

DATA VISUALIZATION : METABASE GUIDE

INTRODUCTION

The data sent from ESPEN Collect is stored in a database on which an automatic backup is made to compensate for the loss of data in the event of any possible accident or damage. The data sent daily by the field teams are raw data that requires cleaned up before any analysis can be done to produce results that are easy to read and understand in the form of charts, summary tables and so on. Since the data analysis is only carried out once the survey is completed, it becomes difficult to know before the end of the survey what results to expect or to determine the trends already for certain key indicators.

In order to monitor and ensure data quality, it is therefore important to produce charts and tables that will be updated automatically from the data sent as the survey progresses. These charts and tables take the form of a dashboard that is designed to facilitate monitoring the progress of field activities by the ministry of health.

The function of a dashboard is to allow easy visualization, monitoring and use of relevant data in the form of figures, ratios and charts. These indicators are linked to objectives in order to inform decision-making¹. That is why ESPEN Collect survey support services use the dashboard as one of the tools available to national survey teams..

It is designed to meet the specific needs of programme managers, monitoring/evaluation officers, data managers, supervisors, and team leaders for tracking survey progress, locating survey sites, inspecting data, assisting with data cleaning, previewing interim results, and assessing interviewer performance.

¹ • Guide pour élaborer un tableau de bord, accessed on september 23, 2020, <https://www.manager-go.com/finance/dossiers-methodes/guide-creation-tableau-de-bord>

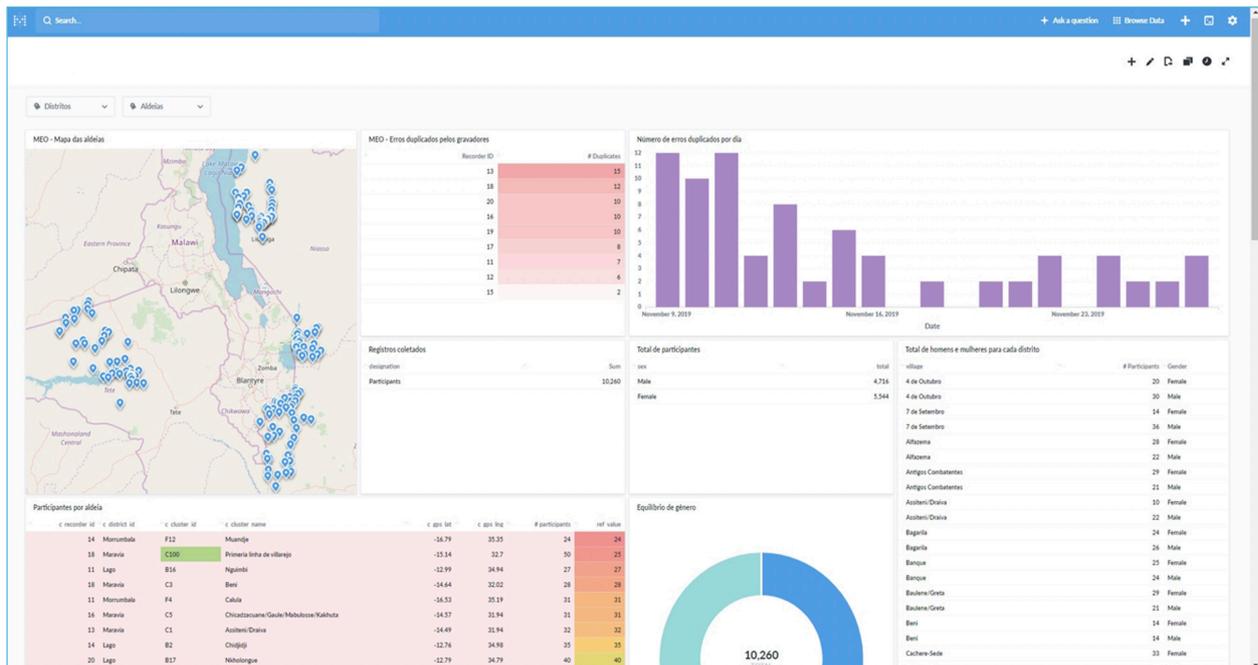


Figure 1 : Dashboard model

CONFIGURING THE DASHBOARD

With regard to the design of the dashboards for the supported surveys, the ESPEN Collect team opted for Metabase, an easy-to-use freeware and powerful analysis tool that facilitates data-driven decision-making.

The configuration of the dashboard is done by the data manager using standard templates so that for each new survey, the supervisory team does not have to learn the new content of the dashboard.

This guide explains the step-by-step process to follow from the moment the invitation to download the EPIRF² is received, through to the monitoring of data quality. The guide also presents some key features of Metabase that you need to know in order to access the data.

For more information on Metabase, the official user guide is available here: <https://metabase.com/docs/latest/users-guide/start.html>

INVITATION TO THE METABASE DASHBOARD

To access the data, at the time of submitting the request to use ESPEN Collect services, the National NTD Programme Manager specifies the people authorized to access the data and their privileges: read/write (ability to view and modify data) or read-only (ability to view data only without the possibility of modification).

The ESPEN Collect Data Manager sends an invitation to the persons specified by the country using their email addresses as shown in figure 2.

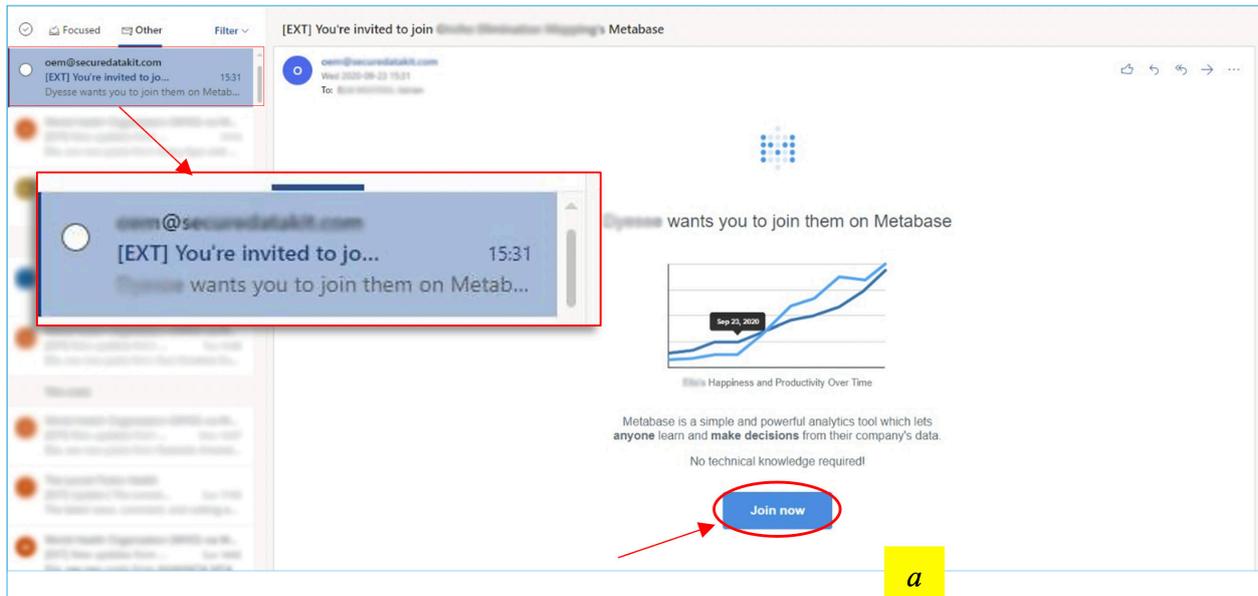


Figure 2 : Invitation to Metabase

NOTE

A user's mailbox may classify the invitation message as spam. Therefore, if you cannot find the invitation message in your inbox, it is important to check the spam folder before contacting the ESPEN Collect Data Manager.

INITIAL CONNECTION TO METABASE

Once you have received the email invitation, you must accept it by clicking on the “Join now” registration button (figure 2 [a]) and creating a new password (figure 3 [b]). This password will be used for each new connection to Metabase. If you already have an account, click on the link or go to Metabase as shown in figure 4: <https://metabase.espen.securedatakit.com/> and enter your identification details to connect.

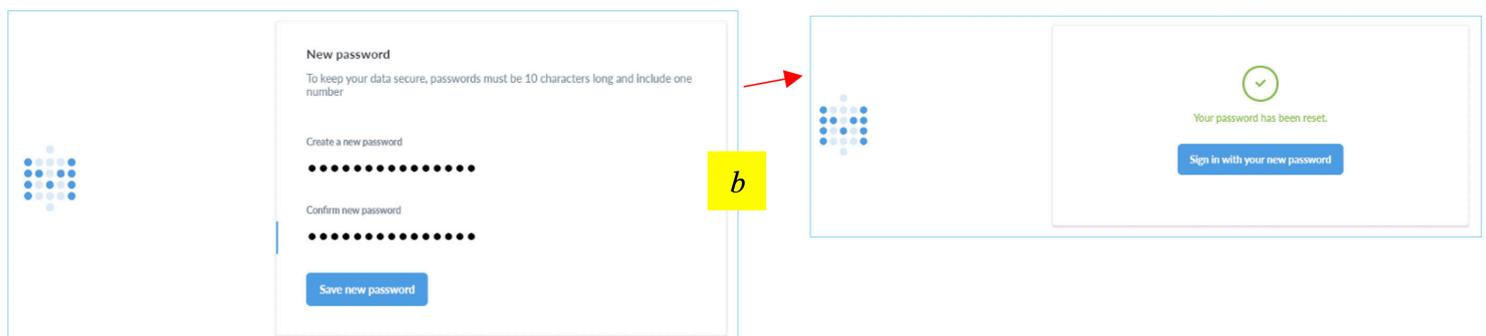


Figure 3 : Creating the password

NOTE

For future connections to Metabase, navigate to the ESPEN Collect page on the ESPEN Portal below “Connect to dashboard of existing survey” and click on “Identify yourself” (figure 4, [c]). You will be directed to Metabase and requested to enter the username and the password. (Use the details created during creation of the password, figure 3, [a]).

The screenshot shows the ESPEN Collect website interface. At the top, there is a navigation bar with links for 'REGIONS', 'COUNTRIES', 'DISEASES', 'PROGRAM STAGES', 'TOOLS & RESOURCES', 'UPDATES & EVENTS', and 'ABOUT'. Below the navigation bar, the main content area features a large heading 'ESPEN Collect' and a sub-heading 'Login to Existing Survey Dashboard'. A red box highlights the 'Login' button in the 'Login to Existing Survey Dashboard' section, with a yellow callout 'c' next to it. Other elements include a search bar, a language selector, and a 'Submit a request' section with a 'Register now / Login' button.

Figure 4 : Access to Metabase from the ESPEN Portal

After creating the password (also for future logins), you will be automatically redirected to the Metabase homepage of your country. This page contains mainly two components: raw data and basic analyses (the dashboard).

The screenshot shows the Metabase Home page. The page is divided into two main sections: 'OUR ANALYTICS' and 'OUR DATA'. The 'OUR ANALYTICS' section contains a list of analytics, with a red box highlighting the 'OUR ANALYTICS' section and a yellow callout 'd' next to it. The 'OUR DATA' section contains a list of databases, with a red box highlighting the 'OUR DATA' section and a yellow callout 'e' next to it. The page also features a search bar, a 'Greetings' message, and a 'Browse all items' link.

Figure 5 : Metabase Home page

Figure 5, **[d]** : Click on the country name to access the table linked to the survey.

Figure 5, **[e]** : Click on the database name to access the raw data.

THE DASHBOARD

The dashboard is the Metabase feature you will use most frequently. It provides analyses, displays key indicators and all the data sent by ESPEN Collect. To access the Dashboard, click below the name of your country. This will take you to another page containing the dashboard(s) of the survey(s) conducted by the country **[f]**.

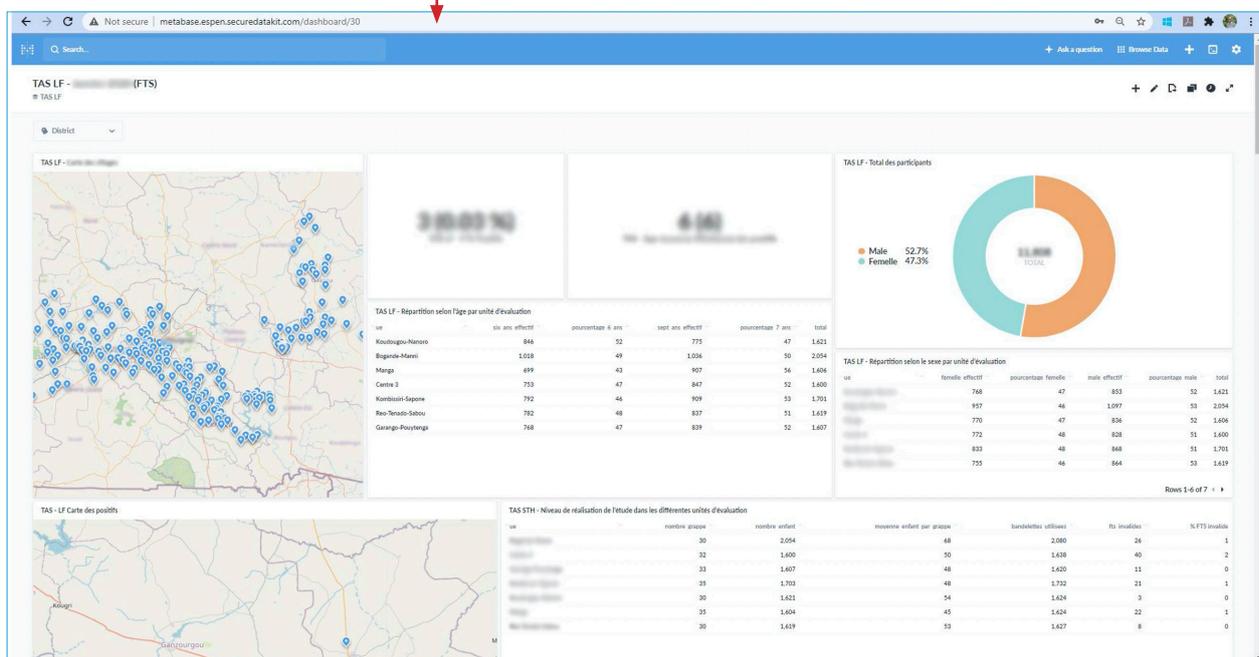
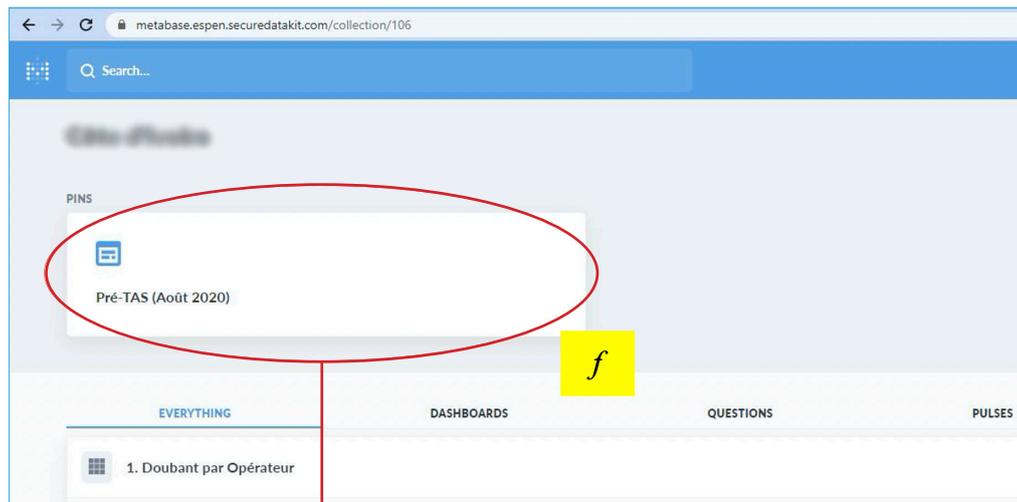


Figure 6 : Example of a PreTAS table

CONTENT/COMPOSITION OF THE DASHBOARD

The Dashboard contains four large blocks, subdivided in turn into visuals corresponding to the indicators chosen for each type of survey. These visuals can therefore be the number of sites visited, participants per site, total number of participants, number/percentage of positive tests, distribution of males and females, and so on. Depending on the type of data, the visuals are displayed in the form of charts, tables, maps, text, and so on.

Below are the main blocks that form a dashboard:

- **Surveillance and errors**

This block contains a set of information on errors in the collected data. This part allows for monitoring of the quality of the data and provides a general idea of the elements to be followed to avoid future errors.

Reporting

The report includes visuals with key indicators from the survey. This block also contains the formatting of the data in EPIRF. To download them, simply click on the title of the table containing the EPIRF data (to the open page containing the «EPIRF» table, click on the bottom right corner of the page to download the EPIRF). For more details on downloading the data, please refer to the page below about downloading.

Raw data

The raw data is represented in the form of tables that include the data as stored in the database.

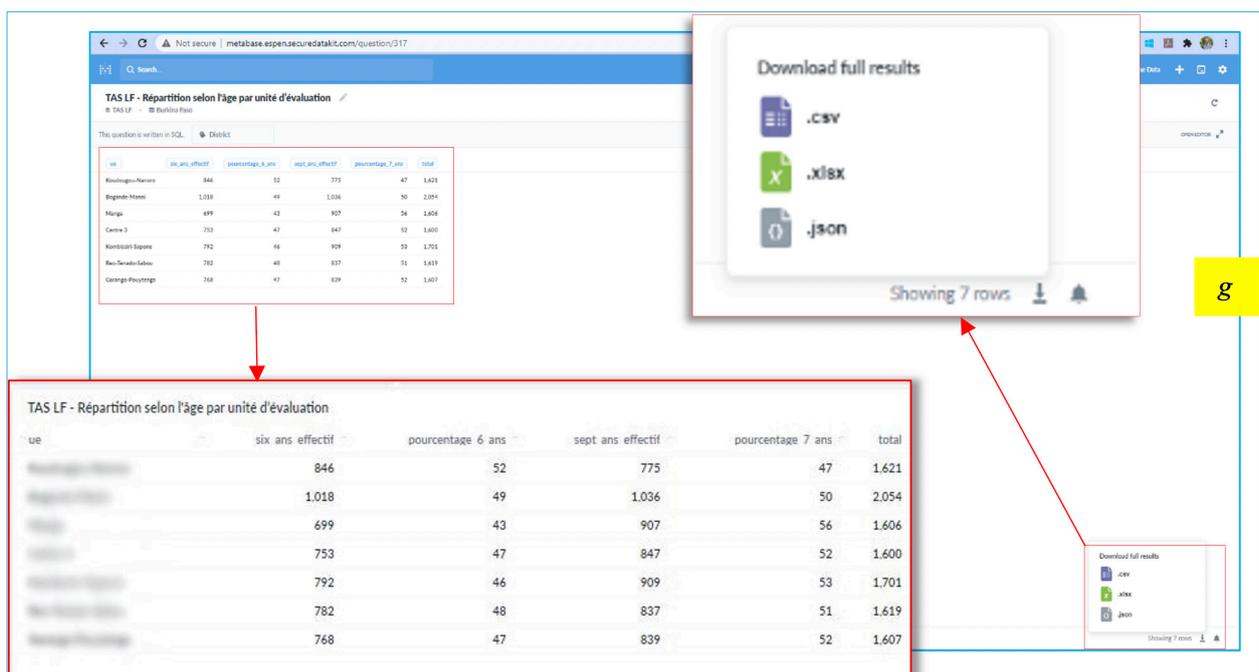
Metadata

This refers to additional information from the survey such as the start date, which people have access to the data, the end date, the partner supporting the activity, the number of sites visited, and so on.

DOWNLOADING DATA FROM METABASE

You can download the data directly from the dashboard. Below are the steps for downloading the data set using a Metabase dashboard.

- Access the dashboard and identify the data set you want to download.
- Click on the title of the indicator figure 7 [g] – containing the data – that you wish to download. It will redirect you to the Metabase visual (the question) containing the data set.
- Wait until Metabase loads all the required data and click on the arrows in the lower right corner of the page. This will drop down the list of available data formats.
- Click on the format you want, usually .csv or .xlsx. Wait for the download to finish and go to the download folder to get the downloaded file.



The screenshot shows a Metabase dashboard with a table titled "TAS LF - Répartition selon l'âge par unité d'évaluation". The table has columns for 'ue', 'six ans effectif', 'pourcentage 6 ans', 'sept ans effectif', 'pourcentage 7 ans', and 'total'. A red box highlights the table. A red arrow points from the table to a larger view of the same table. In the larger view, a red box highlights the 'Download full results' menu, which offers options for .csv, .xlsx, and .json. A yellow box with the letter 'g' is also visible in the bottom right corner of the screenshot.

ue	six ans effectif	pourcentage 6 ans	sept ans effectif	pourcentage 7 ans	total
Koulikou-Namou	846	52	775	47	1.621
Bignabo-Mamou	1.018	49	1.036	50	2.054
Manga	699	43	907	56	1.606
Centre 3	753	47	847	52	1.600
Koulikou-Sapone	792	46	909	53	1.701
Bas-Sarado-Gabou	782	48	837	51	1.619
Gerango-Pouyongo	768	47	839	52	1.607

Figure 7 : Indicator (containing data) for downloading

HELPDESK/ TROUBLESHOOTING

• I have forgotten my password

Click on “I seem to have forgotten my password” on the connection page (figure 8, [h]) of Metabase and follow the instructions. You will receive an email containing instructions on how to reset your password.

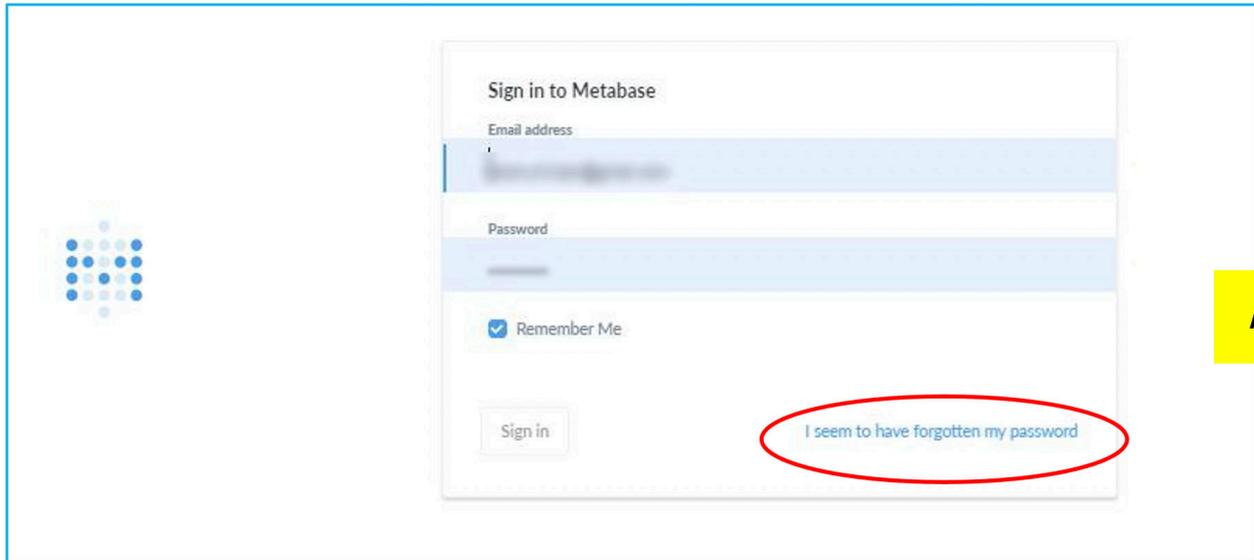


Figure 8: Resetting the password

• I have reset my password but I still cannot get connected

This problem has been encountered by some users of the old version of Metabase. If this happens again, contact the ESPEN Data Manager at espensupport@who.int for help.