Outbreak Tools - User Guide : Linelist Key features

User Guide – April 2024

Summary

Introduction

This document explains how to use an **OutbreakTools linelist**, a type of linelist file developed by Epicentre to collect outbreak data. These files are generated using a data dictionary (the *setup file*) and a designer file (the "maker"). Although the exact columns vary across diseases, all OutbreakTools files have the same general functionalities.

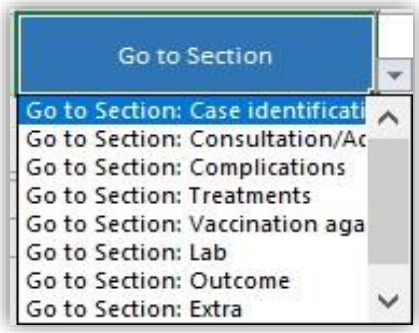
These files are usually designed to accommodate data from one site, but one can create a temporary master linelist from several site to see analyses with pooled data (see the **HOW TO** section of this document).

Structure of the file

At minima, an OutbreakTools linelist will contain these sheets:

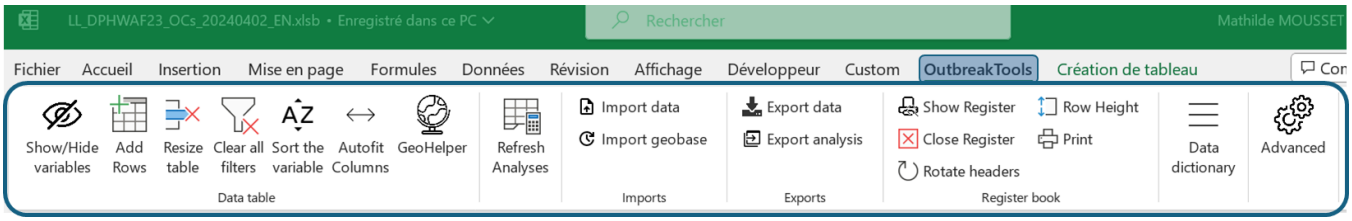
1. A **general information sheet** which contains metadata about the project (often called "Info")
2. At least one **data entry sheet** to enter patient data. This type of sheet will be referred to as "*linelist sheet(s)*" in the rest of this document. In a lot of files, there is one of these sheets, named "Patient data".
3. A combination of **analyses sheets** containing basic exploration of data:
    - Uni and bivariate analyses
    - Temporal analyses (epicurves and their associated tables)
    - Spatial analyses (top X locations of cases)
    - Spatio-temporal analyses (epicurves for chosen locations)
4. A **Custom dropdown** sheet where the user can define categories for some specific variables
5. A **Custom tables** sheet where the user can create a pivot table of the data
6. A **Geo** sheet showing the loaded geobase.

On most of these sheets, a button on the top left help you navigate to sections of the sheet:



The OutbreakTools ribbon

Most of the important features of the linelist can be accessed through the **OutbreakTools section of the ribbon**, at the top of Excel interface. Take a few minutes going through its buttons.



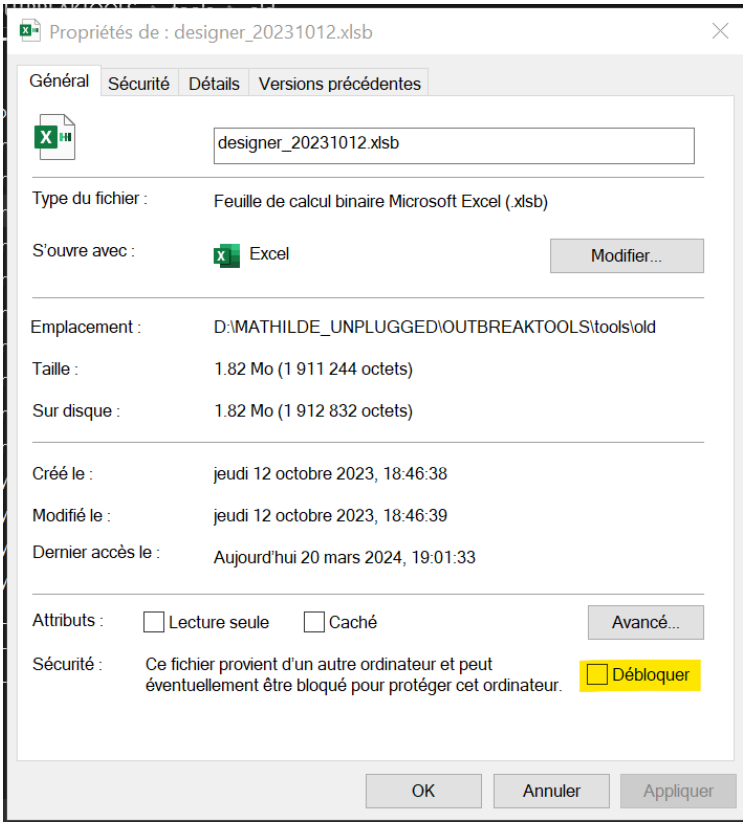
This user guide goes through the button of this ribbon, before presenting a couple of useful “recipes” in the **HOW TO** section of this document.

Typical workflow

Here are the usual steps when using the linelist, from reception to daily use.

Initial preparation upon receiving the file

1. **Save the file locally**. To avoid synchronization problems, it is advised that you do not synchronize it with OneDrive while working on it.
2. **Make sure the file is not protected**. Right click on the file you saved on your computer, and go to the “Properties” popup. If you can see an “Unprotect” (or “Unblock”) checkbox at the bottom right, tick it. If you don’t see such a checkbox, it means the file is unprotected.



3. **Authorize VBA macros** if you are asked to when opening the file

You can then finish preparing the file (if this was not done before at the coordination level):

4. **Fill the general information sheet**. Typically, the first sheet of the linelist, often called *Info*. These metadata are to be entered only once. *They are used to name exports files automatically or to calculate epiweeks, and are thus very important*.
5. **Import the geobase** from this site.

6. **Choose which variables to show in the linelists**. Some variables are “mandatory”, which means they cannot be hidden.
7. **Prepare and print an associated register** and/or **Case Report Form** to enter data on paper (optional)

Data entry (and subsequent checks)

These are the steps that usually happen on a daily basis (or whenever data is entered):

1. **Fill in data in the linelist sheet(s)**. Note that you can add or remove empty lines with a button
2. **Use filters to perform checks on data** (format of dates, logic checks…)
3. **Refresh analysis** (button) and inspect the data using the analyses sheets
4. Don’t forget to **save the file**

Export data and analyses

Every now and then, you might want to export parts of the file (buttons):

- **Data** exports for the MoH or to MSF/Epicentre (so that they can be included on a dashboard for instance).
- **Analyses** to reuse figures or tables in sitreps or slides.
- **Whole content** to *migrate* to a new linelist version, a rarely needed but useful feature.

The data sheet(s) specificities

The data sheet(s) have general characteristics that you may have encounter in other linelists, and a couple of specific ones that you may not.

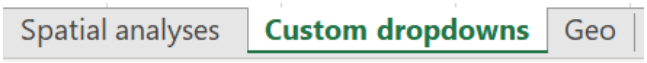
Special column types

In addition to the usual column types (free text, numeric or integer, dates, dropdown menus etc.) there are a couple of specific columns that you need to be aware of.

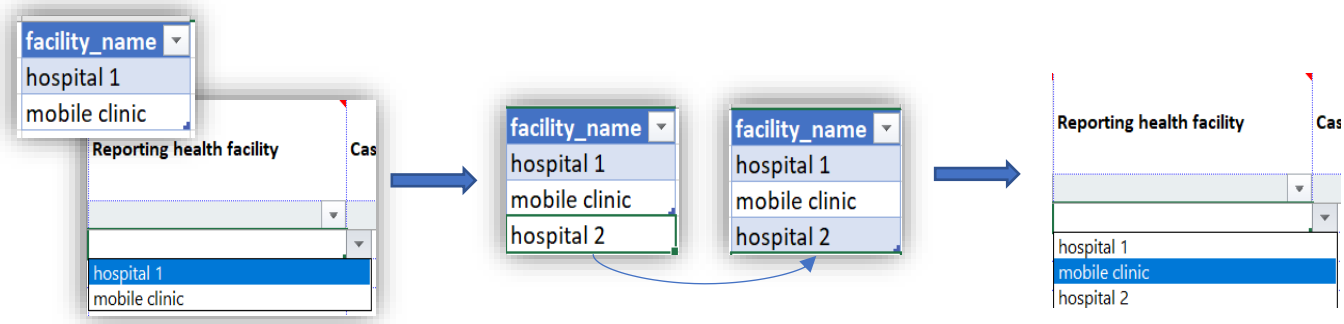
Custom Dropdowns

Custom dropdowns columns are columns for which the **dropdown menu is defined by the user**, or for which the user can add new values to the default ones. These columns are useful for variables that rely on local, field specific information (such as the name of health facilities that the patient could be transferred to).

These variables have a sub-label "custom dropdown". Clicking on the column label brings you to the **Custom dropdown sheet** where you can define the content of the dropdown menu.



Note: the custom dropdown may be empty at first, or populated with “default” values, in which case the user can add new values to the list.



Enter your new option in the cell just below the last option and click enter to ensure that this new option appears in

⚠ If certain options are known before the LL is made available in the field, then it is possible to generate analyses on these options only. Other options subsequently added to the LL directly via the "custom dropdown" tab will not appear in the analyses.

However, it is possible to create a customized table by hand. See the **CUSTOM TABLES** section.

You can manually navigate to the “Custom dropdown” sheet to fill in values in the dedicated table. Alternatively, you can click on the label of a custom dropdown column to move directly to the corresponding list of categories. Clicking on the head of the table will then bring you back to the corresponding column in the linelist sheet.

Geographic data and health facilities

Columns to enter geographic information have a special status. There are two types of such columns.

Geographic location

These columns are for entering information about places, based on a geobase. It could be about the current residence place, or the origin of patient. These columns go by four, because the geobase can, by design, contain up to four administrative levels to describe a place (with a hierarchy link). These columns contain *cascading dropdown menus*, and can be filled using the **GeoApp** (see the **GEOAPP** section about the OutbreakTools ribbon).

There are associated hidden and automatically calculated columns which contain pcodes or concatenated version of the geographic information.

Health facility

If the geobase contain health facility information, there can be special health facility columns, which are also filled using the GeoApp, and which link the facility to its geographic location.

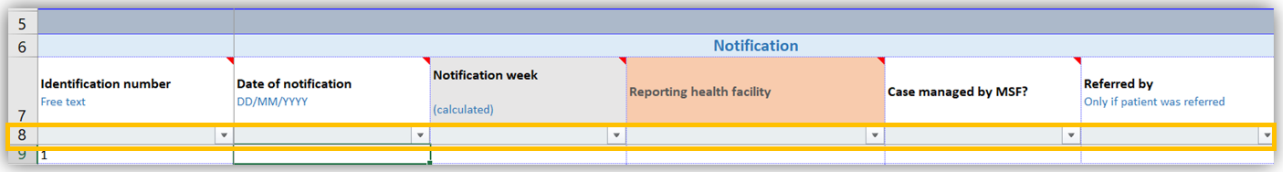
Extra columns

You can add columns where the user can enter what they want and where they can change the label. These columns are used to accommodate for specific needs of a field, or perhaps a complicate migration. The main difference with normal column is that the label can be changed (if it is, the new label will be propagated in case of data migration to a new linelist).

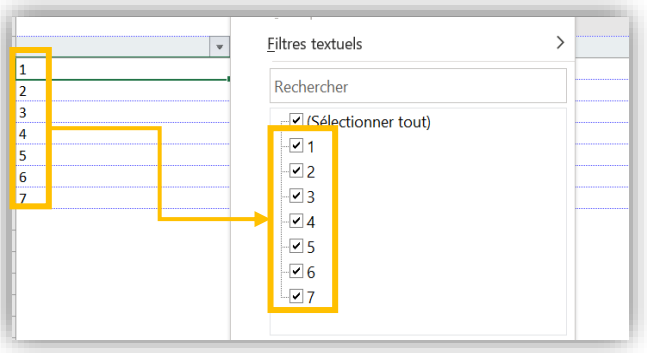
Depending how the column was created, it could be completely free text (to enter comments, or integers), or contain a custom dropdown menu (see above) so that the user can define standardized categories to fill the column.

Filters rows

You can use filters to show only some rows based on one or several column criteria. These filters can be seen in the 8th line (note, this line also contains the variable names, which you cannot modify).



The filters update as you enter new data.



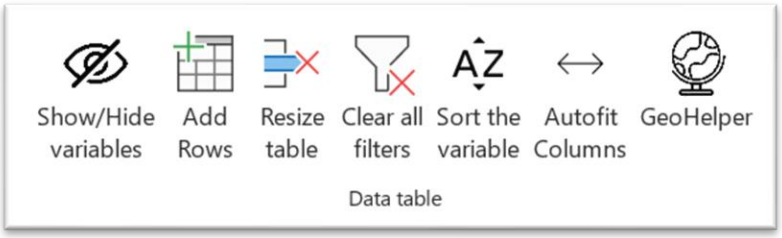
You can use the usual Excell filter functionalities: select lines from the filter windows, but also use operators on numeric columns (>, < or more complex conditions in the “textual filter -> personalized filter” submenu), but also filter by color.

The “sorting” functionality form the filter menu will not work as expected though. To sort the linelist by a column, use the “Sort the variable” button from the OutbreakTools ribbon (see section below).

Presentation of the ribbon buttons

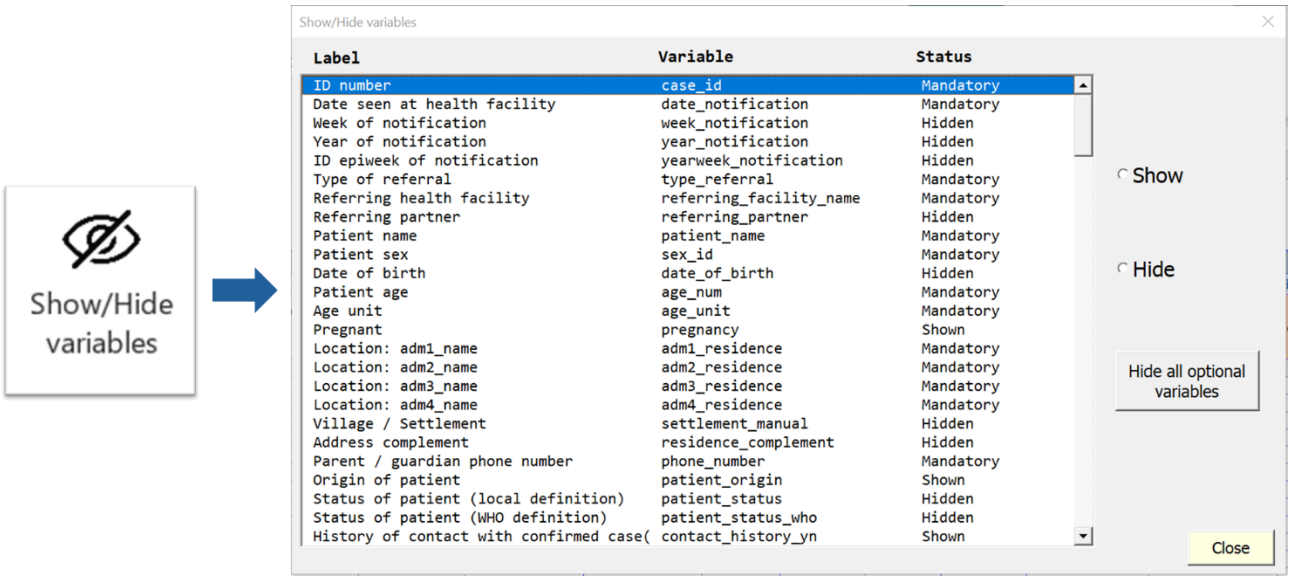
Data table buttons: enter data

All the features in this section only apply to "linelist” type of sheets. You will get an error message if you try to use these functionalities from an inappropriate sheet.



Show/Hide variables: customize variables visibility in the linelist

Clicking on the "Show/hide variables" button opens a window listing all the variables in this linelist sheet.



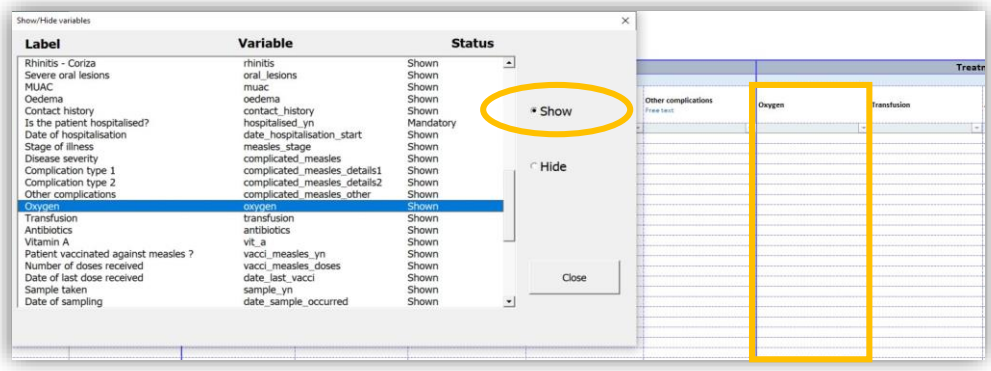
There are three possible visibility status that variable can have:

- “Mandatory" variables cannot be hidden.

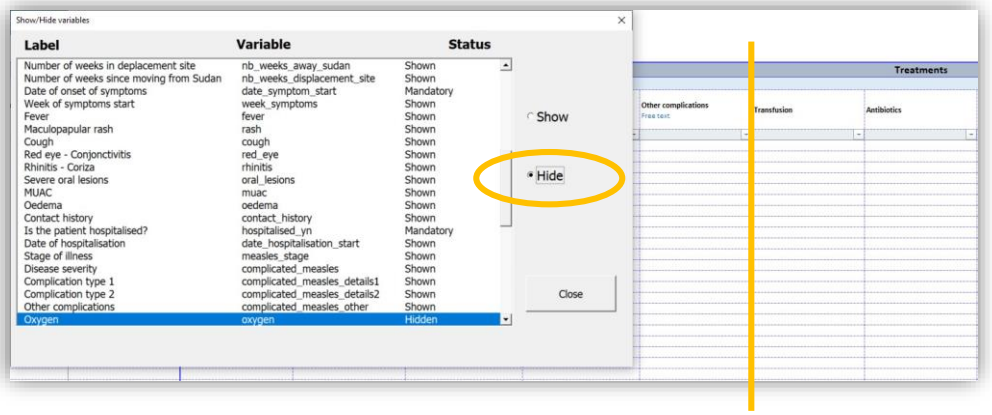
- "Shown" variables are currently visible but can be hidden by clicking "Hide",

- “Hide” variables are currently hidden but can be made visible by clicking “Show”

To display or hide a variable, simply select the desired status.



"Oxygen" variable is shown in the linelist.



"Oxygen" variable is now hidden in the linelist.

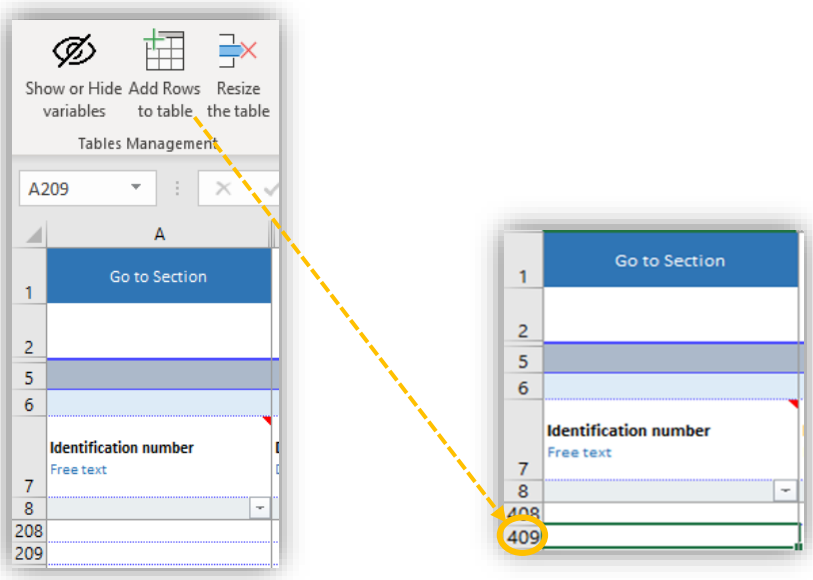
If the linelist has a lot of optional variables you might want to hide them all by default and then selectively un-hide a couple of them. To do that, first click on the “Hide all optional variables”, then select the variables to unhide. The button will change to “Show all optional variables”, to allow the reverse action.

To close the window, click "Close".

⚠ Mandatory variables generally means that epidemiologists deemed that these variables should always been seen. A few of them can be ignored if you do not wish to use them, but **most of them are fundamental**, and used in the analyses (date of admission, age, sex etc.). Ignore them at your own risks.

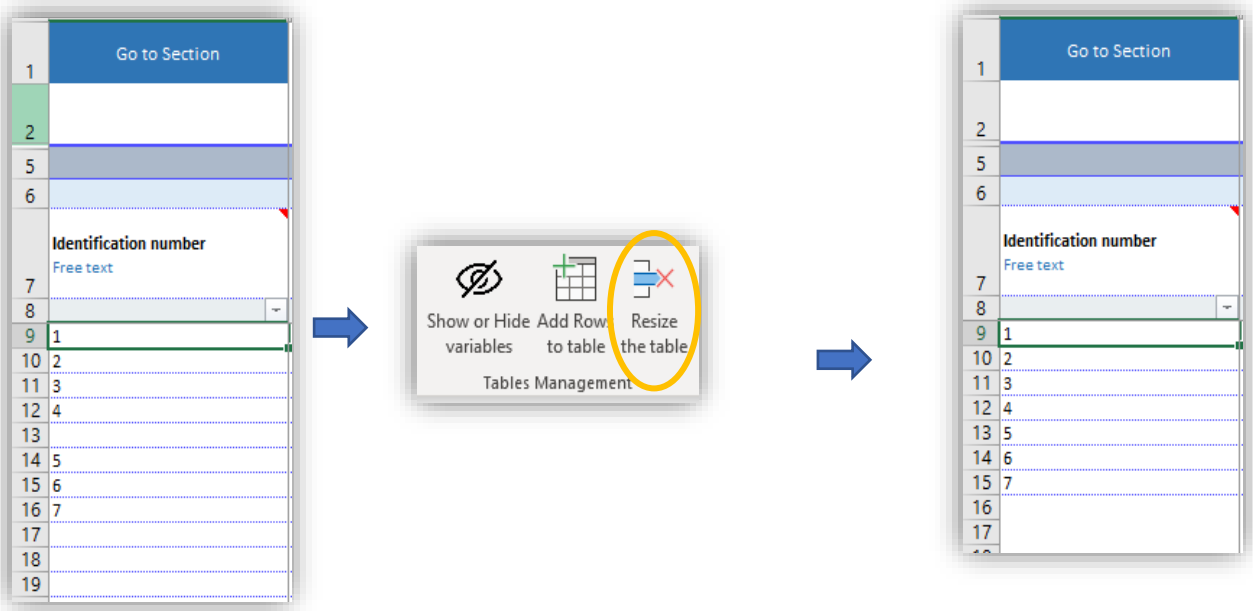
Add rows to the table

By default, the linelist has 200 empty lines. But you can add more when these are filled. Click on the "Add Rows" button to add 200 new empty rows.



Resize the table (remove empty rows)

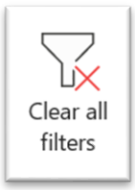
You can resize the table to remove empty rows at the bottom of the table on the linelist sheet. Click on the “Resize table" button to remove any empty row.



You can modify the width of columns in the linelist table to adjust to content.

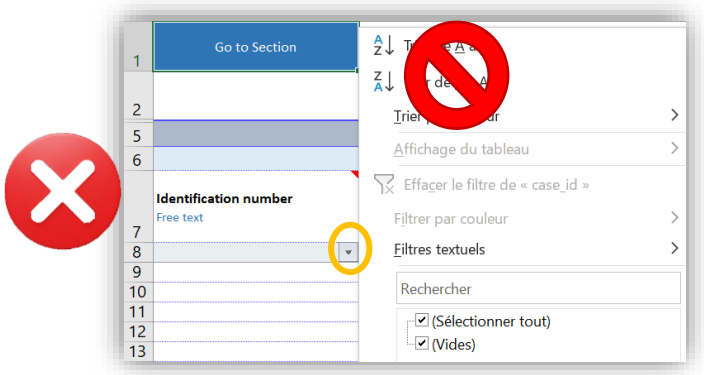
Clear all filters

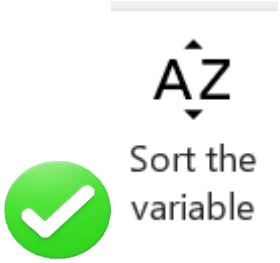
To remove all the filters at once, click on the « Clear all filters » button in the **Data table section in the ribbon**. This is useful if you applied filters to several columns scattered left and right of the table and want to reverse to the full view without missing a sneaky filter somewhere.



Sort table

If you need to visualize your data by sorting on specific variables (date of notification for example), you need to use the sorting function.



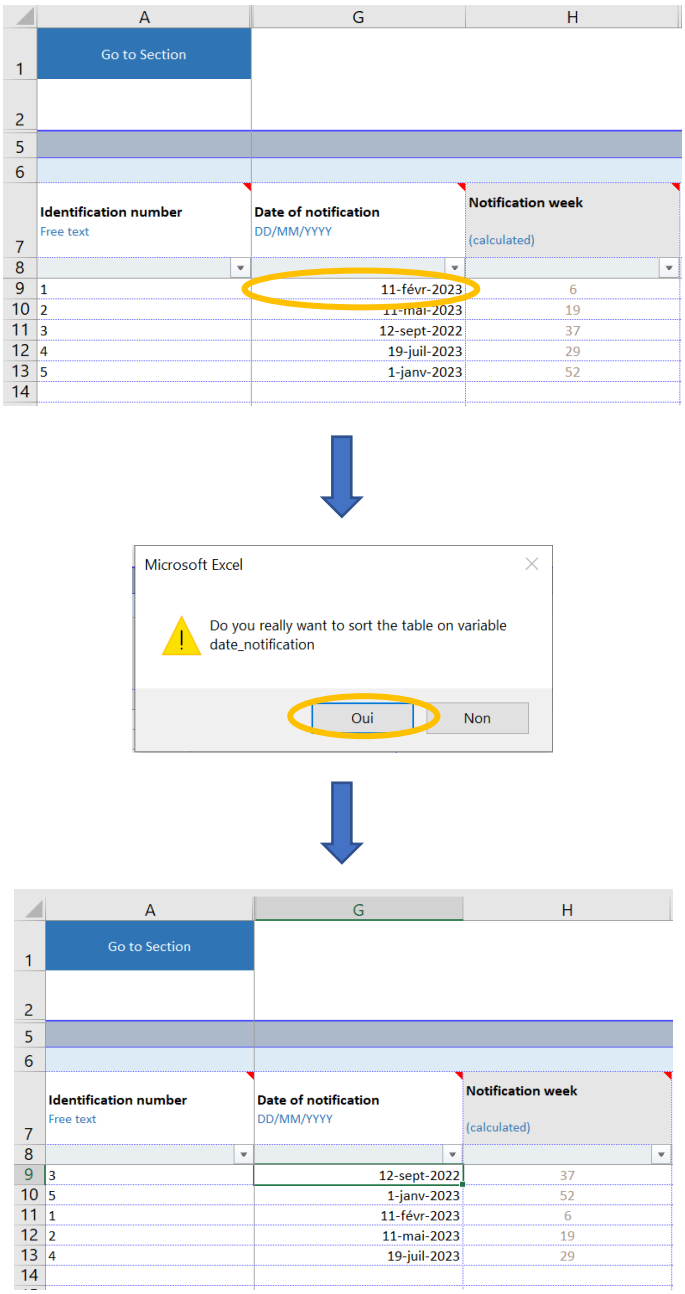


Place the cursor in a cell of the column you want to sort (from line 9).

G9 in the example, to filter on the date of notification.

The first time you click on the button, you have a message to confirm the action, once you click yes, you can't undo it.

When you click yes, the first time it sorts by ascending order, if you click again, it will sort by descending order.



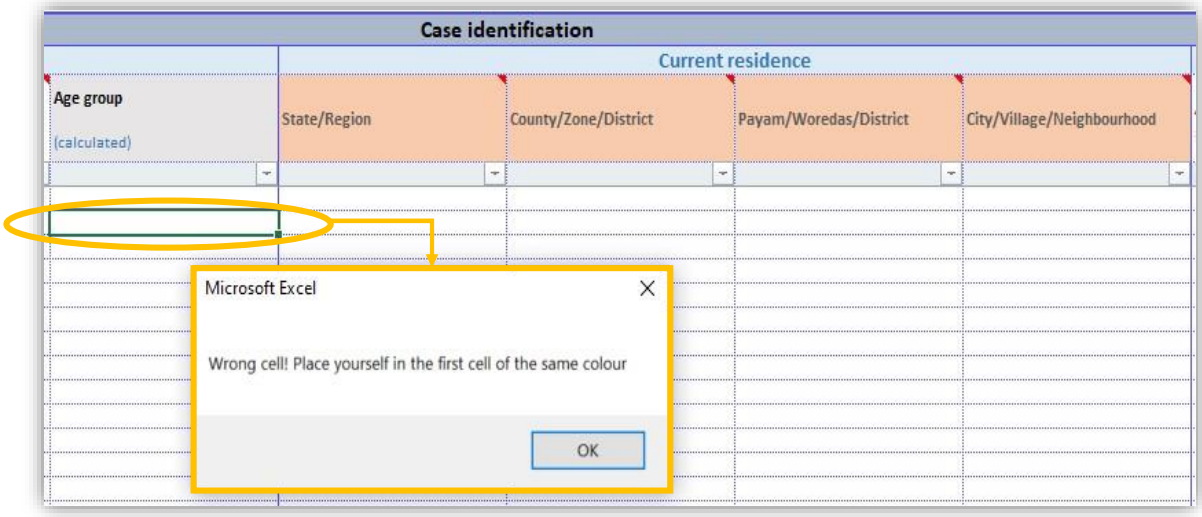
Autofit columns

Use this button to improve column width so that the columns take less space. The fit takes into account the label, the length of categories of the variable (if any) and the name of the variable (hidden). You further tweak column width manually.

GeoHelper: enter geo data (more) easily

The Geo Helper is a popup window that helps you entering geographic data. You will mostly use it to enter geographic data on the linelist sheets, but it is also useful on the Spatio-Temporal analysis sheet (see the section on these analyses).

To use the Geo Helper in linelist sheets, you must be positioned in a column whose header is in orange, (otherwise you will get an error message).

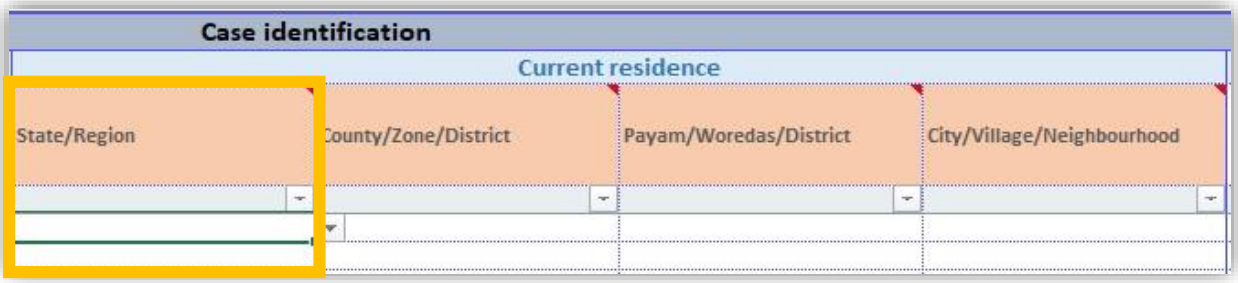


The Geo Helper allows you to enter location information such as a health center or the origin of the patient.

Locations are defined by four columns (by design). Depending on the country, these four columns will correspond to different admin levels.

To use the GeoHelper, position yourself in the column corresponding to the first level (admin1), here the "State/Region column.

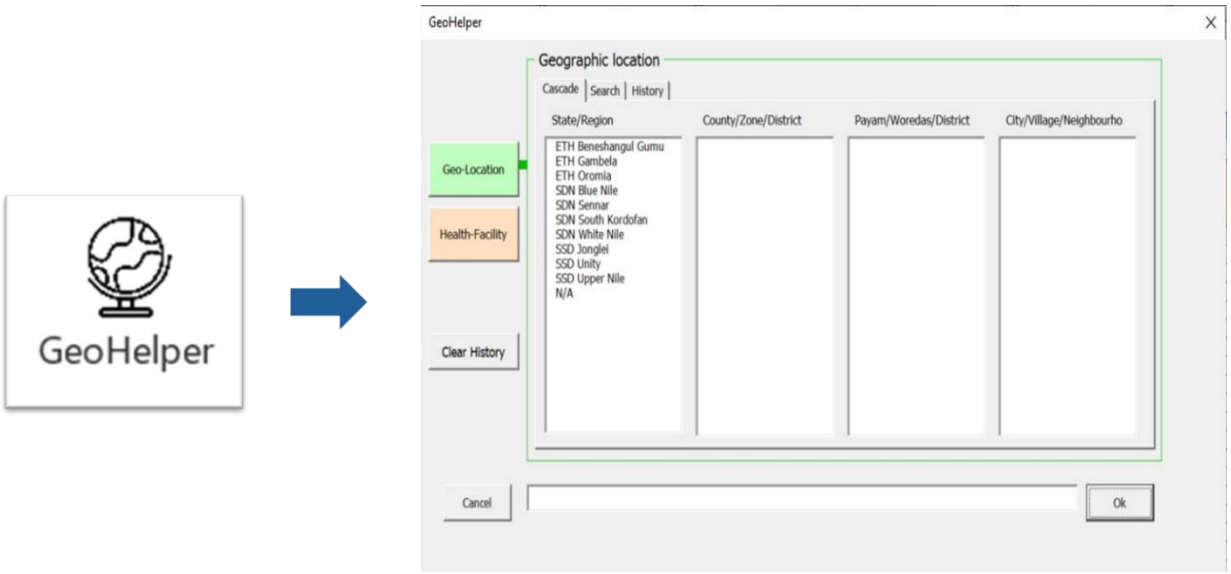
In this example, the geobase contains data from 3 countries, so the names of each level are a combination of the names used in each country, and level 1 start with the country code (ISO 3) to avoid any confusion.



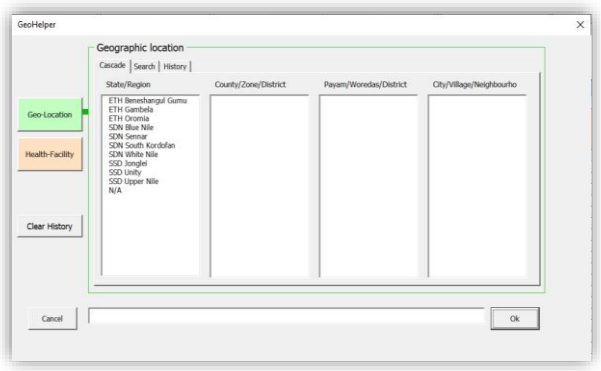
When you are on the right cell, by clicking on the "Enter geographic information with GeoHelper" button, a window opens where you can select the geographic information needed.

You can also use the keyboard shortcut: **Ctrl + Shift + G**.

You can select several cell from the admin 1 column and hit the GeoHelper button/use the keyboard shortcut to fill the same location for several rows in one go.

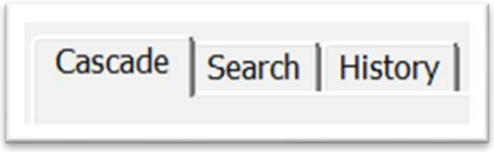


Depending on whether you enter health structure information or other geographical data (e.g., patient origin), you will be automatically positioned either in "*Geographic Location*" (in green) or in "*Health-Facility*" (in orange).



It is normal for the lists to differ between "*Geographic Location*" and "*Health-Facility*": a state for which we do not have health-facility information will not appear in the list.

Whether you are on "*Geographic Location*" or "*Health-Facility*", there are three ways to use the app to fill in the desired cell.



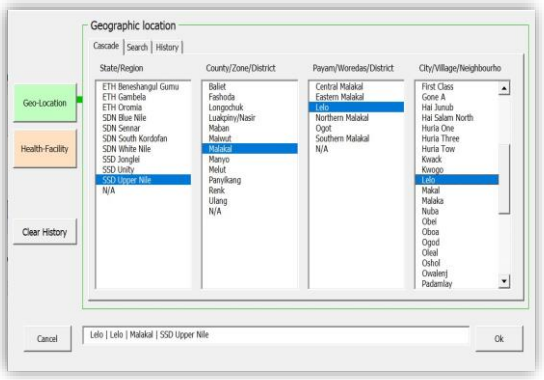
Click on the tab, to use the corresponding method.

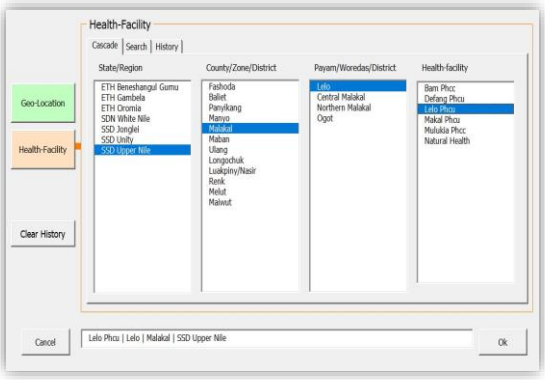
Cascade

Allows you to select the admin levels thanks to cascading menus, by selecting one admin level after the other, starting from the larger one.

In this example:

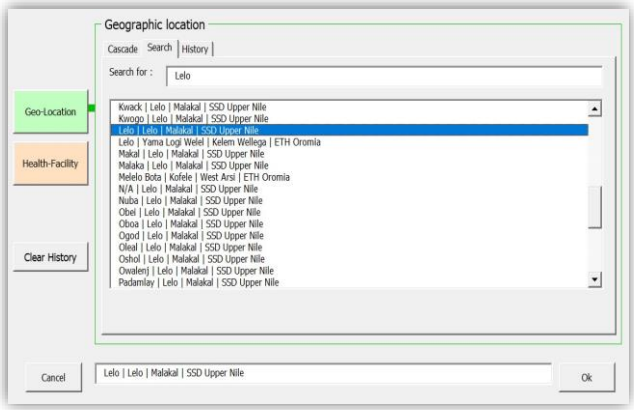
- admin 1 = State/Region
- admin 2 = County/Zone/District
- admin 3 = Payam/Woredas/District
- admin 4 = Health-facility or the city/Village/Neighborhood

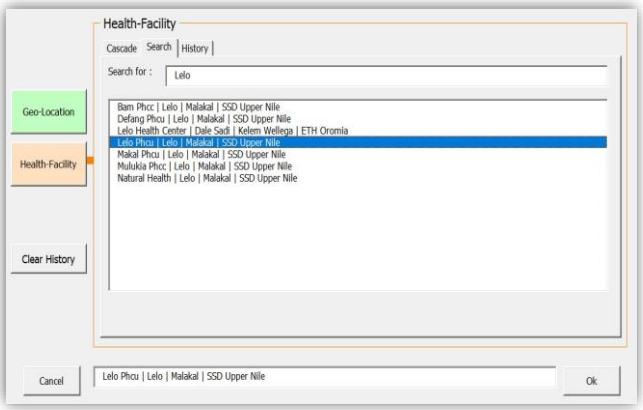




Search

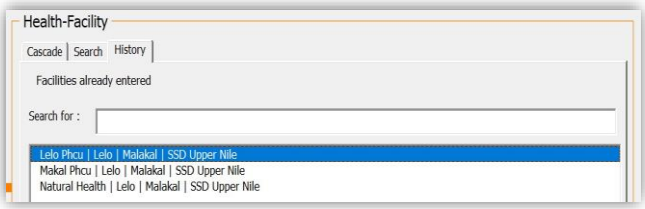
Allows you to search by typing a character string of at least 3 letters

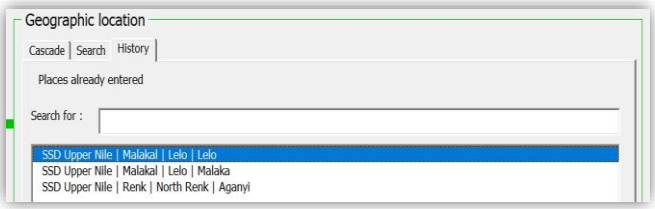




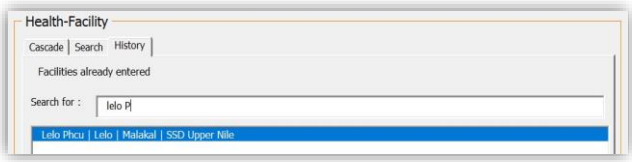
History

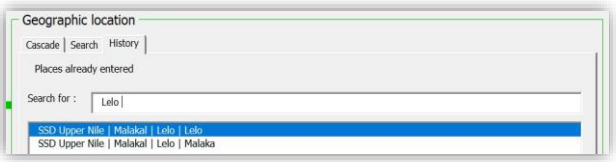
Allows you to quickly find a previous entry entered through the GeoHelper (does not work for data entered using the regular cascading dropdowns).





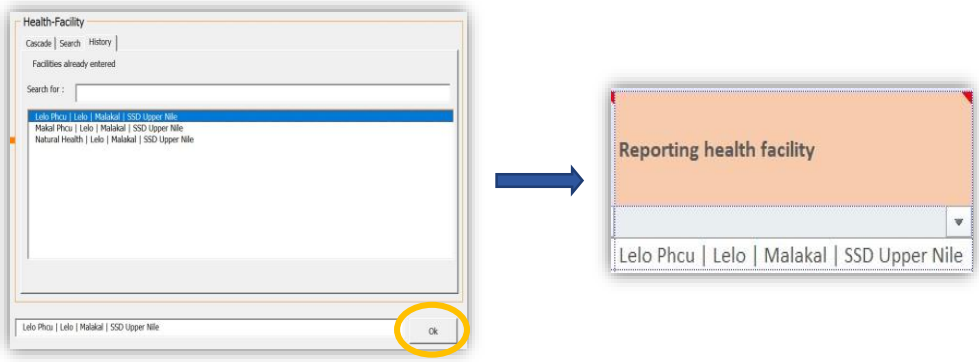
It is also possible to do a quick search by typing the first letters of the place.



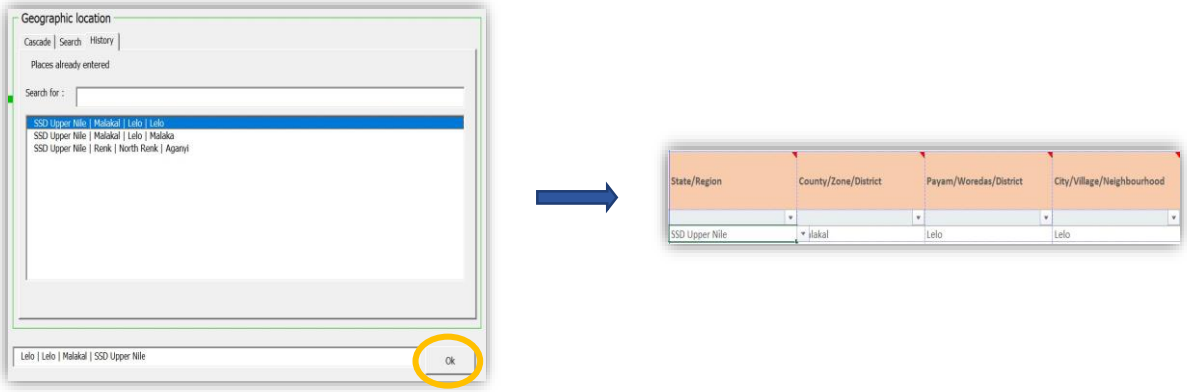


Once the location has been found, it is selected and highlighted in blue and appears in the bar at the bottom of the window, you can click on “OK”.

For Health-facilities, the 4 levels are displayed in the same cell, with separation bars, and the name of the facility on the left.



For "Geographic Location" data, each level is displayed in a different column.

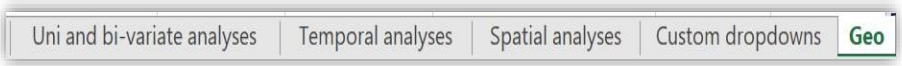


Advanced features

The geographic data (geobase) is provided by the GIS Unit and other sources but is not always complete or up to date.

If you notice that a place is misspelled in the GeoHelper, you can correct it directly in the tables of the Geo tab.

Be careful to correct all the tables where the name is present!



State/Region
ETH Beneshangul Gumu
ETH Gambela
ETH Oromia
SDN Blue Nile
SDN Sennar

State/Region	County/Zone/District
ETH Beneshangul Gumu	Asosa
ETH Beneshangul Gumu	Kamashi
ETH Beneshangul Gumu	Kemashi
ETH Beneshangul Gumu	Mao Komo Special
ETH Beneshangul Gumu	Metekel
ETH Beneshangul Gumu	N/A

State/Region	County/Zone/District	Payam/Woredas/District
ETH Beneshangul Gumu	Asosa	Assosa
ETH Beneshangul Gumu	Asosa	Bambasi
ETH Beneshangul Gumu	Asosa	Bilidigilu
ETH Beneshangul Gumu	Asosa	Homosha
ETH Beneshangul Gumu	Asosa	Kurmuk

State/Region	County/Zone/District	Payam/Woredas/District	City/Village/Neigh
ETH Beneshangul Gumu	Asosa	Assosa	Abenyende
ETH Beneshangul Gumu	Asosa	Assosa	Abu Musa
ETH Beneshangul Gumu	Asosa	Assosa	Afaze Shet'
ETH Beneshangul Gumu	Asosa	Assosa	Agani
ETH Beneshangul Gumu	Asosa	Assosa	Ahmed

Health-facility	Payam/Woredas/District	County/Zone/District	State/Region
Aberamo Health Center	Assosa	Asosa	ETH Beneshangul Gumu
Anger Meti Health Center	Bio Jiganifado	Kamashi	ETH Beneshangul Gumu

Example: if you change the spelling of a State, you must change it in the States table and all the following ones (County, Payam, City/Village/Neighborhood, Health-facility)

If you find that a place is not available in the GeoHelper:

- You can add rows with the new location (and its upper and lower levels) directly in the tables on the Geo tab.
- Also remember to add population information.

When you add a new geographical data, it must be ensured that all lower levels are also created. If it is a new Payam (adm3) for example, but you do not know the Towns/Villages/Neighborhoods (adm4), you must still fill in this table by putting N/A in the Towns/Villages/ Neighborhoods column.

- Without this, the new data will not appear in the GeoHelper

Ex: I want to add a Payam in Renk (SSD) (adm3).

Payam: "New-Payam"; County: "Renk"; State: "SSD Upper Nile"

1. I make sure that the State (adm1) and the County (adm2) in which the Payam is located exist in the tables.

   The state and county already exist in the tables.

State/Region	adm1_pop
SSD Upper Nile	1522252

State/Region	County/Zone/District	adm2_pop
SSD Upper Nile	Renk	193787

2. I add the Payam.

   I position myself at the end of the Payam table and I enter my new line, making sure to spell each level correctly. If possible, I fill in the population.

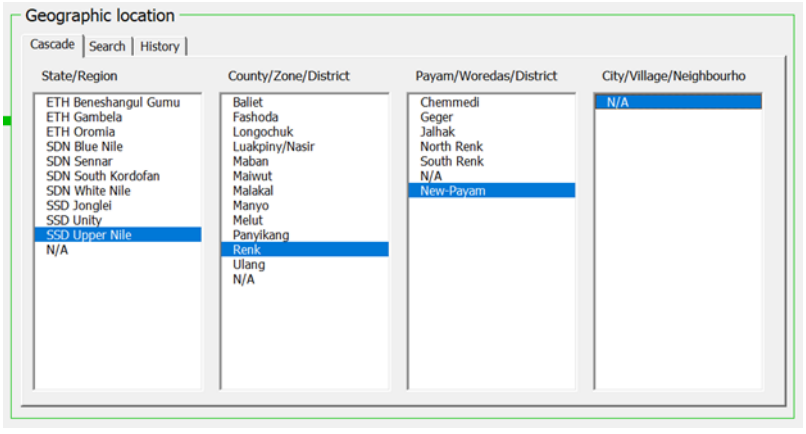
State/Region	County/Zone/District	Payam/Woredas/District	adm3_pop
SSD Upper Nile	Ulang	Yomding	
SSD Upper Nile	Ulang	N/A	
SSD Upper Nile	Renk	New-Payam	

3. If I do not have a City/Village/Neighbourhood (adm4) to fill in for this Payam, I put N/A.

   I create a line with N/A in the town/village/district table.

State/Region	County/Zone/District	Payam/Woredas/District	City/Village/Neighbourhood
SSD Upper Nile	Ulang	Yomding	N/A
SSD Upper Nile	Renk	New-Payam	N/A

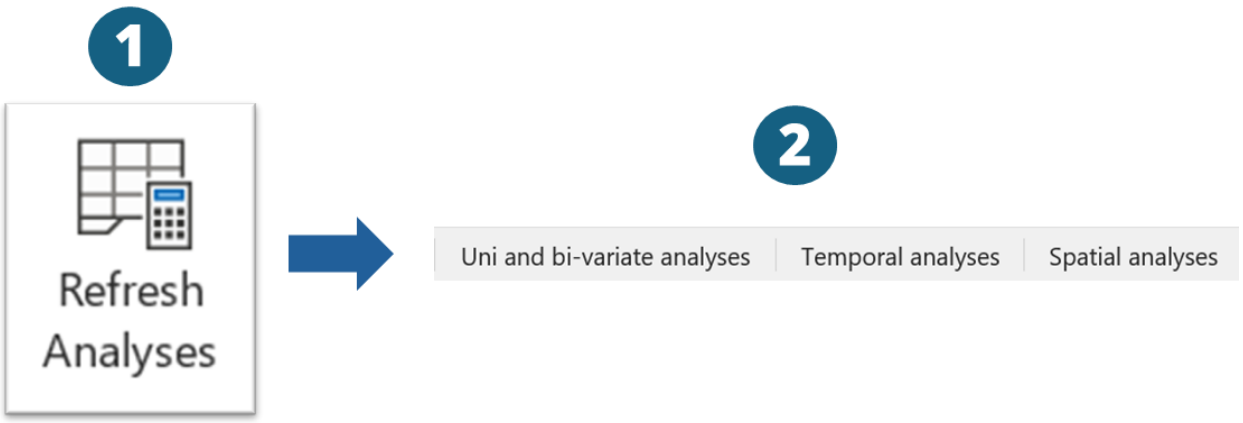
4. The GeoHelper is up to date.



⚠ Note that this newly added level has no corresponding shape in the geographic data provided by the GIS or Epicentre. Patients from this place can therefore not be mapped on maps using the original geobase. Similarly, if you modify the writing of an existing admin level, this level will likely not be matched back to its shape and will not be mapped.

Analyses: investigate your data

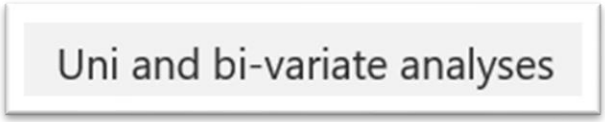
The *Analyses* section of the ribbon allows to automatically recalculate an analyses sheet.



You should use it whenever you entered new data to update the analyses, or when you applied filters to existing data and want to see the analyses on this subset of data. In this case you should apply the filters you want directly in the linelist and then click the refresh button.

Depending on which analyses were pre-defined in the data dictionary, a OutbreakTools linelist file may contain all or a combination of the following sheets.

Univariate and bi-variate analyses



In this sheet, you can see a list of analyses that have been pre-defined.

Global summary table

In this table you have 3 columns, one with the indicators calculated, one with the result for all data and one with the result on filtered data. If no filter were applied, the results in All data and Filtered data columns are the same.

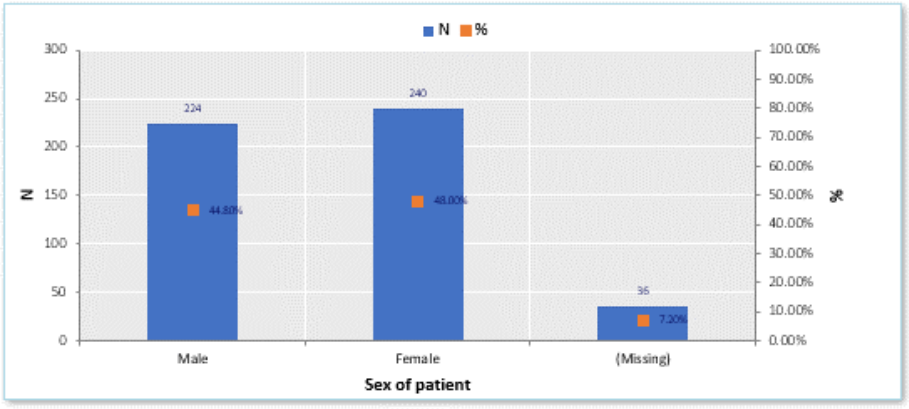
	All data	Filtered data
Notification period	20/07/2022 - 20/07/2023	20/07/2022 - 20/07/2023
Number of patients seen	500	500
Number of patients who died	71	71
Case fatality rate (CFR)	47.97%	47.97%
Median age of deceased patients	3.1	3.1

Univariate tables and bar charts

These tables show counts of cases and percentages for each category of one variable. They are often paired with a graph showing the same data.

Number of cases by sex

Sex of patient	N	%
Male	224	44.80%
Female	240	48.00%
(Missing)	36	7.20%
Total	500	100.00%

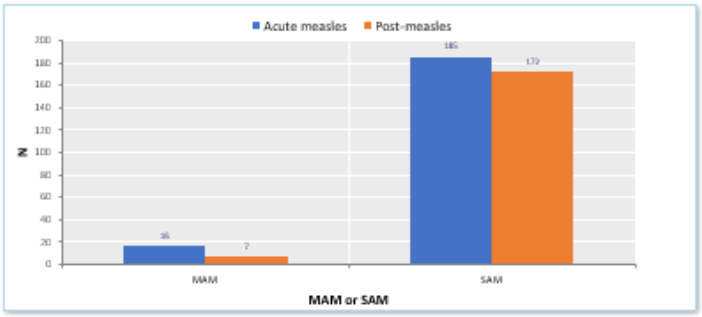


Bi-variate tables and bar charts

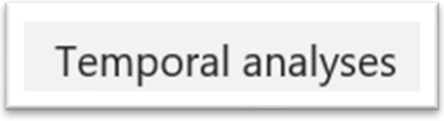
These two-way tables provide counts of cases based on two variables.

Measles stage according to malnutrition

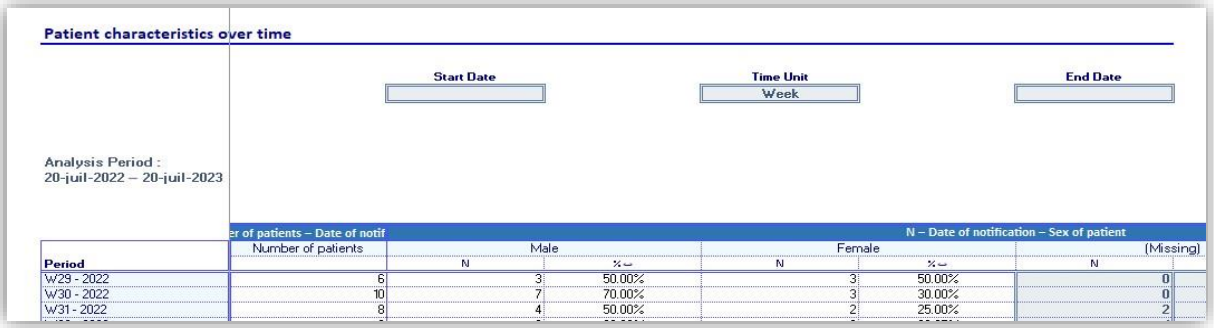
	Stage of illness					
	Acute measles		Post-measles		Total	
MAM or SAM	N	%	N	%	N	%
MAM	16	7.96%	7	3.91%	23	6.05%
SAM	185	92.04%	172	96.09%	357	93.95%
Total	201	100.00%	179	100.00%	380	100.00%



Temporal analyses (tables and epicurves)



This sheet contains one or several tables showing indicators across time, and the corresponding epicurves.

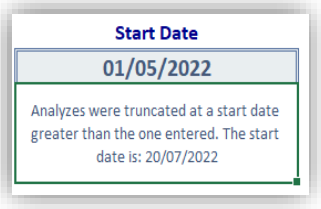


There are different options to show the temporal analyses:

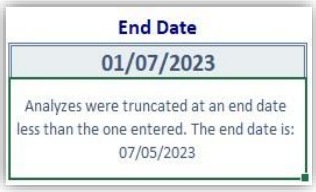
You can select the start date and end date.

You have the information of Analysis Period, meaning the exact dates for which you have data.

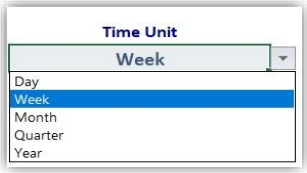
If you pick a start date prior to analyses period you will have a message.



Because the table can have up to 52 rows max, depending on the Time Unit you pick, if you define an end date, you may have your analysis period truncated, in this case you will have this message:



You can use the dropdown menu to select the time unit you prefer. By default it is week:

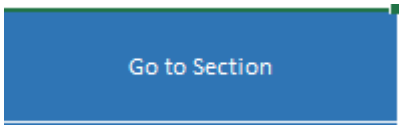


 You can modify the appearance of the epicurves (colour used, font size etc.)

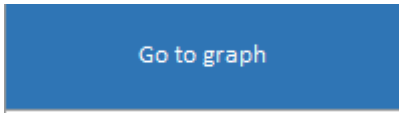
Navigate within the sheet with the "Go to" buttons

In the temporal analyses' sheets, there are three buttons working the same way:

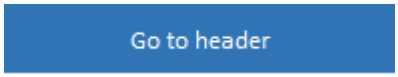
"**Go to Section**", to navigate from one table with temporal analyses to another (pre-defined)



"**Go to graph**", to go directly to the graph you want to see without scrolling down through the tables and the other graphs.

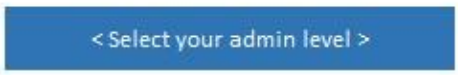


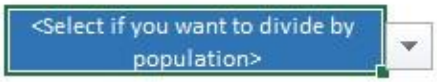
"**Go to header**", one button for each table, to navigate inside the table, and easily go from one part of the table to another.



Spatial analyses

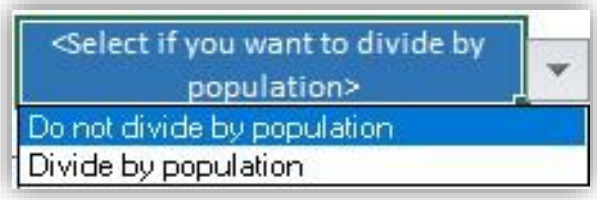
For spatial analyses, there are two options you can define:



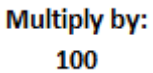


You can select the admin level you want to see by using the dropdown menu.

You can select if you want to see the number of patients or the attack rate by choosing to divide by the population and the table and graph will automatically rearrange:

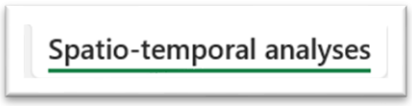


When you choose to divide by population, you can then choose the multiple. The default is 100.



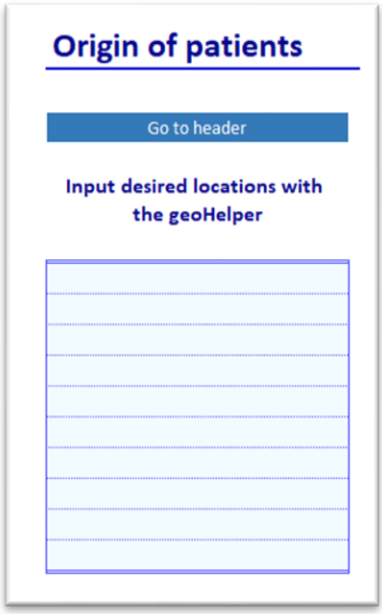
⚠ You need to have population data for the analysed admin levers of this option will yield formula errors.

Spatio-temporal analyses

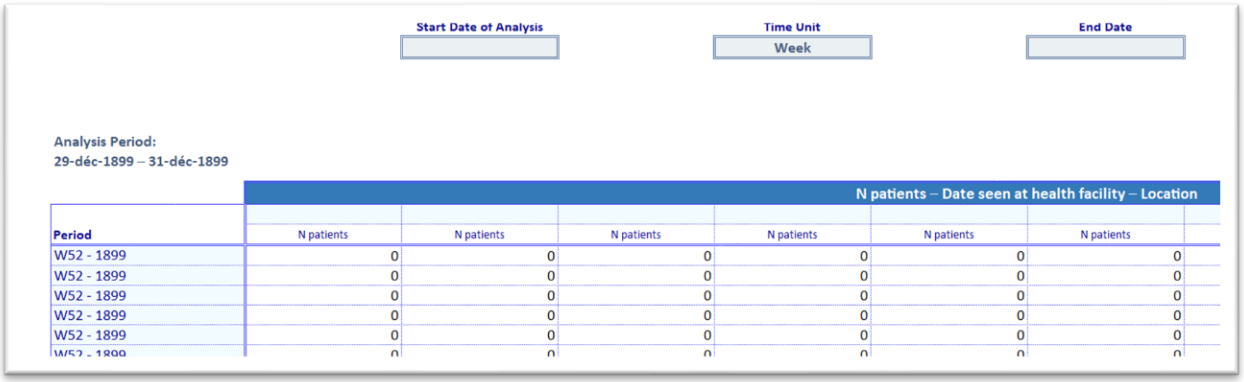


This sheet allows you to track a few localities through time. There is at least one section, usually for the number of cases, but it is also common to have another section for the number of deaths.

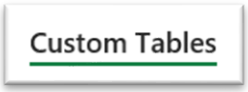
For each section, you need to enter the localities you want to follow in the table below. To do that, click on one of the blue cells and open the GeoHelper (from the ribbon, or hitting the CTRL + G shortcut) to select a location. You can track as many locations as there are blue cells (10 in this example).



Below that table is a table very similar to the *Temporal analysis* one, except that each column tracks the number of cases in each of the selected localities.



Custom tables



An additional analyses sheet is available to create pivot tables. In this sheet, there is one pivot table per existing linelist sheet in the workbook. It works as regular pivot table, except the source is pre-defined.

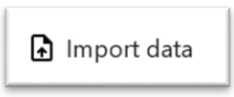
You can use the menu “Data dictionary” button in the ribbon to check the labels of the variables.

Once you have defined your pivot table, you can click on refresh from the Pivot table menu in the ribbon , like for any regular pivot table:

Import data and geobases

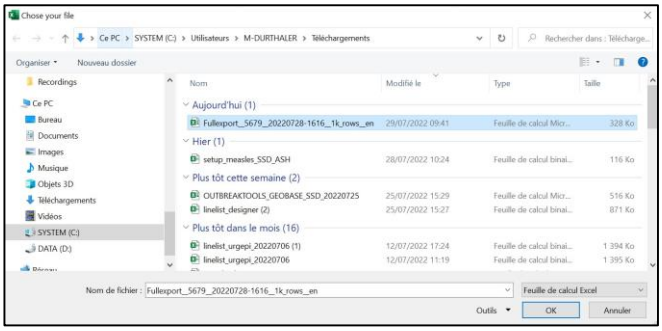
There are several features to import data in the linelist

Import Data

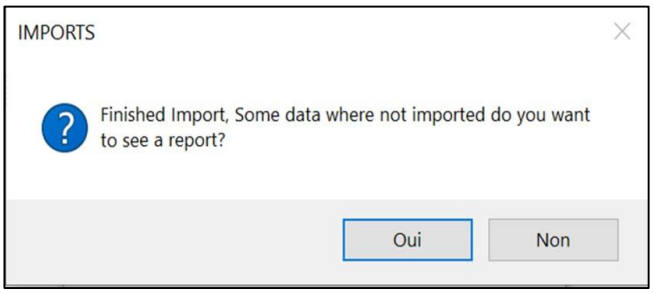


The « Import Data » button allows you to import data in the linelist. This data must be in a special format, and was typically produced by exporting data from another OutbreakTools linelist for the same disease (e.g. see Advanced options > Export for migration).

First a window opens to select the file to import. Select and click on “OK”.



Once finished, you have a message to open a report if some data/sheets were not imported, otherwise a message to ask you to close the window.

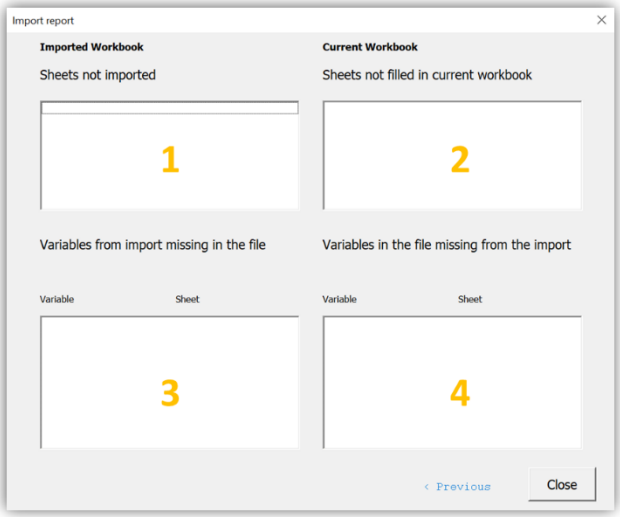


The same button is used whether the data is *partial* (generated by the regular export button, anonymized or not, with metadata or not), or *extensive* (generated through the "Export for migration button", from the *Advanced* section of the ribbon).

Import report

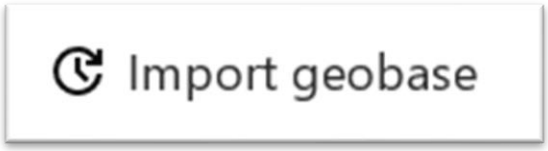
The report is made of 4 parts, in order to list sheets and variables as per below:

1. Sheets not imported: lists sheets which don't exist in the **current** linelist, or the name or spelling is different.
2. Sheets not filled in current workbook: lists sheets which didn't exist in the **previous** linelist or were named or spelled differently.
3. Variables from import missing in the file: lists variables that were present in the **previous** linelist, but not in the **current** one (the name of the sheet corresponds though).
4. Variables in the file missing from the import : lists variables that are present in the **current** linelist, but were not in the **previous** one (the name of the sheet corresponds though).



You can display the last import report again from the *Advanced* section of the ribbon.

Import geobase



« Import geobase » allows you to import a new geobase, either an updated version for the same country, either for a new country, either the geobase from the previous linelist (see the “Export for migration” button from the from the *Advanced* section of the ribbon).

See the **HOW TO** section of this document to know where to find a geobase.

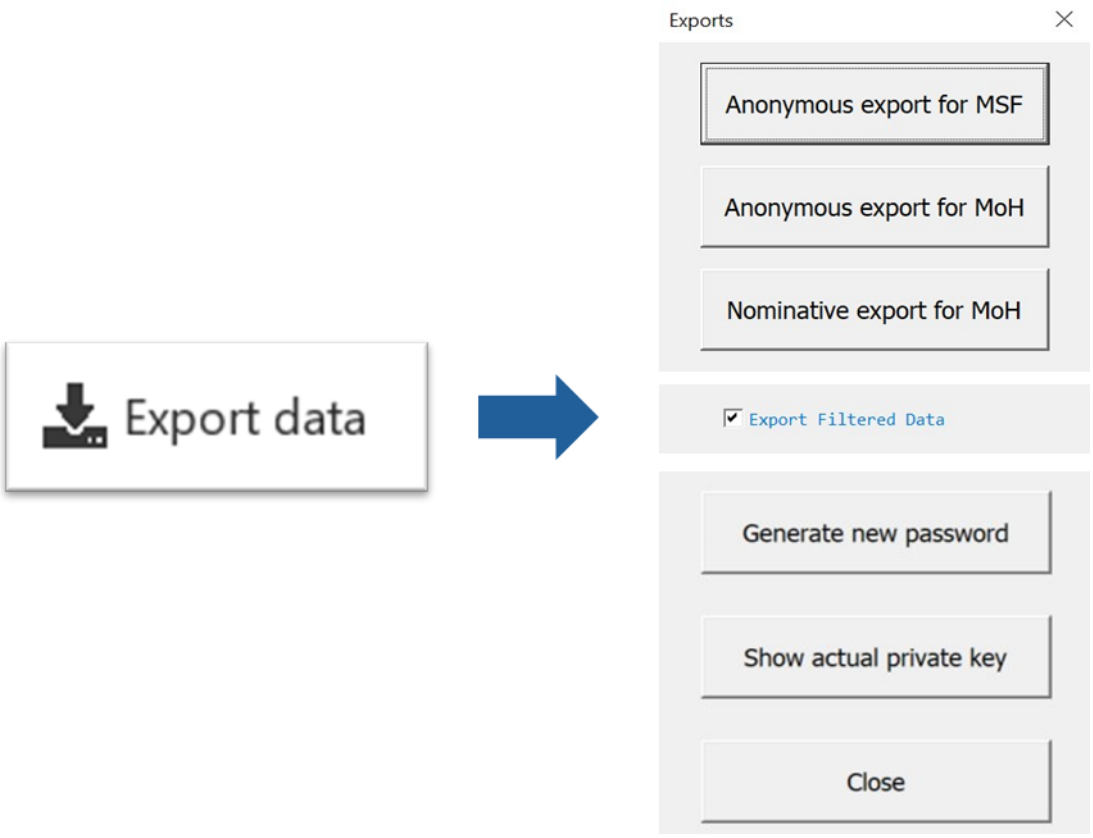
Exports data or analyses

The regular exports buttons are available in the *Export* section of the ribbon, and the export for migration is available in the *Advanced* part of the ribbon.

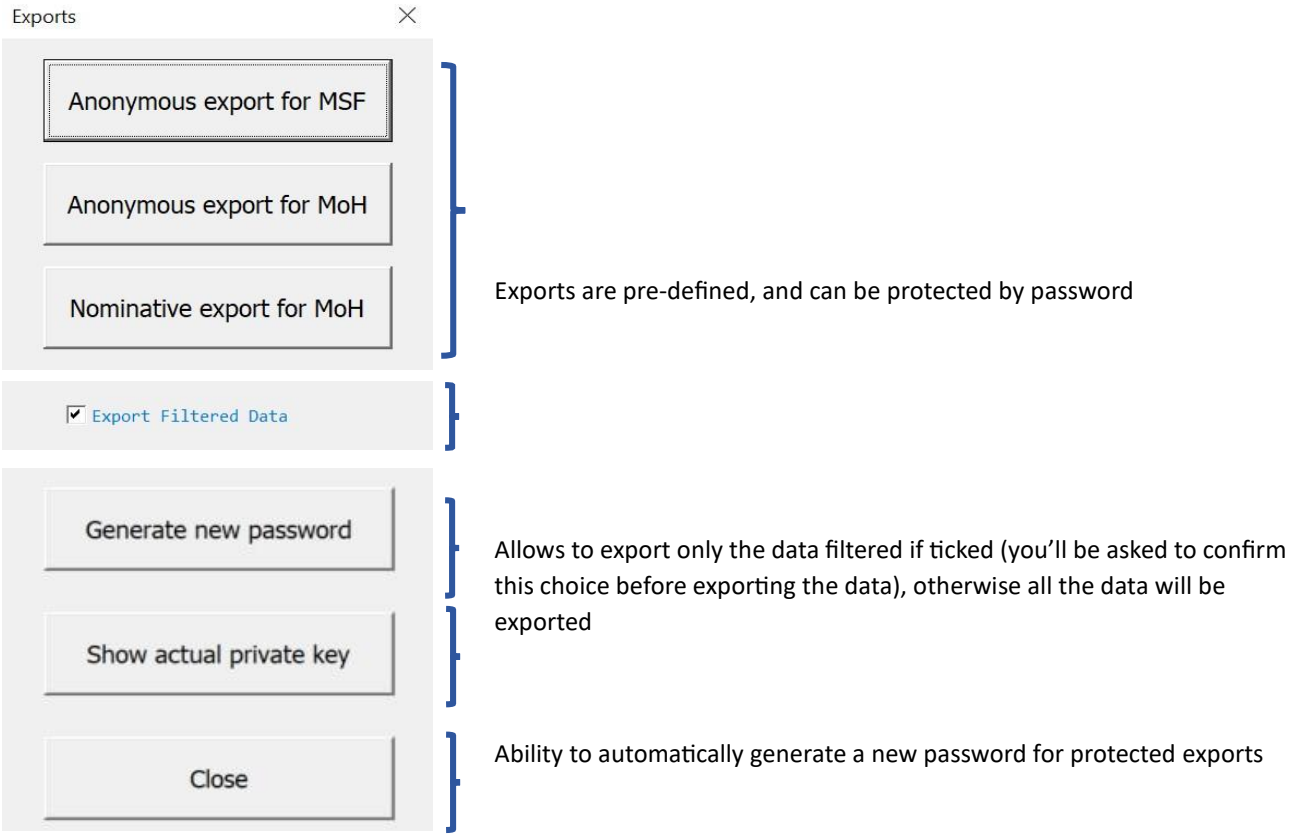
Export Data

The OutbreakTools linelist have the feature to export linelist data in a separated excel file, to share with partners or perform more advance analyses. The characteristics of the exports (which variables, anonymization or not, password protected or not etc.) are pre-defined in the data dictionary that is used to generate the linelist. While there should at minima be a "Anonymous export for MSF" button, the other available exports might differ between linelists (and from the example below, where three exports were defined).

To export data, click on the "Export Data" button, which opens a popup window, with several options:



The top buttons may be different than the example, depending on your file, but all options from "Export Filtered Data" are the same for all files.

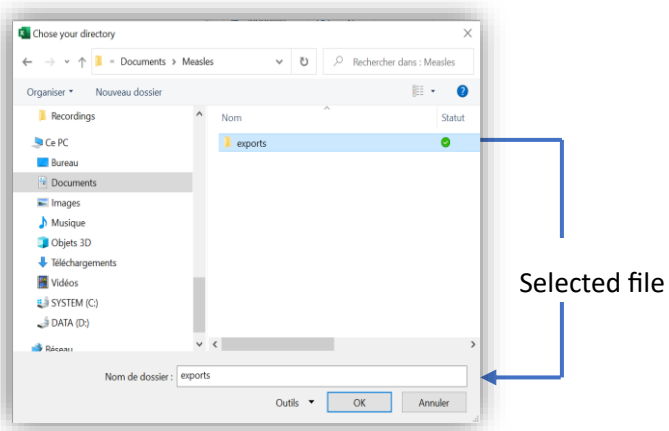


Allow to show the private key currently used for the exports protected by password (this will change every time a new password is generated)

Allow to close the tab

After clicking on the desired export, a window pops-up for saving the export, if "Export Filtered Data" is selected, a confirmation message will pop-up first.

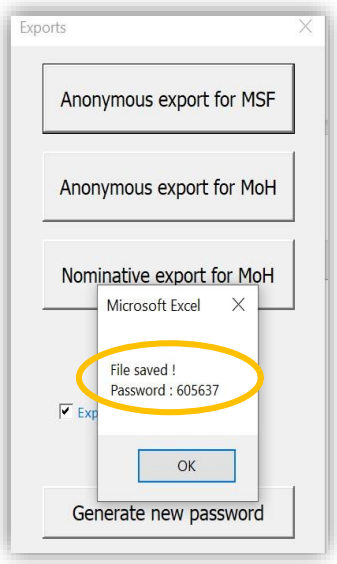
Select the desired folder (<u>avoid root folder</u> like PC, C:\, D:\)



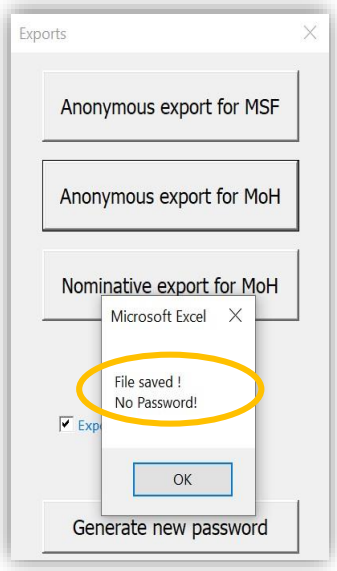
Once the folder has been selected and after clicking "OK", a new window opens to confirm the registration and, if the export is protected, communicate the associated password.

- **Don't forget it, you will need it to open the export file!**

Click "OK" to close both windows.



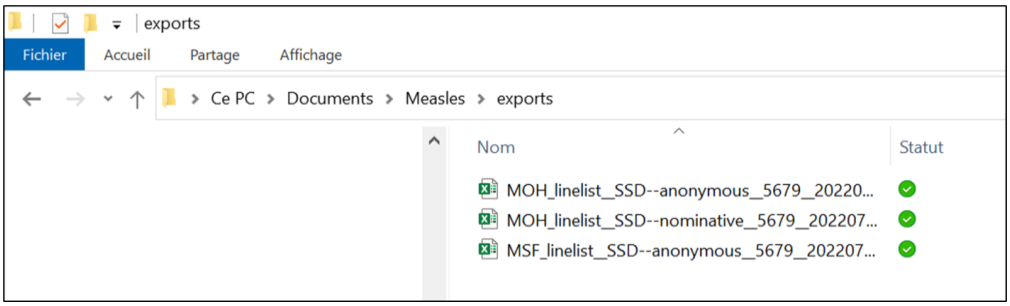
Confirmation message after saving a password protected export



Confirmation message after saving a non-protected export

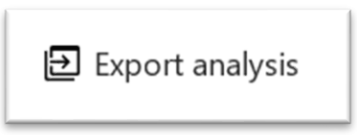
If you forgot to write the password down, you can click on the Export Button again, and then click on the “Show actual private key” to display the password again.

To find an export, simply open the file explorer on your computer and navigate to the selected folder.



Export Analyses

You can export all the tables from the analysis sheets in one document by using the “Export the analysis sheets” button and selecting the directory where you want to save them (avoid saving in root folder like PC, C:\, D:\).

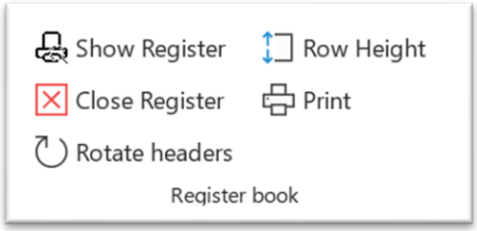


If the analysis are made on filtered data, the tables will be exported as such.

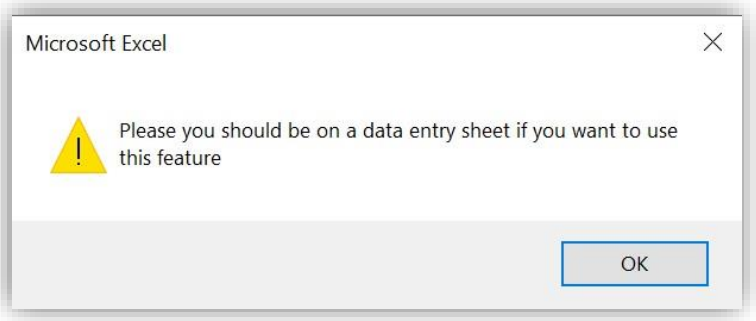
There is an additional type of export, to export data, geobase and metadata to migrate to another linelist file, see the **ADVANCED** section of this document.

Print a register book

You can print a register directly based on the linelist.

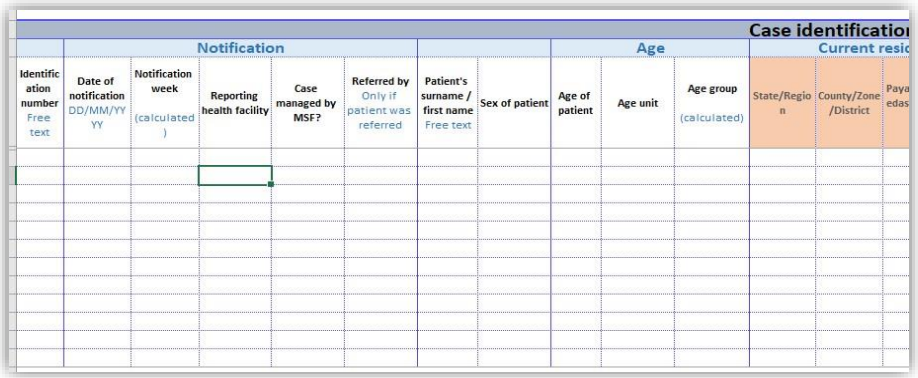


The features from this category only work if you are on a sheet with a linelist, otherwise you get an error message.



Once you are on the linelist, you can start using the features. Click on “Open the print sheet , a new sheet is shown.

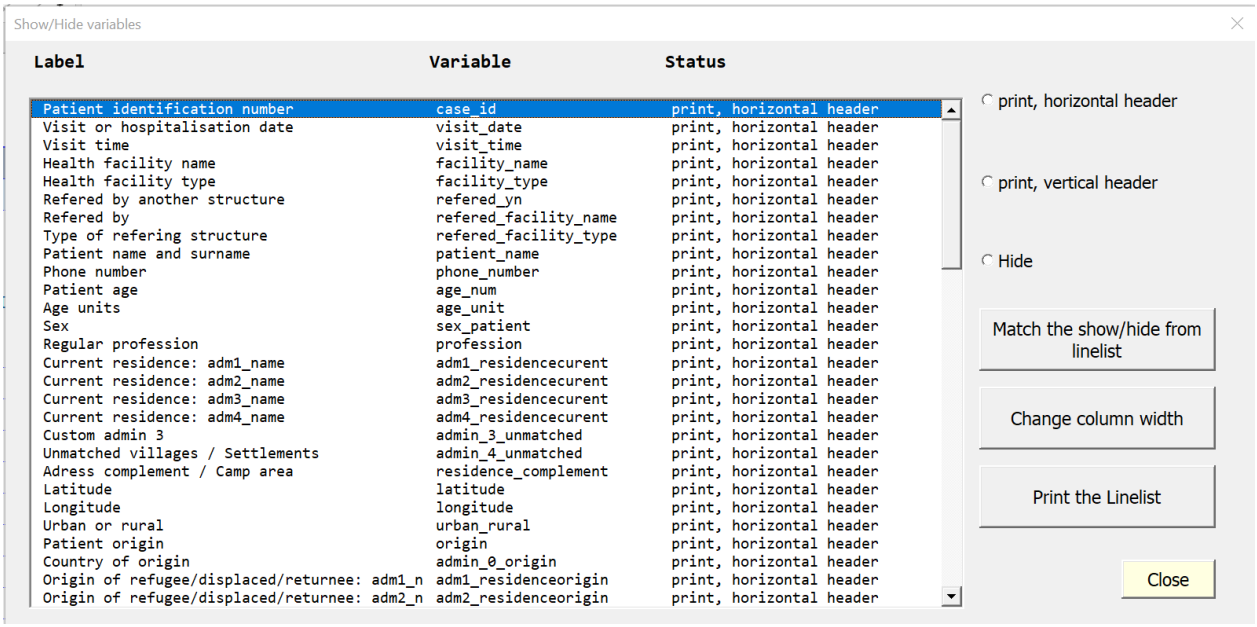
It contains all the variables from the linelist,



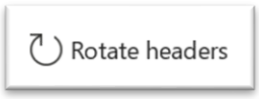
The Data Table features can be used just as in the regular view of the table.

- Add rows and resize tables work exactly the same (except that it adds 10 rows at once)

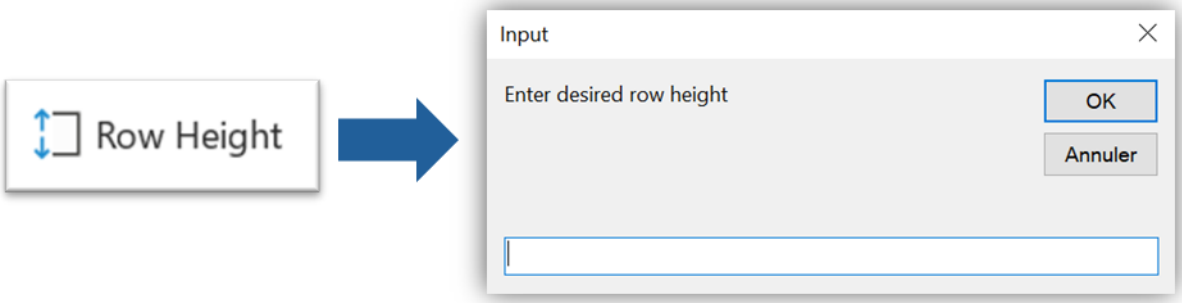
- Show/Hide variables works the same but looks a bit different, instead of “show” you can select print and the orientation of the header. You can import the setup of hidden/shown columns from the regular linelist table, or change column width.



You can rotate all the labels at once by clicking the “Rotate headers” button.



You can define the heigh of the row by clicking directly on “Row height”, a pop-up opens where you can define the heigh.

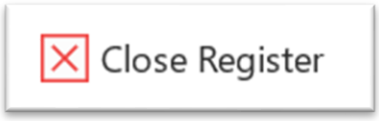


Both features work when the print sheet is not opened (you are on the regular, linelist sheet), but we don’t recommend using them in this case as you won’t directly see the result.

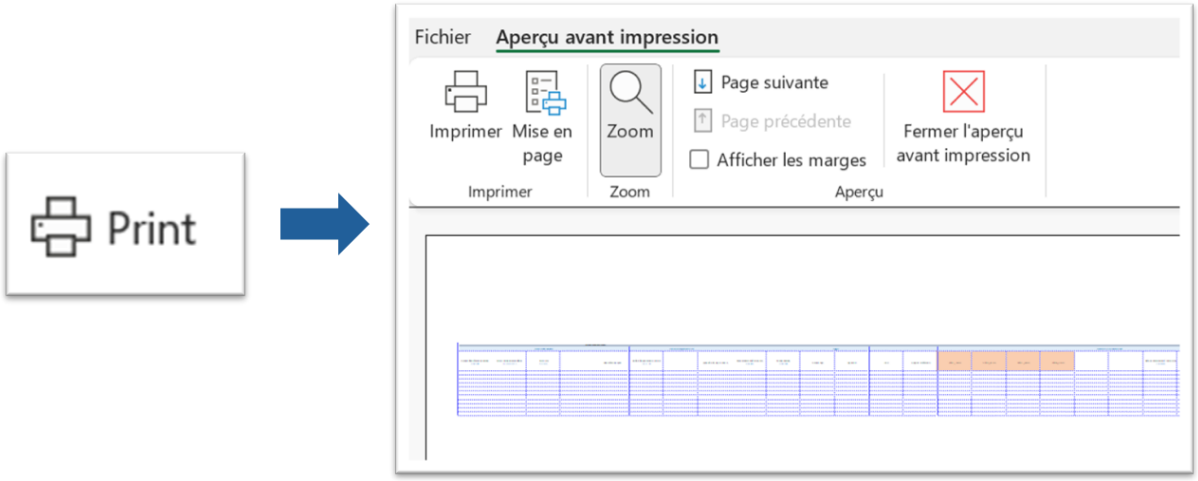
All labels are editable.

We recommend hiding all the calculated variables.

Once customized, you can close the sheet by clicking the red cross, all your modifications are saved.

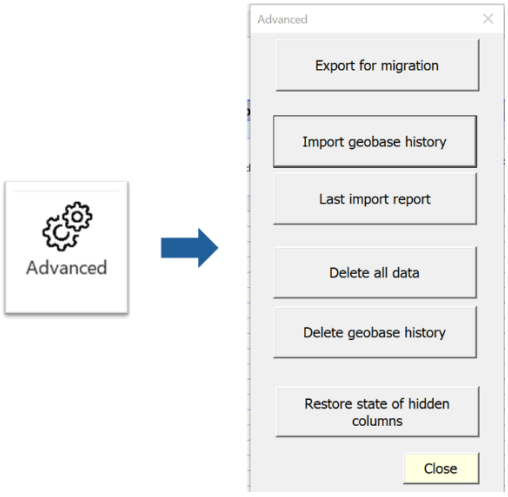


Once ready, you can use the print button to open the print preview view (whether you are on the register sheet or the linelist sheet). All the variables to be printed fit one page (landscape). If you are satisfied, you can print.



Advanced options

These features are available in the *Advanced* section of the OutbreakTools ribbon. When you click on this button, a popup window is displayed, with new options.

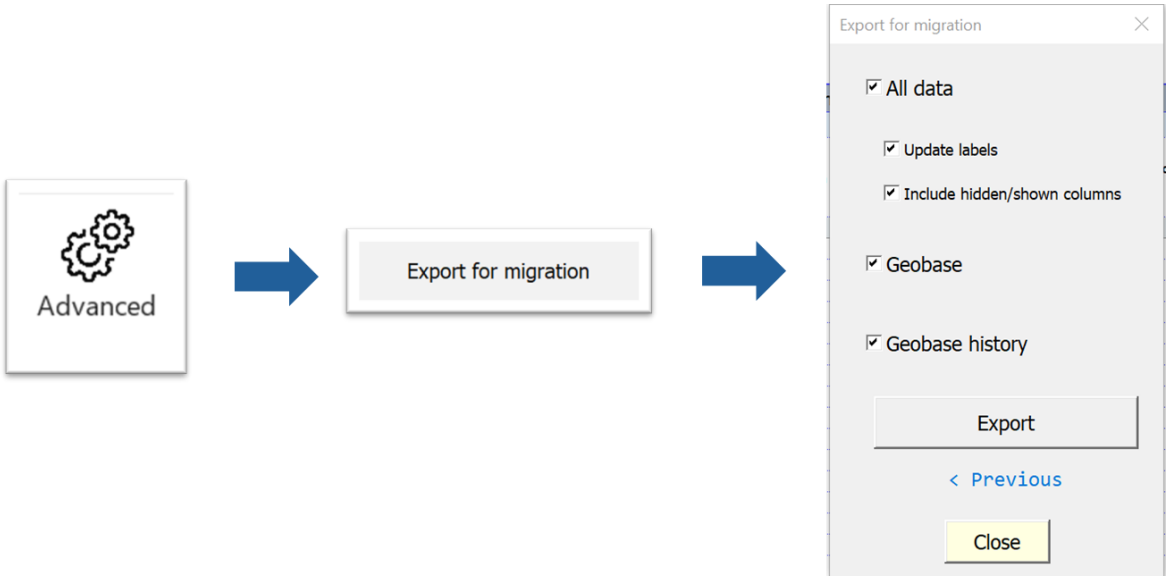


Export for migration

The first button is to export raw data for migration to a new version of the linelist (or potentially to create a temporary master linelist with several sites in it).

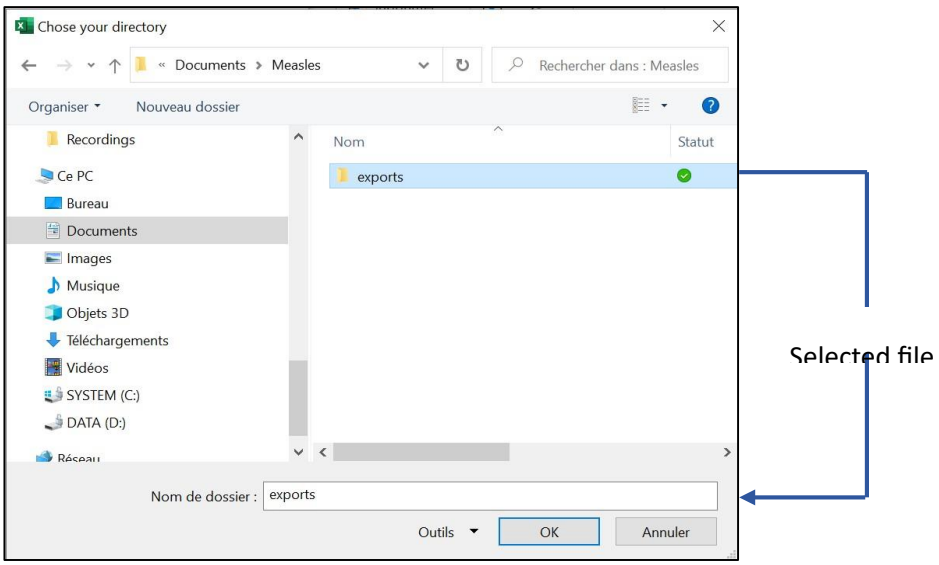
You can choose to export the patient data, the geobase and the history of the geobase (history list in the GeoHelper), by ticking the matching cases. There are also options to include metadata on the state of

hidden/shown columns (to not have to redo the full setup in the new file), and the updated labels of the custom variables, if you used these variables.



After selecting the options and clicking on “export for migration”, a window pops-up for saving the export.

Select the folder and click on “OK”.



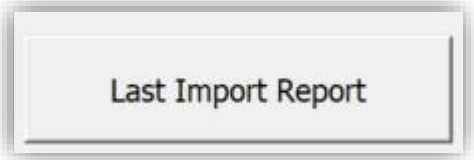
Once finished a message appears to ask if you want to close the window.

Import geobase history

This button allows you to import a file containing the history of the geobase (such a file was created by exporting the data from migration, see above).

This will import the list of previous geo entries in order to use the history method in the Geo Helper feature.

Last Import Report



« Last Import Report » allows you to display the report from the last import made (See Import report).

Delete data or geobase history

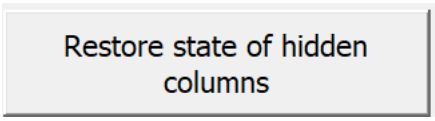
This are a dangerous buttons that allows you to delete data or geobase history from the linelist.

"Delete all data" allows you to remove all the data you entered from the workbook. After clicking, you will have a warning message. To confirm the deletion, you will need to enter the name of the file.

Allows you to empty the table with the geobase history so the list of suggestion of the history method from the Geo Helper will be empty.

Restore the state of hidden columns

This button allows you to restore the state of hidden columns (i.e. hide them all again), if, for any reasons these columns had been shown.



⚠ Note that hidden columns are not supposed to be shown, and the user can thus not modify their visibility state from the regular Show/Hide variables button, hence this button.

HOW TO

Setup a geobase

These are the steps to add a geobase into an OutbreakTools linelist, or to update a base already present.

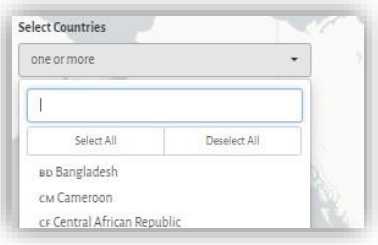
Download the geobase

You can download a geobase by using the **GeoApp** site at this address:
https://reports.msf.net/secure/app/outbreak-tools-geoapp

You need to have an account. If you do not have one already, create one from there:
https://reports.msf.net/signup/

When you connect to the site, a popup window will inform you of the steps and features of the **GeoApp**, but here is a condensed summary:

1. Select one or more countries from the dropdown list.



2. Then, directly on the map, select the regions from the countries selected you want to have in your geobase and download the file locally.

This geobase is a flat excel file containing all the administrative levels for the regions you selected, and it is ready to be imported in an OutbreakTools linelist.

You can also download the associated shapes and GIS data for these regions.

Import geobase

See the **Import geobase** button in the ribbon to import the file you just downloaded.

Migrate the linelist to a newer version

It is easy to migrate data from an OutbreakTools linelist to another OutbreakTools linelist of the same disease. This is useful if the EpiDS team developed a new version of the file, or if your current file got corrupted and you want to migrate into a new, uncorrupted file.

The idea is to export the patient data, the metadata (including information on which variables are hidden or not), the geobase and the geobase history. Then to reimport these into an empty file.

Steps:

1. **Export your data** and metadata using the **Export for migration** button (from the *Advanced* section of the OutbreakTools ribbon). This will create three files in the folder of your choice:
    a. A file containing the data
    b. A file containing the geobase and the geobase history
    c. A file containing uniquely the geobase history, which we will ignore now.

2. **Import the data** in the new file, using the **Import data** button, from the *Import* section of the OutbreakTools ribbon.
3. **Import the geobase** (and its eventual history) in the new file using the **Import geobase** button, from the *Import* section of the OutbreakTools ribbon.

Make a master linelist

Often, several facilities are using the OutbreakTools linelist to gather data on an epidemics. In this setup, each facility has their own linelist file, where they enter their data, and which provide site (basic) analyses. It is possible to create temporary master-files from those linelist to have a summary of what is happening over all sites. *This master-linelist is not used to enter more data, just to look at the analyses pooling all facilities*.

1. **Export the data from each facility linelist** using the **Export data** button (from the *Export* section of the OutbreakTools ribbon). Since you only want to see the patient data, there is no need to export all metadata, the anonymous export is enough.
2. **Get an empty linelist file**. This will contain your temporary master linelist.
3. **Import the all the exports into the master file** using the **Import data** button, from the *Import* section of the OutbreakTools ribbon. When a warning pop up opens, tell it that you want to add the data at the bottom of the existing data.
4. **Refresh analyses** (*always!*)
5. **Go to the analyses sheets**

Share data with MSF/Epicentre for compilation

If Epicentre had developed a dashboard and you want the data to be part of this dashboard, you can send the data at an agreed schedule. Depending on the disease and situation emergency, this schedule might be once a week, or daily (e.g. cholera in full blown epidemics).

Steps

1. **Clean your data** as much as you can.
2. **Make sure that the general information metadata is properly filled** (country, site name, outbreak code, name of the disease, section…). If you are not sure about the outbreak code, check in with the mission epi, or coordinating epi, or, if they were unsure, with the referent member of the Epicentre-EpiDS team.
3. **Export data** using the Export data button of the OutbreakTools ribbon, and chose the "*Anonymous export to MSF*" option. This will generate a file with the pseudo-anonymized data. **DO NOT MODIFY ITS NAME**. The name is automatically created based on the general information data, and will be automatically parsed to sort the data (by country, section, site etc.) and fill dashboard filters.
4. **Send the data to** epi-data@epicentre.msf.org at an agreed upon time.

With correctly filled metadata (and thus correct file names), you can send the exports from several sites, and even several diseases in the dame mail.

This address is rarely checked by a person, do not address your questions and request to the EpiDS team though this channel.

What happens next?

The mails of this address are automatically treated: a script checks if there is an attachment, and detects patterns in the name. The name is parsed and data is automatically downloaded and archived in a SharePoint.

R scripts periodically compile this data, perform perfunctory cleaning and send the data to a dashboard.

If you send data, you can expect it to be pushed onto the dashboard within one hour.

What sort of data cleaning is performed?

Keep in mind that the compilation and data validation is automatic, and can thus go only so far if data is not clean. Columns will be parsed and validated based on the *data dictionary*.

- For categorical variables, values that are not in the agreed categories will be transformed into missing values.
- For dates, dates that which format cannot be recognised will also be turned into NA.
- Geographic values not present in the geobase (and with no associated shapes) will be missing in the cleaned columns.

Using the data dictionary, data will be translated in English.

Troubleshooting

I sent the data yesterday but it does not appear on the dashboard…

- Did you send the data to the epi-data@epicentre.msf.org?
- Did you send the whole linelist file instead the *anonymous export*? In this case you should have received a feedback automatic message explaining the problem.
- Was the OutbreakTool linelist **Info sheet** correctly filled? Scripts cannot compile the data if any of these are missing:
    - Outbreak code
    - Organization
    - Country Name
    - Name of facility
- Open the export (it's an excel file) to see if anything is weird. There should be several sheets, among which:
    - **Metadata sheet** containing information about the export
    - **Info sheet** containing the information of the linelist
    - **Patient linelist sheet(s)** containing your data
- Try to export and send again
- If this does not work, contact a member of the EpiDS team