



# USER MANUAL

for the Ean NEuro-covid ReGistrY

Version 2.0



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# 1 Login

**Address of the Registry: <http://eancore.com>**

Log on to the system with your user name and password (see Figure 1). If you have lost your password click on the „Lost your password?“-Link and follow the instructions on the screen. Lost passwords can't be recovered, you will have to define a new one. Passwords must contain a lower case letter, an upper case letter, a digit and one character out of \* + # \_ - ! % & / ( ) = ? @ € < > (see also Figure 4).



Figure 1: Login screen

# 2 Layout

Below the header (Figure 2) all pages of the application are divided into two section:

- 1 Main menu (Figure 3): serves for the navigation and shows your user name and your role.
- 2 Information and data input area: This the main area of the application. The content depends on the task, which is being carried out at a given time.

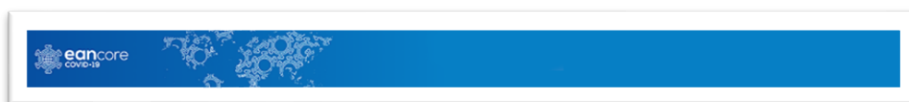


Figure 2: Header

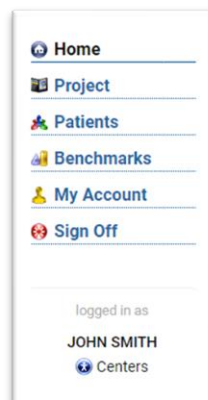







Figure 3: Main menu

### 3 Main Menu: Home, Project, Benchmarks, My Account and Sign Off

-  „Home“ calls the front page, which you also see after the login. The front page provides a welcome text and a short introduction.
-  „Project“ provides access to the project page with specific documentation like this manual and a detailed registry description.
-  „Benchmarks“ shows a list of available benchmarks. By default this includes figures as to demographics and the development of the data entry for your center.
-  „My account“ provides details about your account. Furthermore, you can access a page to set your password by clicking on the „Change Password“ button. Please note that the password must meet certain requirements (see Figure 4 and Chapter 1).
-  „Sign Off“ logs you off from the application.

#### Change Password

Password must contain a lower case letter, an upper case letter, a digit and one of \* + # \_ - ! % & / ( ) = ? @ € < > characters.

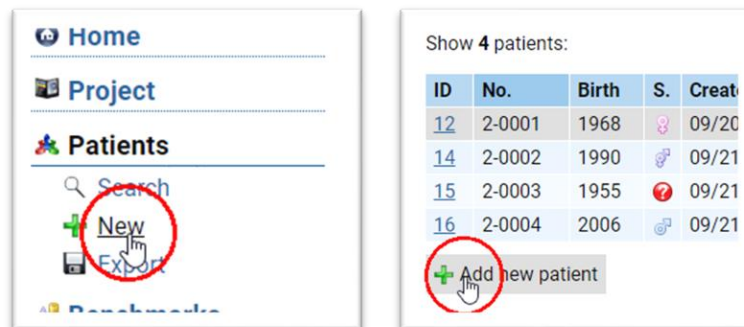
Password:	<input type="text"/>	Confirm password:	<input type="text"/>
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Figure 4: Change Password

## 4 Working with the patients' data

„Patients“ opens the overview page (see chapter 0) and a submenu for working with the patients' data.

### 4.1 Add a new patient



The image shows a form titled 'Add a new patient'. It contains two main sections. The first section is 'Biological sex' with a dropdown arrow and four radio button options: 'male', 'female', 'intersex', and 'unknown'. The second section is 'Year of birth' with a dropdown arrow and an empty input field. Below the input field is the text '(yyyy)'. At the bottom of the form is a 'SAVE' button with a floppy disk icon.

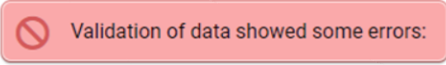
Figure 5: Call the new patient input page

Click on + „New“ in the „Patients“ submenu or the „Add new patient“ button below the patients' overview to start registration of a new patient. (see Figure 5)

Typically, all fields are mandatory. As on all input pages erroneous or missing inputs are indicated by error messages in a light red box just below the header and directly in the corresponding input area (see Figure 6). In this case of adding a new patient, data validation is triggered, when you hit the „Save“ button.

*Your input is saved if and only if the input data is complete and correct and you click the „SAVE“ button. In any other case the input data is lost.*

**Add a new patient**

 Validation of data showed some errors:

**Biological sex** ▾  male  
Biological sex is missing  female  
 intersex  
 unknown

**Year of birth** ▾   
 (yyyy)  
Birthday invalid


 SAVE

Figure 6: Erroneous or wrong input

#### 4.2 The patient's details page


A successful saving of the patient's personal data brings you to the patient's details page as in Figure 7. It shows information on the patient's personal data and a list of the registered visits. In case of a new patient the latter list is of course empty.

*Click on the „Modify patient data“ button,  
if you need to change sex or the year of birth of the patient.*

You can also reach the patient's details page by clicking the patient's ID in the overview page (see Figure 8).

**Patient 16 (No. 2-0004)**

ID	16	Created	09/21/2021 10:04 AM
Number	2-0004	by	you
Year of birth	2006 (15 years old)	Modified	
Biological sex	male	by	

 Modify patient data

Show **0** visits:

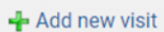
ID	No.	Type	Date	Created	Modified
 Add new visit					

Figure 7: Patient's details page

Show 4 patients:





ID	No.	Birth	S.	Created
<a href="#">12</a>	2-0001	1968		09/20/2021 10:21 PM
<a href="#">14</a>	2-0002	1990		09/21/2021 8:59 AM
<a href="#">15</a>	2-0003	1955		09/21/2021 10:04 AM
<a href="#">16</a>	2-0004	2006		09/21/2021 10:04 AM

Figure 8: Link to patient's details page on the overview page

### 4.3 Search a patient

„Search“ provides a filter for the list of patients (see Figure 9). Empty fields are ignored, the asterisk character can be used as a placeholder. The system will show only these entries, which meet all criteria set in the search window.

#### Search patients

Use the following form to search patients. If you don't want a field to be a criteria, let it be empty. All entered fields are used for searching. You can use "\*" as a placeholder for characters. If you for example enter "195\*" in the birthday field, only patients with birthday between 1950 and 1959 will be found.

ID       Number       Visit ID

Biological Sex       Year of birth

Figure 9: Search function

#### 4.4 Overview page

The overview page provides a list of all patients, who you and other members of your center have registered in the system, one per row (see Figure 10).

You see (from the left to the right) the automatically generated system ID and patient number, the year of birth, the gender (♂ for male, ♀ for female, ♂♀ for intersex, ? for unknown), the date, when the patient was registered, and the date, on which the patient’s data was modified most recently.

For the case, that the registration of an upcoming visit is pending, the system computes a tentative date for this visit according to registry rules. The date is shown in the column „Next visit“. If the date is already in the past, it is printed in bold red.

The list can be sorted ascending by clicking on any of the column headers except „Visits“. Click twice for a descending sorting order.






Show 4 patients:

ID	No.	Birth	S.	Created	Modified	Next visit	Visits
<a href="#">12</a>	2-0001	1968	♀	09/20/2021 10:21 PM	09/21/2021 11:00 AM		👍👍
<a href="#">14</a>	2-0002	1990	♂	09/21/2021 8:59 AM	09/21/2021 11:33 AM	<b>07/01/2021</b>	👍👍👍👍+
<a href="#">15</a>	2-0003	1955	?	09/21/2021 10:04 AM			👎
<a href="#">16</a>	2-0004	2006	♂♀	09/21/2021 10:04 AM	09/21/2021 11:40 AM		👎

+ Add new patient

Figure 10: The overview page

The last column „Visits“ provides information on the processing status of the visit data registration per patient:

-  A new visit can be registered.
-  A new visit has been registered, but no data has been provided yet.
-  The data set, which has been provided so far, is either incomplete, flawed or both.
-  Visit registration for the baseline visit or a follow-up is complete and finished. The data can’t be changed anymore.
-  As above, but for NCC addons

Move your mouse pointer over an icon to get additional information. When you click on the patient ID link, the corresponding details page is displayed. It shows the same icons as the overview page, compare the line with ID 14 in Figure 10 and Figure 11

Show 4 visits:

ID	No.	Type	Date	Created	Modified	
21	1	Day 0	07/21/2020	09/21/2021 11:01 AM	09/21/2021 11:08 AM	👍
22	2	NCC addon day 30/90	08/20/2020	09/21/2021 11:08 AM	09/21/2021 11:08 AM	👍
23	3	NCC addon day 30/90	10/19/2020	09/21/2021 11:08 AM	09/21/2021 11:09 AM	👍
24	4	Follow-up	01/01/2021	09/21/2021 11:32 AM	09/21/2021 11:33 AM	👍

Figure 11: Patient’s details




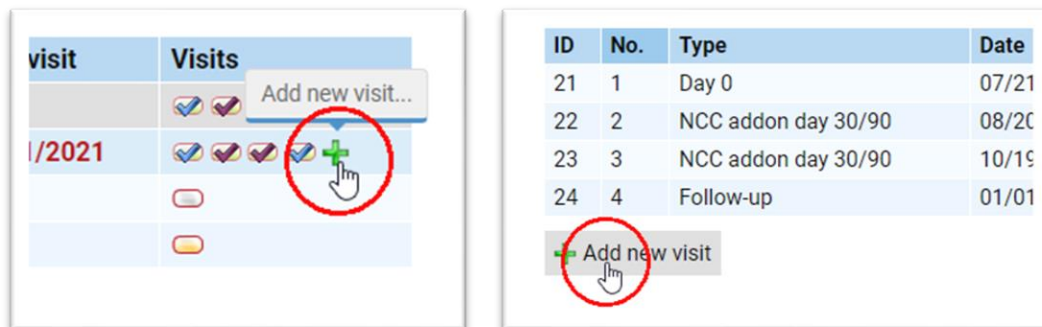
## 4.5 Add a new visit

The Ean NEuro-covid ReGistrY can register three different types of visits:

- baseline visits „Day 0“, one per patient, to be provided as the first data entry with a visit date not before January 1, 2020.
- NCC addon day 30 and NC addon day 90 visits, 1 each per patient, optional, but if and only if neurocritical care questionnaire supplementaries are provided with the baseline visit and no follow-up has been registered yet. Typically registered 30 and 90 days, resp., after the baseline visit
- Follow-up visits, no limitations as to the number, but typically registered every 6 months after the baseline visit



*New visits can only be added, if and only if the data entry for the previous visit has been finished.*

Click on a  link in the overview page, or on the „Add new visit“ button on a patient’s details page to start the data entry for a new visit.



You are requested to provide the visit date and visit type. Depending on the visits, which already have been registered with the current patient, you are offered different types of visits (see above). A click on „Save“ registers the visit and forward you to the actual data input pages. The date can’t be changed after that, the visit can’t be deleted from the system.

## 4.6 Editing the visit data

Data input pages are reached as described in chapter 4.5 or via the overview page by clicking on  or . If you have provided data already, this data is read from the register and displayed accordingly.

The data input pages all contain a header showing information on the patient (ID, number, year of birth and sex) and the visit (number of the visit, date of the visit) and a headline showing the type of the visit, which is currently being edited (see Figure 12). In case the data entry consists of several pages an additional navigation bar is displayed. The current page is displayed in bold black, the other pages in bold gray. You can navigate to these pages by clicking on the different page titles.

Alternatively, you can use the previous and next buttons in the footer (Figure 13) if enabled.

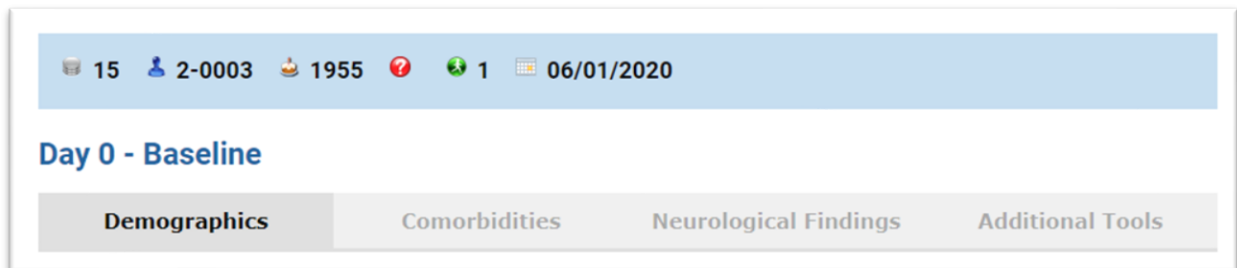


Figure 12: Header navigation bar on the input pages

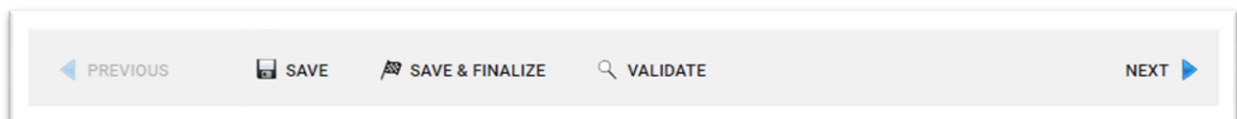



Figure 13: Footer

### Demographics & History

Patient's height ▾	<input type="text"/> cm	<input type="checkbox"/> Unknown
Patient's weight ▾	<input type="text"/> kg (1 - 400)	<input type="checkbox"/> Unknown

Figure 14: Input help

The data input per se is a typical mixture of text fields for user input, radio buttons for exclusive selections and checkboxes for multiselects. In the case of text fields the applications typically provides hints for the allowed values (see Figure 14)

 „save” runs a plausibility check on the data, which you have input already. If the check is positive the data is saved to the register’s database. Flawly input is shown in a light red box just above the navigational bar and directly in the corresponding input area as shown in Figure 15.

Leaving a page via the navigation bar, the previous button or next button will run the same checks as run by clicking the save button.

*If you leave an input page in any other way than described above, the data isn't stored.*

Data can not be saved. Validation of data showed some errors:  
--- Page "Comorbidities" ---

- Input at "Premorbid modified Rankin Scale score (mRS)" has to lie between 0 and 5.

Demographics **Comorbidities** Neurological Findings Additional Tools

**Comorbidities in history**

...

Premorbid modified Rankin Scale score (mRS) ▾

Input has to lie between 0 and 5.

Figure 15: Flawly input

Note that the content of the forms may change or may be expanded dependent on options you have selected or input values you have provided. An example is shown in Figure 16 and Figure 17.

**Neurocritical Care Questionnaire Supplementary**

**NCC additional values**  Yes  No  
 Optionally you have the possibility to fill out the NCC CRF

**Finally**

**Any comment**

Figure 16: Option select „No”

**Neurocritical Care Questionnaire Supplementary**

**NCC additional values**  Yes  No  
 Optionally you have the possibility to fill out the NCC CRF

**Patient's ethnicity**  Hispanic or Latino  
 self-reported  Not Hispanic or Latino  
 Unknown  
 Not reported  
 Other:

**Empiric COVID 19 treatment**  None  
 What empiric COVID 19 treatem(t)s was given  Hydroxychloroquine  
 Zithromax  
 H+Z combo  
 IVIG  
 Remdesivir  
 lopinavir/ritonavir  
 Other:

**Pre-Existing Code Status**  Full  
 Pre-existing code status prior to presentation to hospital  DNR  
 DNI  
 CMO  
 Other

**ATII-RA**  Yes  No

Figure 17: Option select „Yes”

#### 4.7 Finalize a visit

„Validate“ runs both a plausibility check and a check for completeness of the data of all input pages. Possible errors are again shown in a light red box with a clear indication on the concerned page and again directly in the corresponding input areas on each page. Otherwise a positive feedback is given as shown in Figure 18.





Figure 18: Data validated






*„Validate“ does not save any data!*

🚩 „Save & Finalize“ does the same as „Validate“, though, if all the data is plausible and complete, the data will be saved and the visit will be closed.


*Once you have finalized and a visit, the data can not be changed anymore.*

## 4.8 Reviewing the data

You can review your data by clicking on the corresponding  or  button on the overview page or details page. Though, the data can't be changed after you have finalized the visit registration.

 14  2-0002  1990  2  08/20/2020

### Neurocritical Care Questionnaire Supplementary (~1 months after the baseline)

 This visit is finalized.

**30 day mortality**  Yes  No  Unknown  
Was the patient alive at 30 days after hospital discharge

### COVID Status

**COVID-19 re-infection since previous visit**  Yes  No  
Previous visit was 07/21/2020

**Was the patient vaccinated since previous visit?**  Yes  No  
Previous visit was 07/21/2020

### Finally

**Any comment**

---


 VALIDATE

Figure 19: Reviewing the data

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