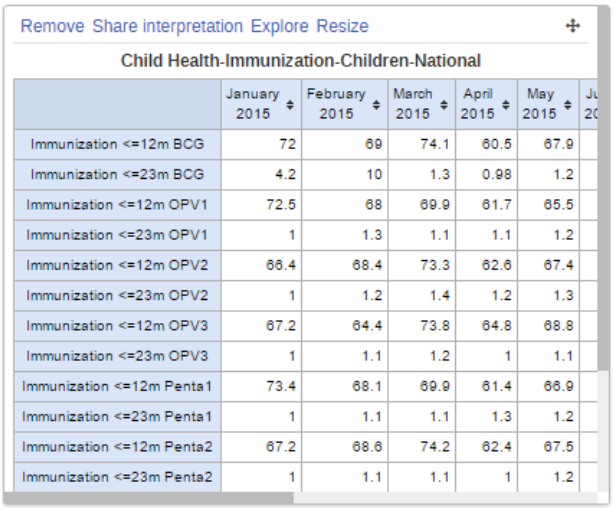
Child Health-Immunization-Children-National

	January 2015	February 2015	March 2015	April 2015	May 2015	Ju 20
Immunization <=12m BCG	72	69	74.1	60.5	67.9	
Immunization <=23m BCG	4.2	10	1.3	0.98	1.2	
Immunization <=12m OPV1	72.5	68	69.9	61.7	65.5	
Immunization <=23m OPV1	1	1.3	1.1	1.1	1.2	
Immunization <=12m OPV2	66.4	68.4	73.3	62.6	67.4	
Immunization <=23m OPV2	1	1.2	1.4	1.2	1.3	
Immunization <=12m OPV3	67.2	64.4	73.8	64.8	68.8	
Immunization <=23m OPV3	1	1.1	1.2	1	1.1	
Immunization <=12m Penta1	73.4	68.1	69.9	61.4	66.9	
Immunization <=23m Penta1	1	1.1	1.1	1.3	1.2	
Immunization <=12m Penta2	67.2	68.6	74.2	62.4	67.5	
Immunization <=23m Penta2	1	1.1	1.1	1	1.2	


Remove Share interpretation Explore Resize

Child Health-Diarrhea-National

	January 2015	February 2015	March 2015	April 2015	May 2015
IMCI Diarrhea (0-28Day(s))	1 042	887	1 018	973	878
IMCI Diarrhea (29 Days-2 Months)	3 368	3 186	3 689	3 106	3 026
IMCI Diarrhea (2 Months- 1Year)	22 468	20 648	22 639	23 805	22 899
IMCI Diarrhea (1-5 Year(s))	35 472	32 069	34 700	36 302	35 703
Total	62 350	56 790	62 046	64 186	62 506

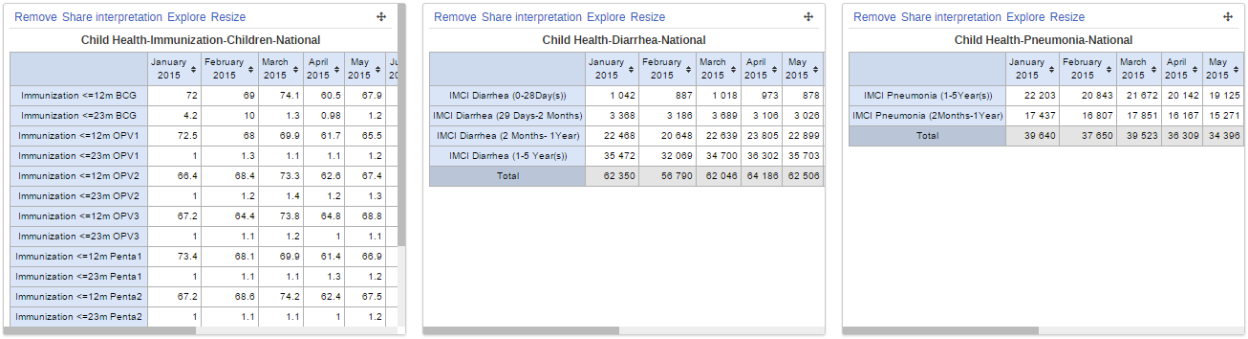

Remove Share interpretation Explore Resize

Child Health-Immunization-Children-National

	January 2015	February 2015	March 2015	April 2015	May 2015
Immunization <=12m BCG	72	69	74.1	60.5	67.9
Immunization <=23m BCG	4.2	10	1.3	0.98	1.2
Immunization <=12m OPV1	72.5	68	69.9	61.7	65.5
Immunization <=23m OPV1	1	1.3	1.1	1.1	1.2
Immunization <=12m OPV2	66.4	68.4	73.3	62.6	67.4
Immunization <=23m OPV2	1	1.2	1.4	1.2	1.3
Immunization <=12m OPV3	67.2	64.4	73.8	64.8	68.8
Immunization <=23m OPV3	1	1.1	1.2	1	1.1
Immunization <=12m Penta1	73.4	68.1	69.9	61.4	66.9
Immunization <=23m Penta1	1	1.1	1.1	1.3	1.2
Immunization <=12m Penta2	67.2	68.6	74.2	62.4	67.5
Immunization <=23m Penta2	1	1.1	1.1	1	1.2

Resize graph, chart, map

Presently each row contains three column which contains you graph, chart and map.


Remove Share interpretation Explore Resize

Child Health-Immunization-Children-National

	January 2015	February 2015	March 2015	April 2015	May 2015
Immunization <=12m BCG	72	69	74.1	60.5	67.9
Immunization <=23m BCG	4.2	10	1.3	0.98	1.2
Immunization <=12m OPV1	72.5	68	69.9	61.7	65.5
Immunization <=23m OPV1	1	1.3	1.1	1.1	1.2
Immunization <=12m OPV2	66.4	68.4	73.3	62.6	67.4
Immunization <=23m OPV2	1	1.2	1.4	1.2	1.3
Immunization <=12m OPV3	67.2	64.4	73.8	64.8	68.8
Immunization <=23m OPV3	1	1.1	1.2	1	1.1
Immunization <=12m Penta1	73.4	68.1	69.9	61.4	66.9
Immunization <=23m Penta1	1	1.1	1.1	1.3	1.2
Immunization <=12m Penta2	67.2	68.6	74.2	62.4	67.5
Immunization <=23m Penta2	1	1.1	1.1	1	1.2

Remove Share interpretation Explore Resize

Child Health-Diarrhea-National

	January 2015	February 2015	March 2015	April 2015	May 2015
IMCI Diarrhea (0-28Day(s))	1 042	887	1 018	973	878
IMCI Diarrhea (29 Days-2 Months)	3 368	3 186	3 689	3 106	3 026
IMCI Diarrhea (2 Months- 1Year)	22 468	20 648	22 639	23 805	22 899
IMCI Diarrhea (1-5 Year(s))	35 472	32 069	34 700	36 302	35 703
Total	62 350	56 790	62 046	64 186	62 506

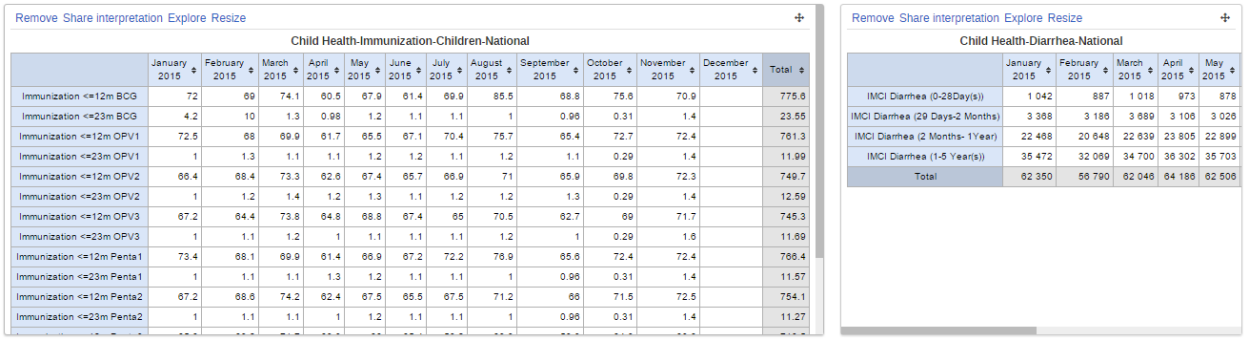
Remove Share interpretation Explore Resize

Child Health-Pneumonia-National

	January 2015	February 2015	March 2015	April 2015	May 2015
IMCI Pneumonia (1-5Year(s))	22 203	20 843	21 672	20 142	19 125
IMCI Pneumonia (2Months-1Year)	17 437	16 807	17 851	16 167	15 271
Total	39 640	37 650	39 523	36 309	34 396

You can assign and you graph, chart or map to one column width or two column width or three column width.

Click "Resize" button once your graph, chart or map will be two column width.



Remove Share interpretation Explore Resize

Child Health-Immunization-Children-National

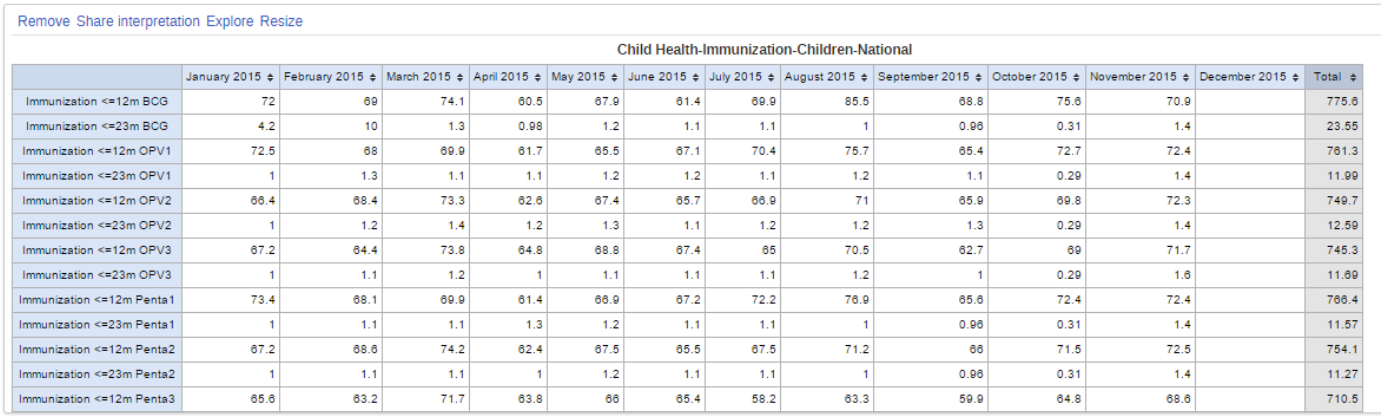
	January 2015	February 2015	March 2015	April 2015	May 2015	June 2015	July 2015	August 2015	September 2015	October 2015	November 2015	December 2015	Total
Immunization <=12m BCG	72	69	74.1	60.5	67.9	61.4	69.9	85.5	68.8	75.6	70.9		775.6
Immunization <=23m BCG	4.2	10	1.3	0.98	1.2	1.1	1.1	1	0.96	0.31	1.4		23.55
Immunization <=12m OPV1	72.5	68	69.9	61.7	65.5	67.1	70.4	75.7	65.4	72.7	72.4		761.3
Immunization <=23m OPV1	1	1.3	1.1	1.1	1.2	1.2	1.1	1.2	1.1	0.29	1.4		11.99
Immunization <=12m OPV2	66.4	68.4	73.3	62.6	67.4	65.7	66.9	71	65.9	69.8	72.3		749.7
Immunization <=23m OPV2	1	1.2	1.4	1.2	1.3	1.1	1.2	1.2	1.3	0.29	1.4		12.59
Immunization <=12m OPV3	67.2	64.4	73.8	64.8	68.8	67.4	65	70.5	62.7	69	71.7		745.3
Immunization <=23m OPV3	1	1.1	1.2	1	1.1	1.1	1.1	1.2	1	0.29	1.6		11.69
Immunization <=12m Penta1	73.4	68.1	69.9	61.4	66.9	67.2	72.2	76.9	65.6	72.4	72.4		766.4
Immunization <=23m Penta1	1	1.1	1.1	1.3	1.2	1.1	1.1	1	0.96	0.31	1.4		11.57
Immunization <=12m Penta2	67.2	68.6	74.2	62.4	67.5	65.5	67.5	71.2	66	71.5	72.5		754.1
Immunization <=23m Penta2	1	1.1	1.1	1	1.2	1.1	1.1	1	0.96	0.31	1.4		11.27

Remove Share interpretation Explore Resize

Child Health-Diarrhea-National

	January 2015	February 2015	March 2015	April 2015	May 2015
IMCI Diarrhea (0-28Day(s))	1 042	887	1 018	973	878
IMCI Diarrhea (29 Days-2 Months)	3 368	3 186	3 689	3 106	3 026
IMCI Diarrhea (2 Months- 1Year)	22 468	20 648	22 639	23 805	22 899
IMCI Diarrhea (1-5 Year(s))	35 472	32 069	34 700	36 302	35 703
Total	62 350	56 790	62 046	64 186	62 506

Click "Resize" button once your graph, chart or map will be two column width.



Remove Share interpretation Explore Resize

Child Health-Immunization-Children-National

	January 2015	February 2015	March 2015	April 2015	May 2015	June 2015	July 2015	August 2015	September 2015	October 2015	November 2015	December 2015	Total
Immunization <=12m BCG	72	69	74.1	60.5	67.9	61.4	69.9	85.5	68.8	75.6	70.9		775.6
Immunization <=23m BCG	4.2	10	1.3	0.98	1.2	1.1	1.1	1	0.96	0.31	1.4		23.55
Immunization <=12m OPV1	72.5	68	69.9	61.7	65.5	67.1	70.4	75.7	65.4	72.7	72.4		761.3
Immunization <=23m OPV1	1	1.3	1.1	1.1	1.2	1.2	1.1	1.2	1.1	0.29	1.4		11.99
Immunization <=12m OPV2	66.4	68.4	73.3	62.6	67.4	65.7	66.9	71	65.9	69.8	72.3		749.7
Immunization <=23m OPV2	1	1.2	1.4	1.2	1.3	1.1	1.2	1.2	1.3	0.29	1.4		12.59
Immunization <=12m OPV3	67.2	64.4	73.8	64.8	68.8	67.4	65	70.5	62.7	69	71.7		745.3
Immunization <=23m OPV3	1	1.1	1.2	1	1.1	1.1	1.1	1.2	1	0.29	1.6		11.69
Immunization <=12m Penta1	73.4	68.1	69.9	61.4	66.9	67.2	72.2	76.9	65.6	72.4	72.4		766.4
Immunization <=23m Penta1	1	1.1	1.1	1.3	1.2	1.1	1.1	1	0.96	0.31	1.4		11.57
Immunization <=12m Penta2	67.2	68.6	74.2	62.4	67.5	65.5	67.5	71.2	66	71.5	72.5		754.1
Immunization <=23m Penta2	1	1.1	1.1	1	1.2	1.1	1.1	1	0.96	0.31	1.4		11.27
Immunization <=12m Penta3	65.6	63.2	71.7	63.8	66	65.4	58.2	63.3	59.9	64.8	68.6		710.5

Remove graph, chart, map

"Remove" button from each item

Note:
Removing graph, chart and map from Dashboard is not actually deleting the item it's only removing the item from dashboard.

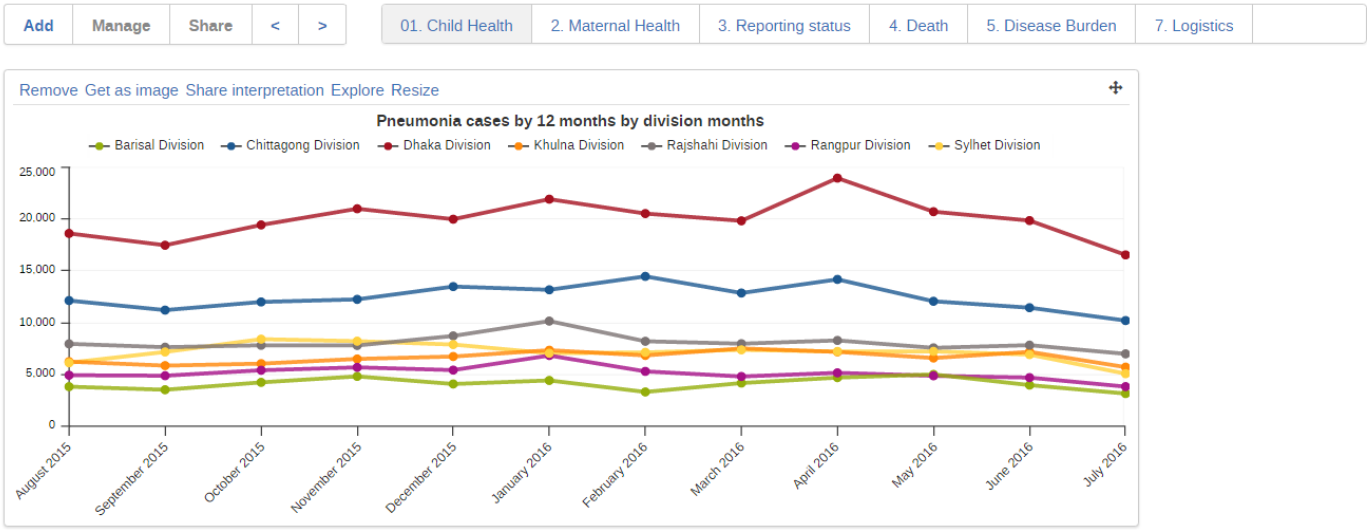
Case Study

Objective: Create a dashboard **Tab** named **Case Study.** Add three reports (Pivot table, Visualizer and GIS) which were created in this previous case study are as below:

- Division wise child nutrition status last month in Bangladesh
- Khulna division wise delivery status last month
- Division wise Maternal Death last year in Bangladesh

Step-1: Open Dashboard

Dashboard is the central display board for you information. Each user has his own dashboard and it is highly customizable. After your login your home screen is your dashboard.

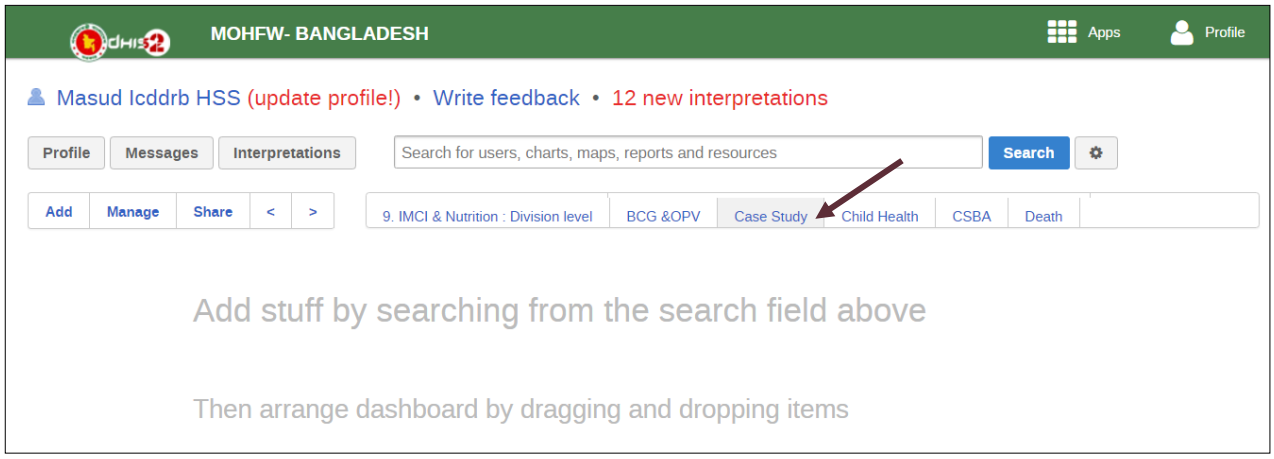


Step-2: Create New Tab

2.1 If you want to create a new dashboard please click "Add" button which is mentioned below.

2.2 Write the name of the dashboard according to the requirements of case study. Then click "Create" button

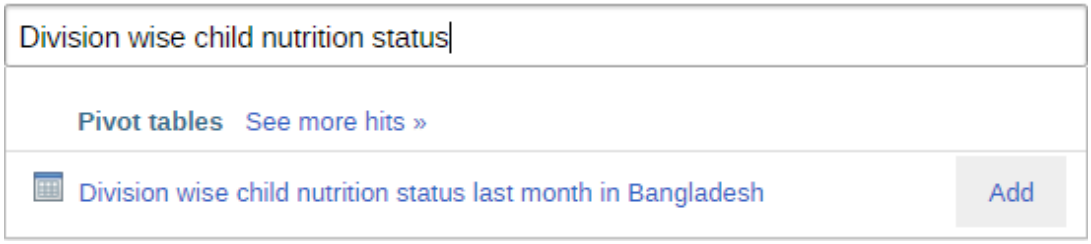
Then your home screen will look like below mentioned picture



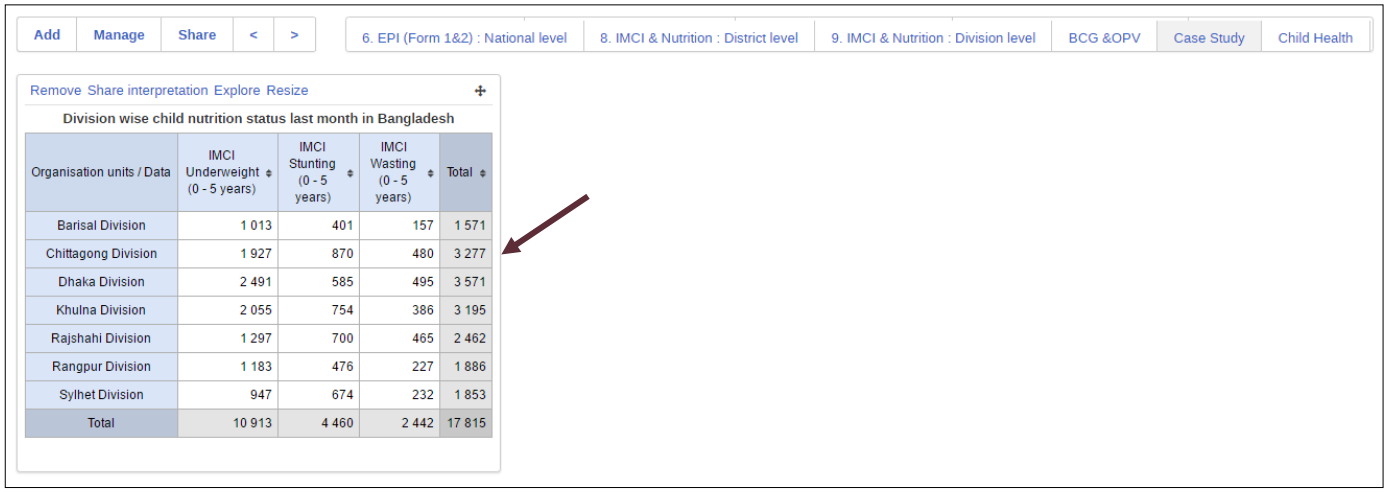
Step-3: Add pivot, chart, map in dashboard

3.1 Write your desired graph, chart or map name. System will search as you type.

3.2 To Add pivot table name "**Division wise child nutrition status last month in Bangladesh"** in dashboard type the name in search bar and then you will see the desire pivot table appear in the list. Click **Add** button



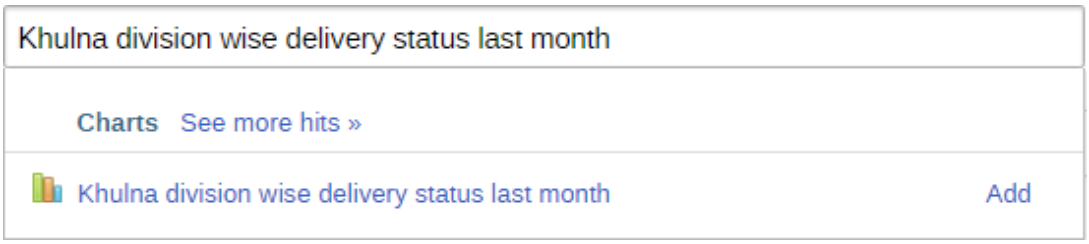
Now you will see the desire pivot table is added in your dashboard tab



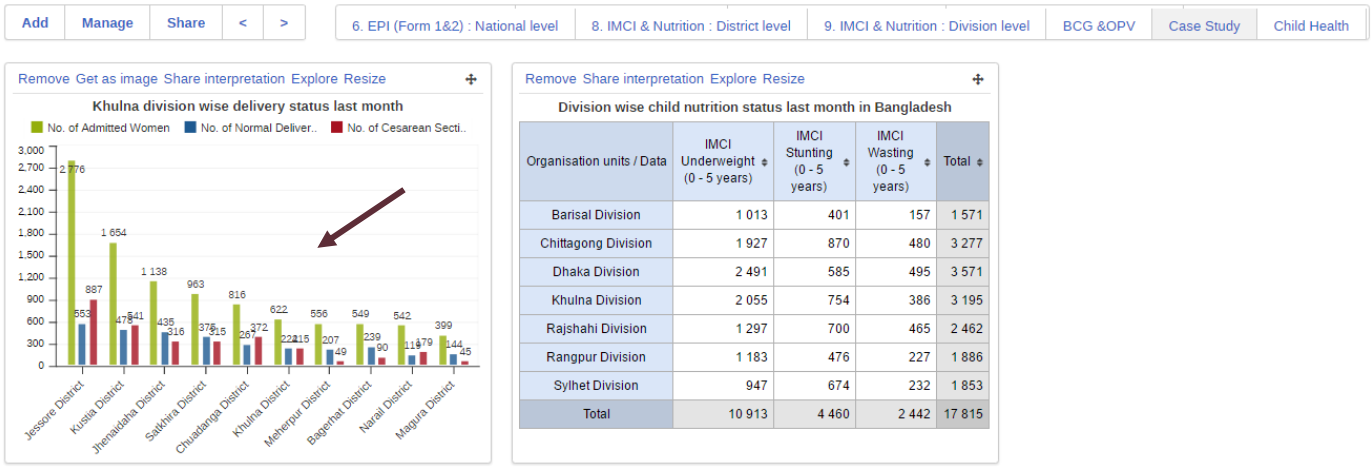
3.3 Similarly, to add chart name “Khulna division wise delivery status last month” in dashboard type the

name in search bar and then you will see the desire pivot table appear in the list.

Click **Add** button



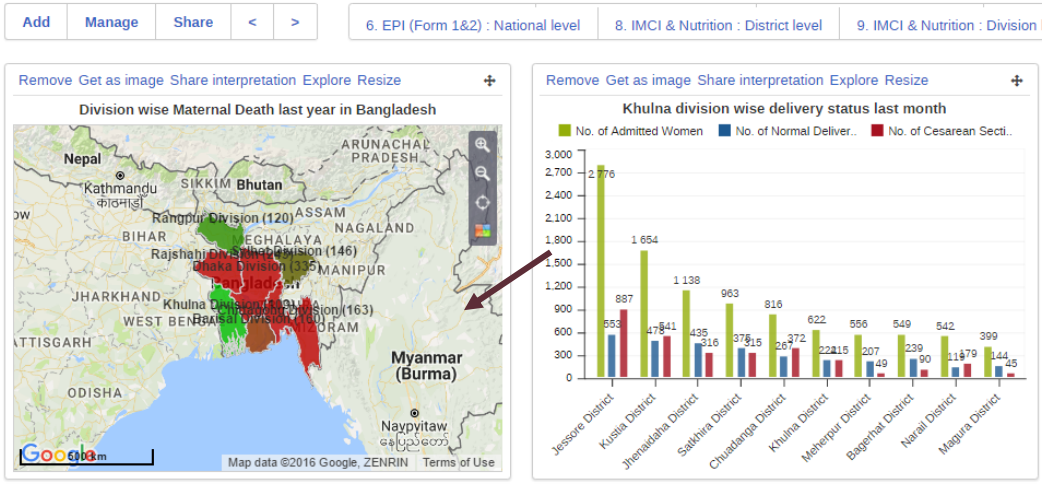
Now you will see the desire chart is added in your dashboard tab



Organisation units / Data	IMCI Underweight (0 - 5 years)	IMCI Stunting (0 - 5 years)	IMCI Wasting (0 - 5 years)	Total
Barisal Division	1 013	401	157	1 571
Chittagong Division	1 927	870	480	3 277
Dhaka Division	2 491	585	495	3 571
Khulna Division	2 055	754	386	3 195
Rajshahi Division	1 297	700	465	2 462
Rangpur Division	1 183	476	227	1 886
Sylhet Division	947	674	232	1 853
Total	10 913	4 460	2 442	17 815

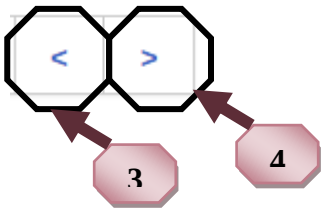
3.4 Similarly, to add chart name “Division wise Maternal Death last year in Bangladesh” in dashboard type the name in search bar and then you will see the desire pivot table appear in the list.

Click **Add** button



Step-4 Navigate Dashboard Tab

If you have more than 10 dashboard then your dashboard list will be in next bar which you can navigate through below mentioned button.



If you click left arrow button  then you will see

And if you click right arrow button  then you will see