Global Point Prevalence Survey of
Antimicrobial Consumption and Resistance

2021 IT Manual
Protocol Global-PPS with optional HAI module

Supported browsers for the Global-PPS program

The Global-PPS program supports the **latest versions** of the following browsers and platforms.

	Chrome	Firefox	Internet Explorer	Opera	Safari
Android	Supported	Supported		Not supported	N/A
iOS	Supported	N/A	N/A	Not supported	Supported
Mac OS X	Supported	Supported		Supported	Supported
Windows	Supported	Supported	Not well supported	Supported	Not supported

Unofficially, Bootstrap should look and behave well enough in Chromium and Chrome for Linux, Firefox for Linux, and Internet Explorer 7, though they are not officially supported. Internet Explorer 8 and 9 are also supported, however, please be aware that some CSS3 properties and HTML5 elements are not fully supported by these browsers!

Important! Use Google Chrome. This browser supports the Global-PPS very well. Chrome is freely available and easily downloadable at: https://support.google.com/chrome/answer/95346?hl=en

Hospitals who have participated before to at least one Global-PPS survey need to login with their existing password! As such, you can activate a new survey using the same hospital number as the one which was attributed to you before. Only then, you will be able to download a longitudinal feedback including results on all the surveys to which the hospital participated.

If you lost your login, please contact Ann or Ines at global-pps@uantwerpen.be

Applicable for hospitals who participate for the very first time:

Register yourself - Create your login

To access the Global-PPS program, go to: https://app.globalpps.uantwerpen.be/globalpps_webpps/
Go to 'Register' in the menu bar, complete all fields and click Register.

Register a new webpps user

name	Your name
Email	Email
Username	Login
Password	Password
Password	Plase confirm Password

☐ Ik ben geen robot — reCAPTCHA — Privacy - Voorwaarden

Register

Create here your Username and Password
Complete all fields and tick the CAPTCHA (I'm not a robot)
Click register
You will receive a confirmation email with your password and you need to confirm your email address.

Now, you can now use your login. It provides you access to the functionalities of the Global-PPS program

Please, do not create more than one login.
If you lost your login, please contact Global-PPS@uantwerpen.be
If you lost your password, click 'forgot password'

Login	ann
Password	••••••••••••

☐ Remember Me

✓ Ik ben geen robot — reCAPTCHA — Privacy - Voorwaarden

Forgot password

Login

Go to login in menu bar and complete the fields.
Do not forget to tick also the captcha (I'm not a robot).

Click login

If you want to change your password go, after login, to "***My profile/Change password***"

Welcome Ines Pauwels, current survey: 2019 Global-PPS (Jan - Apr)   current institution: University Hospital of Antwerp

Home   User Management ▾   My institutions ▾   Departments ▾   Surveys ▾   Methodology   My profile ▾

change password

Password rules :

Email	Email
Current Password	current Password
New Password	New Password
Confirm Password	Plase confirm Password

Submit

Data entry – STEP BY STEP !!

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1. Register the hospital on the Global-PPS website

After login you'll see the home page; first go to "**My Institution**"/**New** on the menu bar.

Complete **ALL** fields (**with exception of ID number**) and click Save. Now an ID number for your institution has been created. This ID number is your anonymized unique hospital code.

!! If you are unable to select "region, county and district" information for your hospital, you'll need to contact Ann and/or Ines at Global-PPS@uantwerpen.be providing the details for these fields. For example:
Country=Canada
Region= Ontario
County= Toronto region
District=Toronto
The Global-PPS program uses the NUTS coding of classification of countries, regions, counties and districts. Information for countries outside Europe is sometimes lacking in the Global-PPS program and will be entered manually by Ann or Ines to ensure unified coding.

1.1   You want to enter data for multiple hospitals

You can complete data for as much hospitals as you like. Therefore, go to "**My institution**" and click "**New**". Complete ALL fields and click save (same procedure as above).
If you go now to **"My institution/Overview"**, you will see the new institution listed. To activate another institution click the left checkmark under the button "action". You will than see that the current institution has changed to the newly selected institution.

For each of the selected institutions, you are able to perform the steps as described below.

1.2 Add supplementary hospital users

The local administrator can assign supplementary hospital users to help him/her with data-entry and management. This feature **can only be activated by the main local administrator**; this is the first person who created the first and subsequent hospitals.

The local administrator can be responsible for a fusion or network of several hospitals and he/she can assign supplementary users for data-entry for each or several hospitals. This aspect is particularly helpful for bigger hospitals, but can serve any local administrator.

To create extra hospital users go to: "**User Management**"/"**New user**" and provide the name of the new user, his/her email address and a username. Select thereafter to which institutions this person should have access. You can e.g. provide him/her access to only one hospital or all hospitals as you like. An email will subsequently be sent to this person's email address (the one you have provided) with an automatically generated password.

This supplementary user can now login with the automatically generated password and has access to all facilities of data entry of the attributed hospital (create departments, enter wards information=denominators, and enter patient data). He/she can also change his/her password. The supplementary user however is not able to create a new institution; this can only be done by the local administrator. The supplementary user will also not be able to see the institutional specifications and will subsequently not be able to change these.

The local administrator can provide access to an unlimited number of people (e.g. three different or more people are helping with data entry of one and the same hospital).

It can happen you do not see the institutions listed:

2. Select the appropriate survey

Select the appropriate survey to enable entry of survey data : there are two steps to activate the survey:

1. first go to "**Surveys"/"Available"** and select the appropriate survey. Make a choice between **"the basic PPS" or "the PPS with HAI module"** e.g. for the survey : **«2021 Global-PPS (Jan-April) – NEW protocol »**

Overview Available surveys

id	title	description	start date	end date	action
20	2020 Global-PPS (May-Aug) - NEW protocol	2020 Global-PPS (May-Aug) - NEW protocol	2020-01-05	2021-03-01	
21	2020 Global-PPS (Sep-Dec) - NEW protocol	2020 Global-PPS (Sep-Dec) - NEW protocol	2020-09-01	2021-03-01	
22	2021 Global-PPS (Jan-Apr) - NEW protocol	2021 Global-PPS (Jan-Apr) - NEW protocol	2021-01-01	2021-07-01	participate in basic PPS

Or select

20	2020 Global-PPS (May-Aug) - NEW protocol	2020 Global-PPS (May-Aug) - NEW protocol	2020-01-05	2021-03-01	
21	2020 Global-PPS (Sep-Dec) - NEW protocol	2020 Global-PPS (Sep-Dec) - NEW protocol	2020-09-01	2021-03-01	
22	2021 Global-PPS (Jan-Apr) - NEW protocol	2021 Global-PPS (Jan-Apr) - NEW protocol	2021-01-01	2021-07-01	participate in PPS incl. HAI

Important, <u>do not select any other survey</u>, for example a demo/test survey, otherwise your data could be entered into the wrong survey (unless you want to test out the tool).

2. *Go thereafter to "Surveys"/"Subscribed"* : you see the survey **«2021 Global-PPS (Jan-April) – NEW protocol »** available in the list.

    You now **activate the survey** to allow data entry. Tick the checkmark ✓ under "action" to activate the survey. You will see the survey written in the black bar on top of the page next to your name. You can now start data entry.

Overview subscribed surveys

Survey: 2021 Global-PPS (Jan-Apr) - NEW protocol switched to basic PPS

| id	title	description	validated	completed	start date	end date	action	HAI-module enabled
	protocol	protocol			01	01		
22	2021 Global-PPS (Jan-Apr) - NEW protocol	2021 Global-PPS (Jan-Apr) - NEW protocol	☐	☐	2021-01-01	2021-07-01	✓ select current active survey...	

You are able to switch between the survey with the "basic PPS" or the "PPS including the HAI module".

➢ Make your choice by ticking or unticking the box "**HAI module enabled**". Thereafter, tick again ✓ under "**action**" to activate the survey of your choice.

Overview subscribed surveys

Survey: 2021 Global-PPS (Jan-Apr) - NEW protocol switched to basic PPS

id	title	description	validated	completed	start date	end date	action	HAI-module enabled
22	2021 Global-PPS (Jan-Apr) - NEW protocol	2021 Global-PPS (Jan-Apr) - NEW protocol	☐	☐	2021-01-01	2021-07-01	✓	☐

When the appropriate survey is activated, you will see the **«2021 Global-PPS (Jan-April) – NEW protocol »** survey appearing on top of the page. **Whenever you have entered data for this survey, you will not be able any more to switch between the "basic PPS" or the "PPS including the HAI module".**
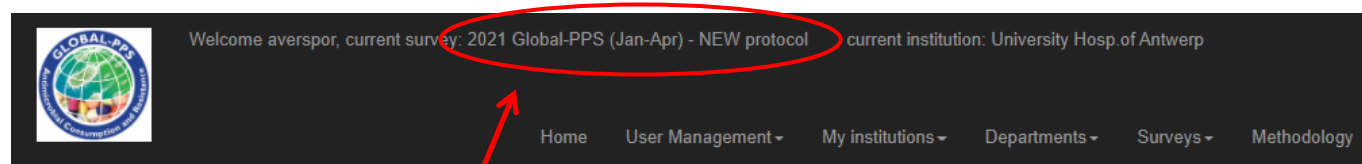
Make sure that you see the "appropriate survey" written in the black bar on top of the page. Only then will you be able to enter data for this survey !!!

3. Prepare or update the hospital department list.

After defining your institution, you are able to Create and/or Update departments. You first need to **define ALL eligible (! exclude day care, recovery, emergency) wards (units/departments) at institutional level!** These ward names will afterwards appear in the drop down lists when entering ward (denominators) and patient (numerator) information.

First make sure the correct institution is selected and visible in the black bar on right top of the page (if not yet automatically done) **any time you want to enter data for the particular institution**. If needed, go to "*My institutions"/"Overview"* and click *select* on the appropriate institution!

Go now to "**Departments"/"New"**. Identify here **ALL** departments of your hospital.

The following information is needed:

- The **NAME** of the department. This field is mandatory; it will be used in the department (=ward) drop down lists in the *Global-PPS* program. Provide a recognizable ward name that is used in your hospital. For example, for the category "GMW" various different wards may exist. If these wards have particular/appropriate names, write them down accordingly (e.g. Medical Ward 1 or neuro). **All** inpatient adult, paediatric and neonatal departments must be included (i.e., no hospital sampling). **Each department name needs to be defined uniquely!!**
- Code and description (optional fields)
- Department **Group**. Mandatory field. Choose between one of the 4 department groups (Adult medicine, surgery, ICU or paediatric department).
- Department **Type**. Following the choice of the department group, you will need to specify a more detailed department type.

After completing all fields (except for the ID number), click **save**.

To create new departments, go again to "Departments" in the menu bar and click **"New"**

You can **edit or delete a defined department** by going to **"Departments"/"Overview"**. Whenever you have entered survey data for these wards (you have used the department, which means you have completed denominators and patient data), you will not be able to delete this department anymore and the dustbin under the field '**action**' will not be visible again.

<div style="border:1px solid black; padding:8px; color:red; font-weight:bold;">
All participants who have participated before will need to update their department list to define in more detail their department types ! Go therefore to "Departments"/"Overview" and click edit. Attribute to each department in the list the exact department type.
</div>

<div style="border:1px solid black; padding:8px; color:red; text-align:center;">
IMPORTANT: You need to define ALL departments under surveillance before entering survey data! Make sure you have correctly defined your departments (correct name, code, department group and type).
</div>

4. Complete the denominators for the departments surveyed

First of all, make sure you enter data for the 'correct' Institution: do you see the appropriate institution in the field '**current institution' in the black bar** on top of the page? Select the appropriate institution if not visible for which you want to complete data for: go to "***My institutions"/"overview***" and click ***select*** to activate the appropriate institution.

Whenever you want to enter survey data: Your "current institution" and the "appropriate survey" should both be visible in the black bar on top of the page; otherwise, you will not be able to start entering data for the appropriate institution and survey.

Start data entry by **first** completing the **denominators** for the departments/wards under surveillance. Therefore, go to "***Surveys"/"New Ward***" and complete the form for your first ward. A unique Id number will be attributed to this ward after clicking ***save.***

Total number of admitted patients = ALL admitted inpatients present at 8am on the day of the survey. This includes all inpatients receiving antimicrobials and also ALL those patients NOT receiving antimicrobials at 8am on the day of the survey.
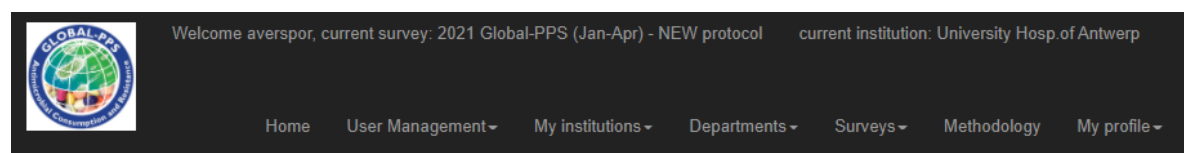
Extra to be completed for the HAI module: count the number of all patients present on the ward with an invasive device, split up by activity (Medicine-Surgery) if appropriate. Count the number of patients with an invasive device, not the number of devices at patient level.

4.1   Edit the denominators for a ward

Denominators can be modified afterwards. Go to "**Surveys**"/"**Wards**". A screen will display all wards for which you have defined denominators.

Click on the action **"edit"** if you want to modify the denominators. Click **save** after you have edited your denominators.

You can also **delete** the whole ward with its denominators specified for the survey; but this is only possible if no patient information has been entered for this ward. In this case the delete button will not be visible any more on the screen.

You need to <u>complete the denominator data</u> (=N admitted inpatients, N beds and extra denominators for the HAI module) <u>for the surveyed wards</u> <u>"before"</u> you will be able to enter patient data for the wards concerned !!

5. Complete PATIENT DATA

5.1   Enter patient characteristics

After data entry of the denominators, you can start entering patient data. Go to *"Surveys"/"New Patient"* and start completing all fields of the patient form.

Data entry can be done by clicking on the subsequent fields; but goes much faster if you use the **tab and arrow buttons**. Each time you use the tab, the next 'field you want to complete' will be selected, and with the arrow you can select the appropriate choice for your patient.

When all appropriate fields are completed, **click "Add new treatment"**. Now you will be directed to the treatment form allowing you to enter the first antimicrobial.

5.2   Complete antimicrobial information

You will notice that after saving the patient characteristics, the **Survey Number** for this particular patient is created. **WRITE DOWN this survey number on your paper form !**
Complete now the antimicrobial information on the treatment form.

Several fields provide drop down boxes: click here on the arrow on the right. *Type key information in the box* to search and *select a certain code faster;* (e.g. 'amox' in the antimicrobial Name box, or 'proph' when you want to select the code concerning prophylactic use in the indication box (see below).

Welcome averspor, current survey: 2021 Global-PPS (Jan-Apr) - NEW protocol   current institution: University Hosp.of Antwerp

Home   User Management ▾   My institutions ▾   Departments ▾   Surveys ▾   Methodology

'Please write down the patient's survey number : 26964-1-164295 on the paper data collection form and add a treatment.'

New Treatment Form for patient: 26964-1-164295

Important: Write down the Survey Number in the appropriate field on the patient paper form (=next to patient identifier).

Field	Value	
Start date of the antimicrobial	02/03/2021	🗓
Antimicrobial Name:	Amoxicillin and enzyme inhibitor	× ▾
Single Unit Dose | Unit ❓	500	mg ▾
Doses/day | Route ❓	3	[P]-Parenteral ▾
Diagnosis	[Pneu] - Pneumonia or LRTI (lower respiratory trac... × ▾	
Type of indication	[CAI] - Community acquired infection × ▾	
Reason in Notes	Yes ▾	
Guideline Compliance	[Y]-Yes ▾	
Is a stop/review date documented	No ▾	
Treatment	[T]-Targeted ▾	reset

The following resistance data is to be filled in only if the treatment choice is based on microbiology data (Treatment=T) available on the day of the PPS

	Microorganism	Resistance type
Microorganism 1	Streptococcus pneumoniae × ▾	Please select (if applicable) ▾
Microorganism 2	Please select (if applicable) ▾	▾
Microorganism 3	Please select (if applicable) ▾	▾

Save treatment | Save and add new treatment | Cancel

After completing ALL fields, click "**Save treatment**" or "**Save and add new treatment"** if you want to add another antimicrobial.

If you click "**Save treatment**", you will be directed to the **Patient Dashboard** where you can still enter subsequent antimicrobials been prescribed for that patient on the day of the PPS. Therefore, on the Patient Dashboard, click **"Add Treatment".** After saving the next antimicrobial, it will appear on the Patient Dashboard.

Do not forget to write down the Survey Number on your patient paper form

Click "Edit patient form" to change patient characteristics

Click "Add treatment" to continue to add more antimicrobials prescribed to the patient on the day of the PPS at 8 am

Edit or delete an antimicrobial with these buttons

5.3   Complete the HAI form

Click at the bottom of the Patient Dashboard "**Edit HAI form**" to start completing the HAI form for each patient receiving at least one antimicrobial on the day of the survey.

Complete the form and click *Save*

It is possible to enter data immediately online, without using the paper data collection forms.
This is perfectly possible on a laptop or a tablet/IPad. The screen of a smartphone or IPhone is a bit too small for smooth data entry. Proceeding in this way has the advantage that one can move on faster. People entering data for the same hospital can even proceed at the same time.

BUT, you need to be aware that most variables are mandatory to be entered online otherwise you can't save, first denominator and then the necessary patient data. The variables related to patient weight, cultures sent to the lab and start date of the antimicrobial are optional on the basic patient form. In the HAI form, there are more optional variables (marked with *).
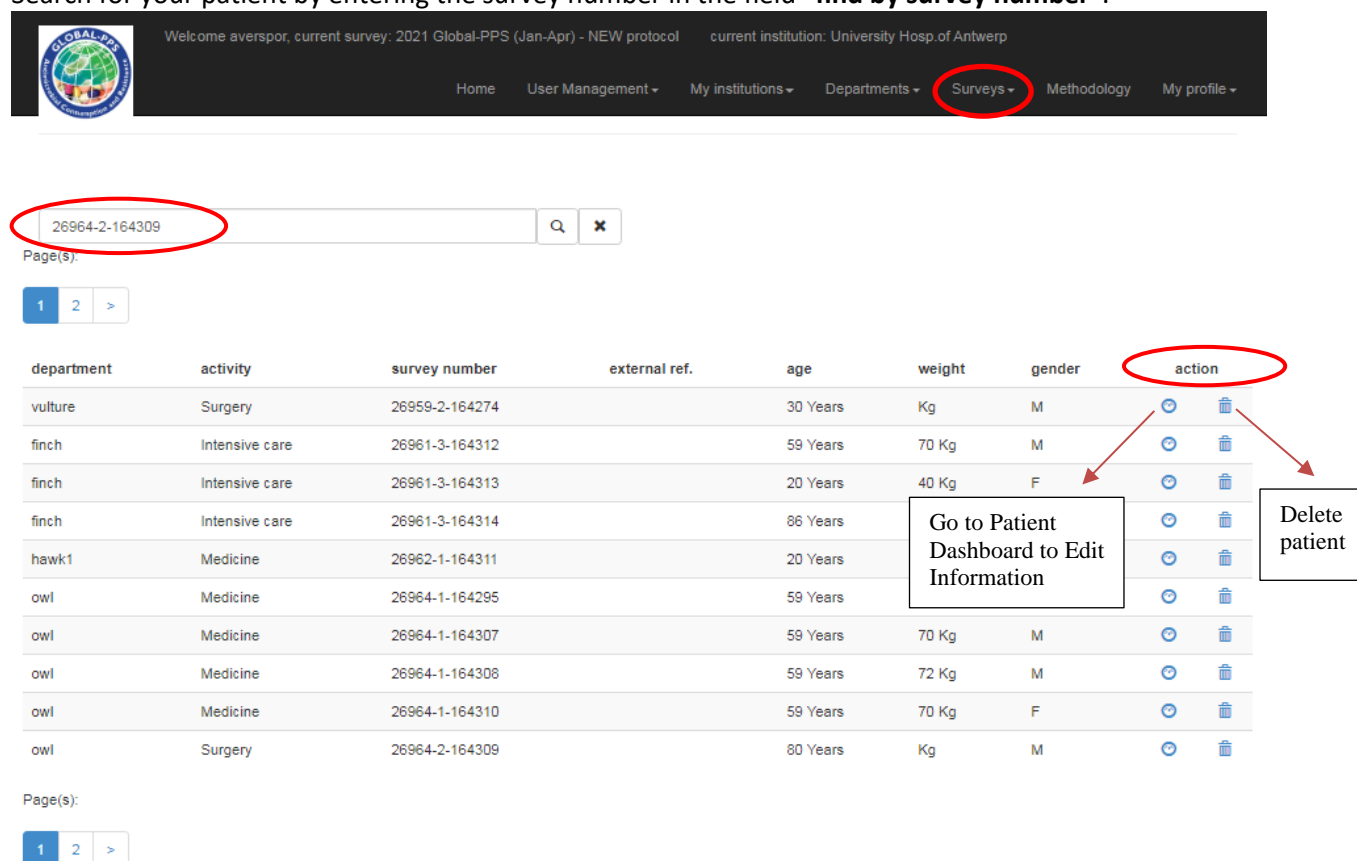
Also, make sure you write down the patient survey number (automatically generated by the system after saving your patient). Only with the patient survey number, you will be able to trace the patient in your dataset ! You might need this link during the validation procedure or whenever you notice a mistake which has been made and for which you need to go back to the patient file.

Some IT-particularities you should know during patient data entry:
It is never advised to use the **back button of the internet browser**. When using this button during data entry, this could cause problems, instead **use the menu buttons or the F5 button** to refresh the page. Alternatively, one can also empty the cache. When using for example Chrome, go to https://support.google.com/chrome/answer/95582?hl=en for instructions.

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5.4   Patient data overview

Whenever one made a mistake during data entry, it is possible to edit the online entered patient information. Therefore, go to "**Surveys"/ "Patients"** to display an overview of the patients you have entered in the database. Search for your patient by entering the survey number in the field "**find by survey number**".

When you have found your patient, click on the left " **action**" button which will bring you to the "**Patient Dashboard**".

5.5   The Patient Dashboard – Edit and delete patient data

In the Patient Dashboard, you can:
- Edit the Patient form
- Add, edit or delete an antimicrobial treatment
- Add/Edit the HAI form

Attention:
- ➢ if you have chosen to follow the new protocol **with the HAI module**, you will need to **complete each of the three forms (Patient information, Antimicrobial information and HAI information) for each patient** receiving an active or ongoing antimicrobial at 8am on the day of the PPS.
- ➢ If you have chosen to follow the new protocol **without** the HAI module, you will only need to complete the patient and antimicrobial information.

6. Export your data

At any time, you can export your own data which you have completed online. This export in excel provides you an overview of all data entered. Go to "**Surveys"/ "Export".**

The excel output provides you four worksheets:
- Survey information
- Institutional information: provides information of the institution in the survey
- Overview departments: provides denominator data by ward (N admitted patients and N available beds) and also the total number of recorded patients who have received at least one antimicrobial on the day of the PPS (= treated patients). For the G-PPS with HAI module, also the extra denominators of N patients with an invasive device are listed in this form.
- Patient forms: provides you detailed patient and antimicrobial information for patients who got at least one active or ongoing antimicrobial on the day of the PPS. For the G-PPS with HAI module, also the extra variables for the HAI module are listed in this form.
    - ➢ **Be aware: Each line(row) in the patient form is one antimicrobial** ! As such, if two or more antimicrobials have b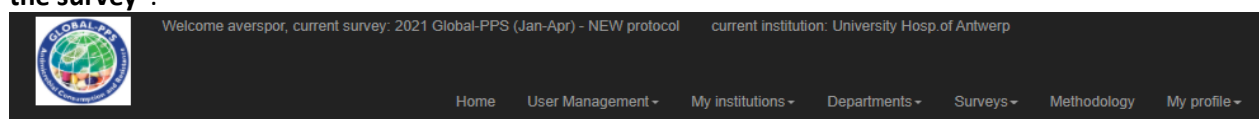een recorded for one single patient, you will see that all patient information (ward name, age, gender, weight, etc) is repeated for each recorded antimicrobial. This enables you to make your own pivot tables and subsequently analyse on your own data.

Please **use this excel export to double check the data you have entered online**. Take your time to verify whether all denominators and patient data are complete and correctly entered!

7. Validate your data

To validate your survey, go to "**Surveys"/"Subscribed"** and click for the appropriate survey under action "**validate the survey**".

If there are **no issues found** you will immediately be able to validate your survey and get following message:
Your survey is validated, please complete this one question and click on 'Save as validated and completed
But, before clicking "**Save as validated and completed**", please FIRST answer the mandatory question "**did you survey all wards of the hospital**" (yes-no).

If **issues are found** the following message will be shown:
You have one or more validation issues! Please correct the issues and try again.

These issues will be displayed to you at three levels: 1) by department (number and name) providing you an overview of the issues by 2) patients (survey numbers) and their 3) recorded antimicrobials.
At antimicrobial level, two different results can be shown:

1) ERROR = you need to go back to your data and change online the recorded information before you will be able to validate the survey. These are mandatory issues which need to be solved !

For example, **errors** might concern ***patients recorded without treatments/antimicrobials***. The current validation procedure filters these patients for you. You can easily add this information. Proceed as follows:

- **Copy the survey number** of the patient for which an error was shown.
- **Go to "Surveys"/ "patients"**; paste the survey number in the search field. Go to the patient dashboard to add or edit antimicrobial information (tick 'add treatment'; see page 15-16 in this IT manual).
- Click "**save treatment**".

2) WARNING = this information warns you that the system found some 'potential' inconsistencies. Please go back to your data (excel export) to verify the recorded antimicrobial(s) for a certain patient (look up by survey number). You can still, because of several reasons, accept the data as such and continue to validate the survey.

Most frequent **warnings** concern ***inconsistencies between diagnostic code*** (appendix II) ***and indication code*** (appendix III). A warning will for example be given IF for a certain patient diagnostic code was recorded as "Cys", but the indication code was recorded as "SP3". The diagnostic code refers to a therapeutic treatment for an infection, while the indication SP3 refers to surgical prophylaxis. As you see, the indication does not sort with (or is not consistent with) the recorded reason to treat (diagnosis). We ask you to review these patients again. Depending on the day (and hour!) of inclusion of the patient into the survey, the indication could rather be HAI2 (or maybe the diagnostic code should be adapted to Proph UTI). Be aware, time of reference is 8am on the day of the survey!
 If you want to correct this kind of information online, please follow the same procedure as described above under "errors".

Implemented validation checks include:

An **ERROR message** will be shown for following issues = which need to be corrected online:
- Count on number of treated patients should =< count on number of admitted patients
- Double antimicrobial data entry is not allowed (check on ATC5 code)
- Patient information with missing antimicrobials
- Impossible combinations between single unit dose and unit defined as: "if "unit" = g and "single unit dose" >=8" (for example 500 g (which should be 500 mg))

A **WARNING message** will be shown for following issues = which need to be checked and possibly corrected online, though not mandatory:
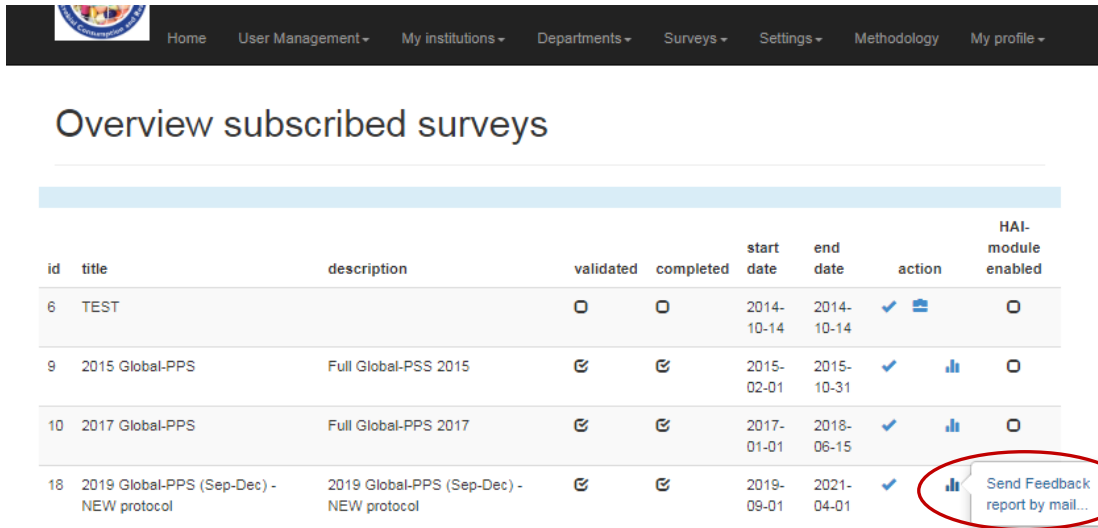- Inconsistencies between diagnosis code and indication:
  - IF indication = prophylaxe (MP or SP1, SP2, SP2) then diagnostic code preferably should also be proph
  - IF indication= therapeutic (CAI or HAI), then diagnostic code should preferably be different from proph (for example diagnosis=Pneu and indication=SP2 or MP: verify whether Proph RESP is indicated as diagnose or otherwise encode CAI or HAI as indication)

Other validation checks to avoid erroneous data entry are implemented online during the process of data entry. These are checks to reassure:
- that all mandatory data are recorded;
- that the age-field is correctly recorded as these are split up by year, month and days
- that wards are only recorded once (unique ward);
- that the number of patients admitted =< beds available on a ward (and its activity);
- that the number of patients on antimicrobials =< the number of patients admitted on a ward (and its activity);
- that antimicrobials (at ATC5 level) are uniquely recorded by patient.

8. Download the feedback report for your hospital

➢ To download your **one-point feedback report**, go to '**Surveys/Subscribed'** and **click on the graph** displayed under the button action.

Overview subscribed surveys

id	title	description	validated	completed	start date	end date	action		HAI-module enabled
6	TEST		☐	☐	2014-10-14	2014-10-14	✔ 📋		☐
9	2015 Global-PPS	Full Global-PSS 2015	☑	☑	2015-02-01	2015-10-31	✔	📊	☐
10	2017 Global-PPS	Full Global-PPS 2017	☑	☑	2017-01-01	2018-06-15	✔	📊	☐
18	2019 Global-PPS (Sep-Dec) - NEW protocol	2019 Global-PPS (Sep-Dec) - NEW protocol	☑	☑	2019-09-01	2021-04-01	✔	📊 Send Feedback report by mail...	

➢ To download **the longitudinal feedback report**, go to *Surveys and click Longitudinal Feedback*
➢ The download of a merged feedback report is only possible if data from several hospitals for a particular survey period has been entered.

Downloading a feedback report takes time !! The R software is used to calculate the figures for you (https://www.r-project.org/). Integrating all data of your country as well as international data takes time. So, please do not click several times on the button "report", this will decrease the capacity of the system for all of us. After a few minutes, **you'll find the feedback report in your email box**.

9. Log out

When finishing data-entry go to *My profile* and click *Log Out*

➢ **Do not forget to log out** ! It is important to correctly close your session as it increases the capacity and efficiency of data entry for all of us using the Global-PPS programme. Thank you!

Good luck!
For any question, remark or assistance; please contact global-PPS@uantwerpen.be