

CentroStella

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What is CentroStella

CentroStella Cerotek's managing software that allows to **record, store** and **extract** all the datas from the different devices that it makes use of.

CentroStella's service has been conceived with the specific goal to implement the **quality of assistance**, becoming a real and concrete support to healthcare workers, **reducing the risk of error** and improving the **quality of life** of the assisted.

Accessing to CentroStella with given credentials, it's possibile:

- 1) create and manage the accesses to the portal and to the App for **Admin, Doctors e Operators**
- 2) create the master data of the **single assisted**
- 3) create the master data of **doctors**
- 4) **monitor the datas** and **manage the alarms** in case of anomalies or abnormal parameters
- 5) **manage therapy** previously uploaded for the single assisted

It's a service available both for Desktop, especially for what concert the administration, and for App to guarantee the correct use from the operators.



CentroStella

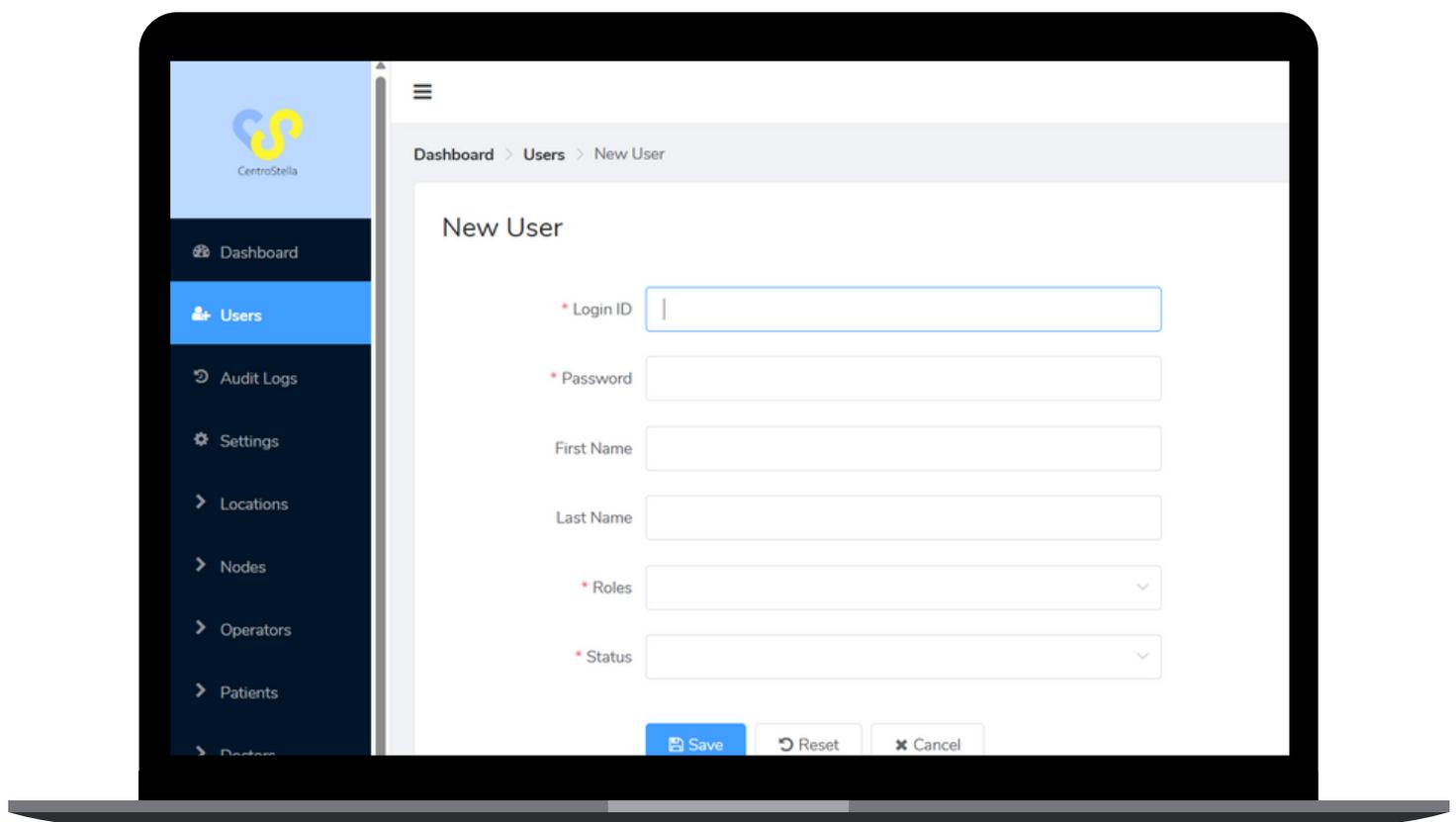


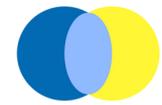
1. Management of Users

1.1 creation Users' profile

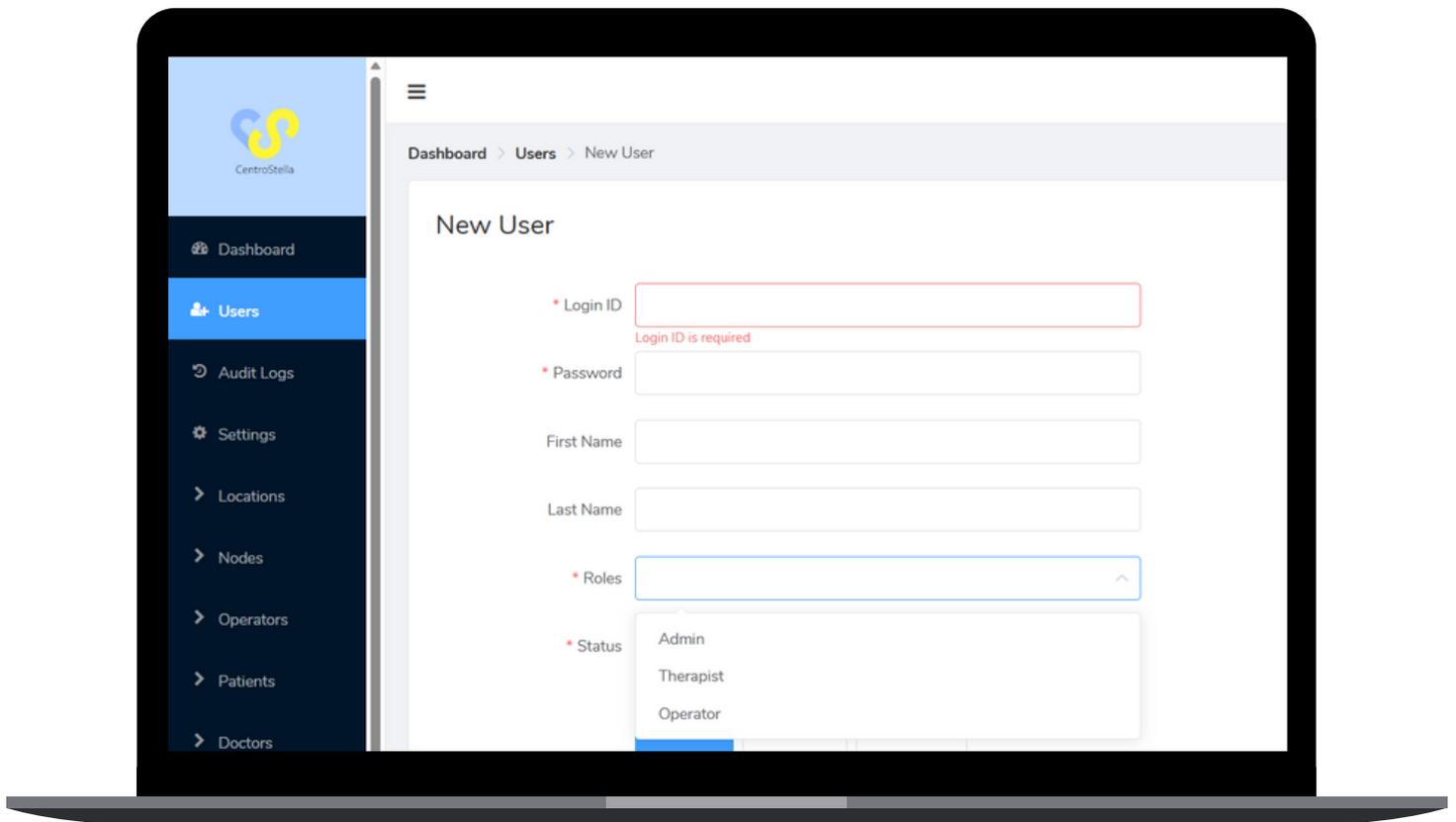
After the access to CentroStella with given credentials, the Admin can insert the datas of the people responsables.

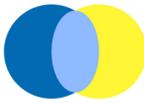
In the "Users" section, clicking on "New", the Username, a password with 8 characters between numbers and letters, the First Name and the Last Name of the person need to be inserted.



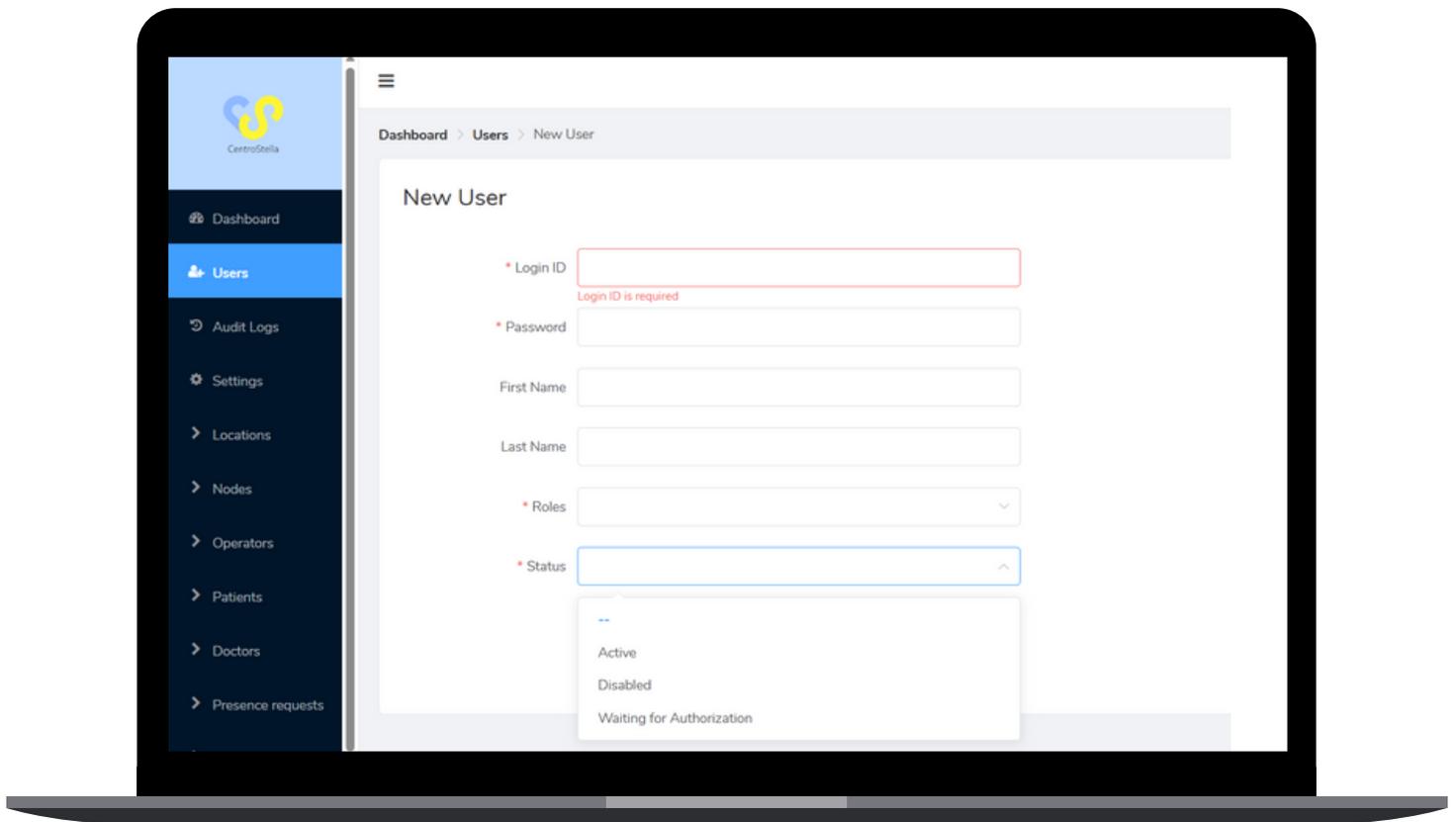


The selection of the role of the User is necessary, choosing between "Admin", "Therapist", "Operator" or "Doctor".





Once the role is defined, the status of the profile needs to be indicated.



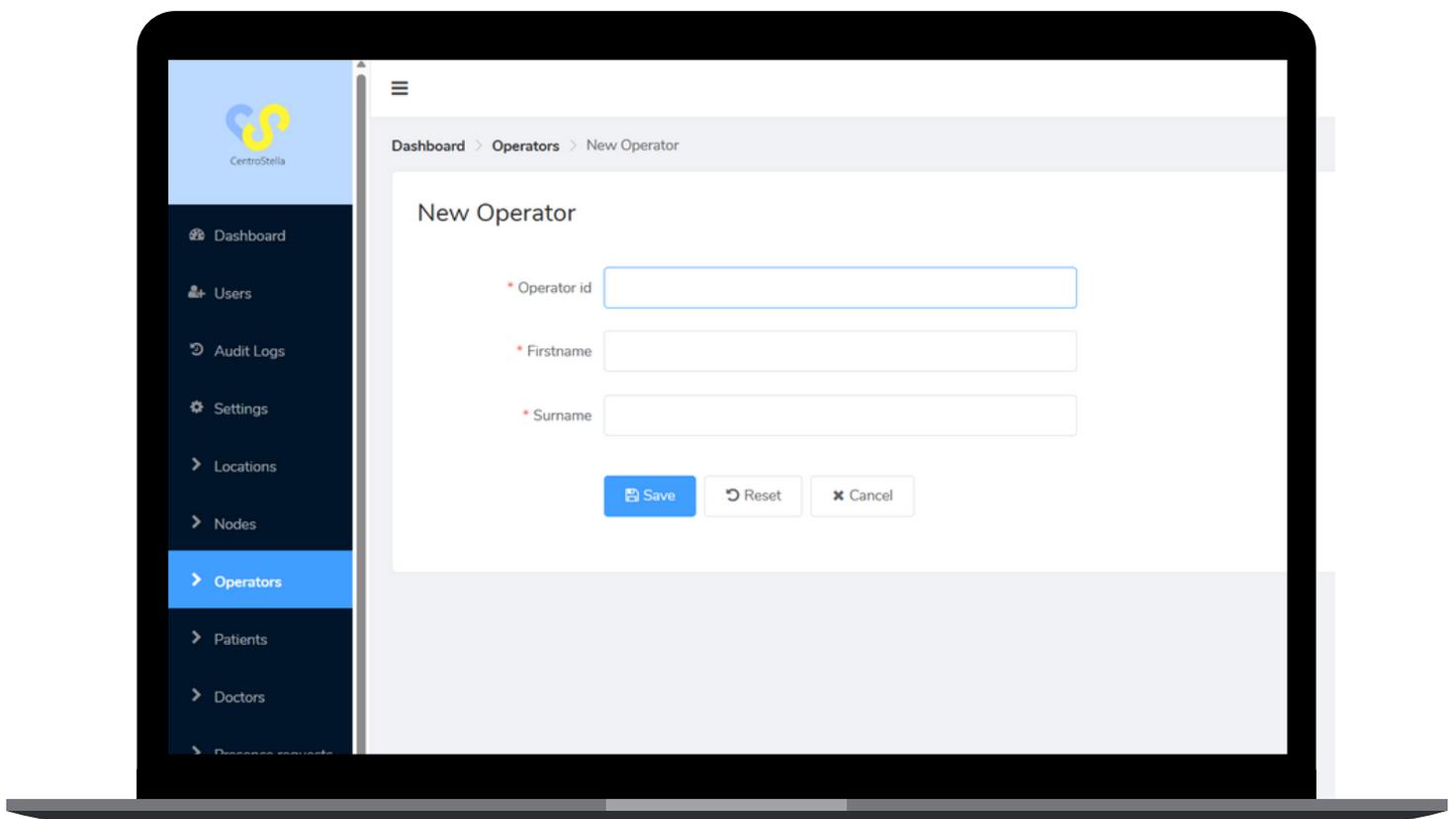


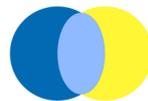
1.2 App Access

In order for the users uploaded to access to the App, the Admin needs to enter the datas previously inserted in the given sections according to the Role.

1.3 Creation Operator's profile

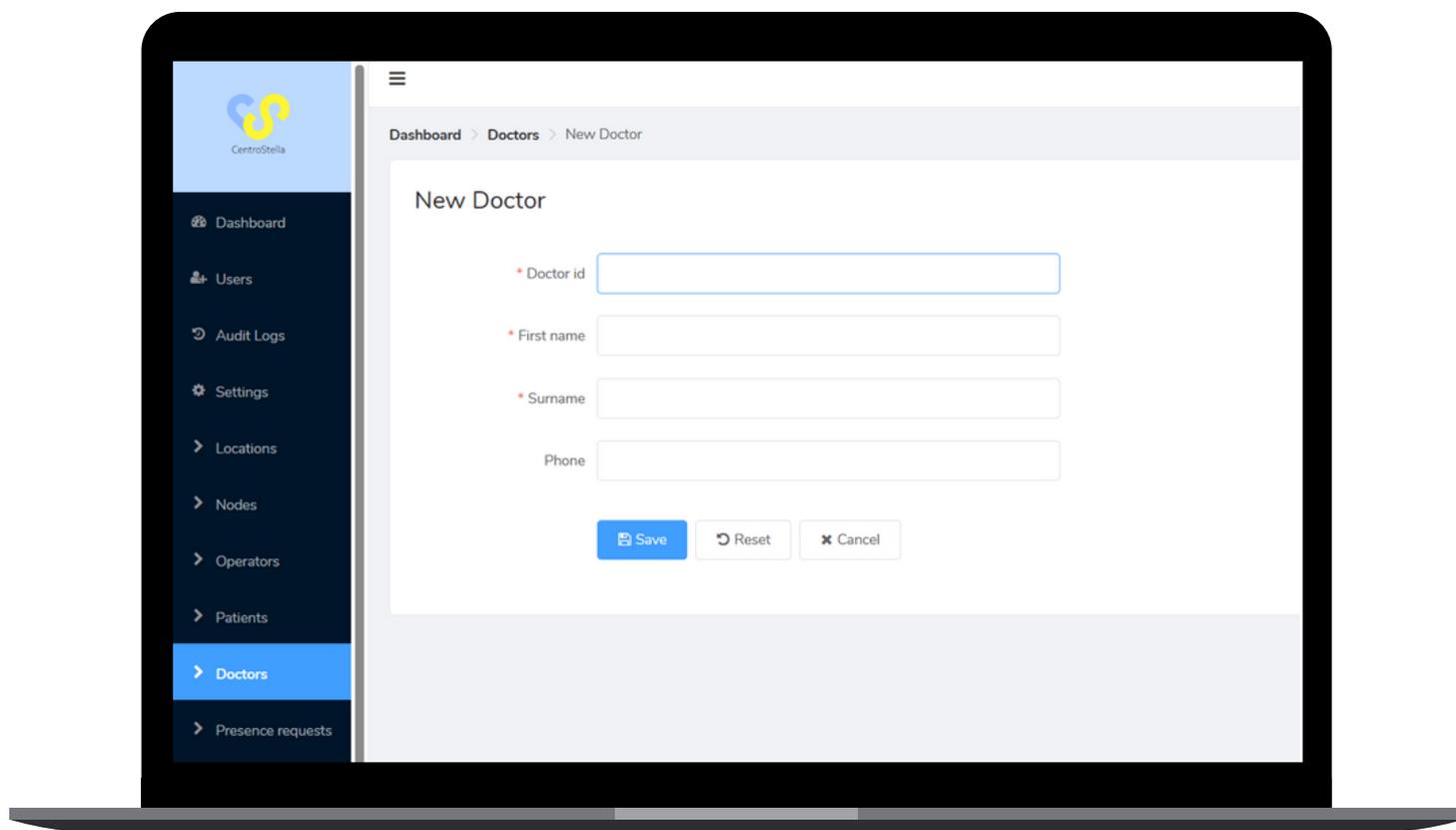
To guarantee the Operators' access to the App, the Admin needs to select the "Operators" section. Clicking on "New", the Username, the First Name and the Last Name need to be inserted.





1.4 Creation Doctor's profile

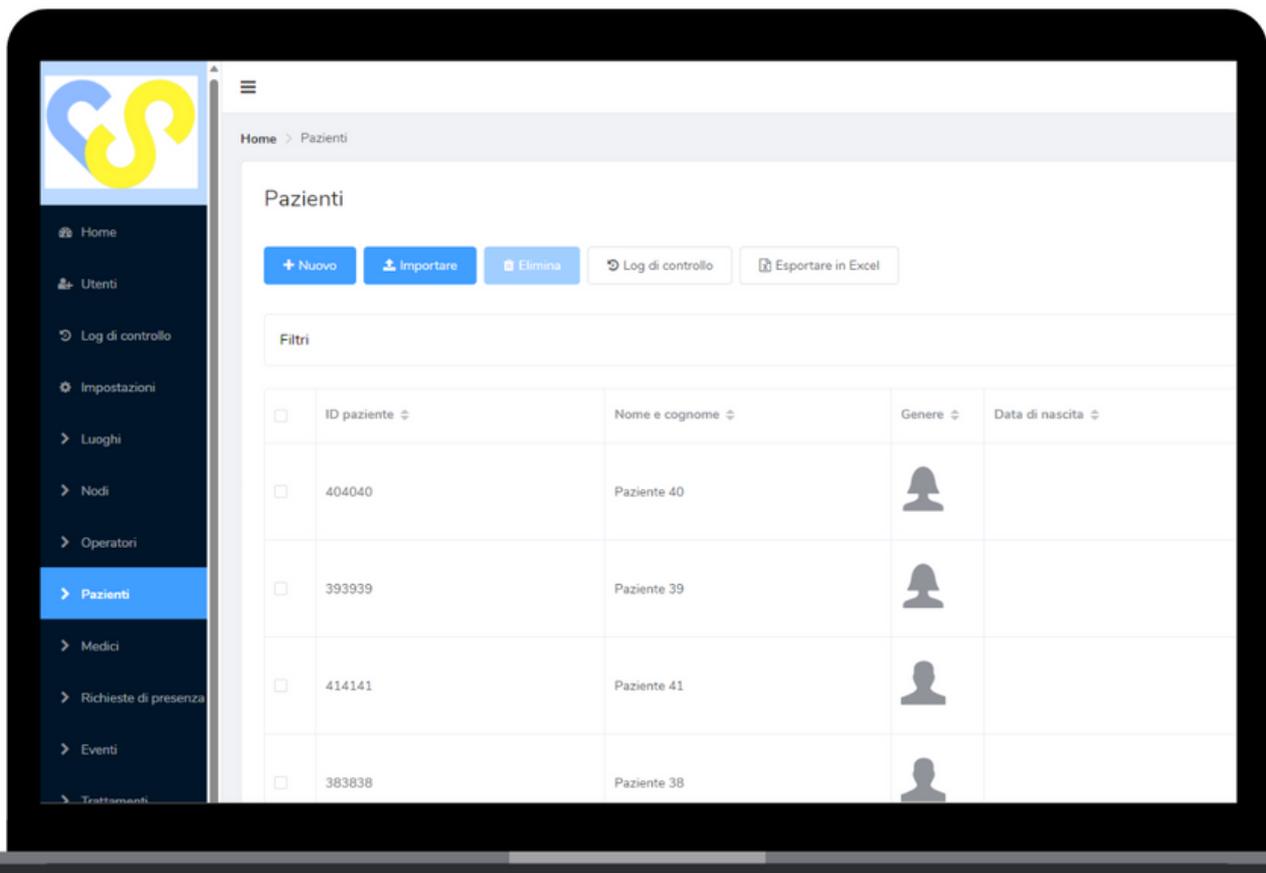
Selecting the "Doctors" section, it's necessary to insert the Username, the First Name and the Last Name previously uploaded.

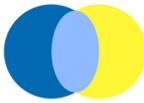


2 Anagrafica

2.1 Patients' master data

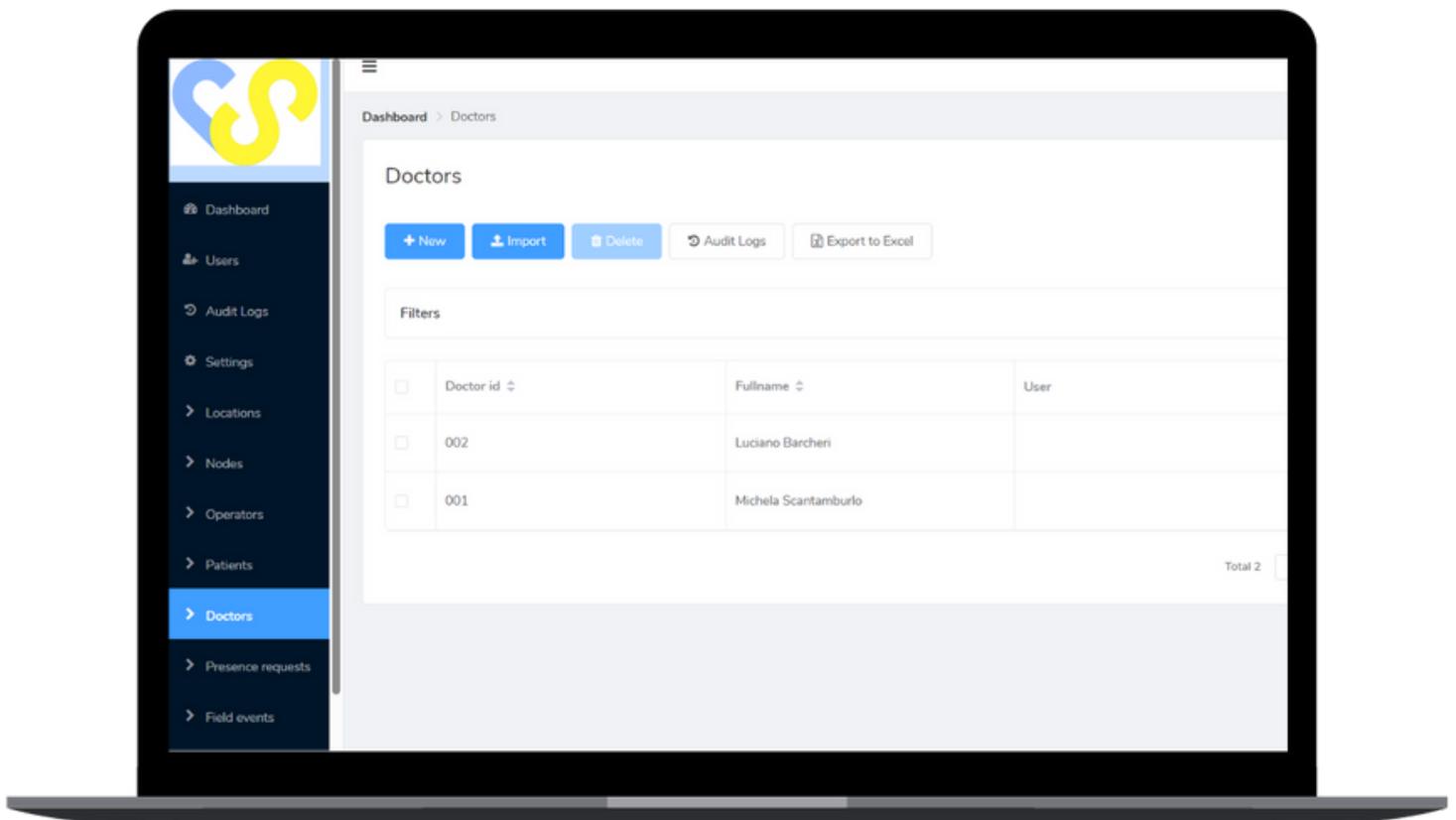
After accessing to CentroStella with given credentials, in the “Patients” setion, selecting “New”, it will be possible to upload the assisted master data. It will be necessary to insert the **health card code**, **Surname** and **Name**, **date of birth**, **sex**, the **general practitioner**, **reported allergies**, the certificates of **documented allergies**, **weight**, if the assisted benefits of **hospital supply**, indicating if it is a **diabetic patient** and if the profile of the patient is “**active**” or “**not active**”.

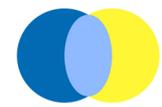




2.2 Doctor's master data

After accessing to CentroStella with given credentials, in the “Doctor” section selecting “New”, it will be necessary to insert the **doctor ID**, **Surname** and **Name**, **specialization**, the **Structure** where the doctor practises and the **phone number**.





CentroStella's functions

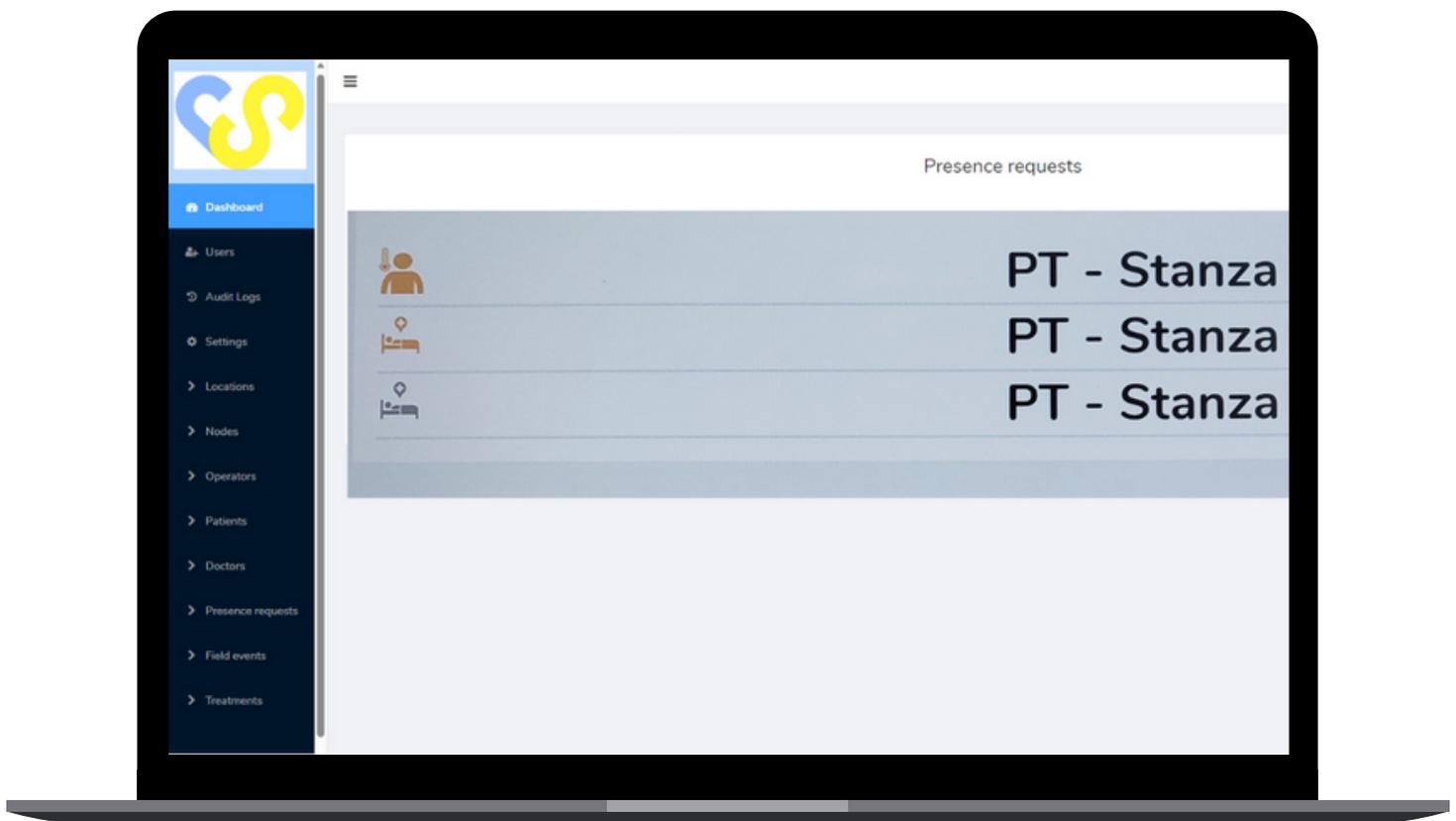
With CentroStella, is possible to manage the different services linked to the products offered by Cerotek.

The areas of expertise are **Assistance Call System**, **Management of Therapy**, **Monitoring of the Guest** and **Doktorbag**.

3 Assistance Call System

3.1 Assistance Call System visualization- PC

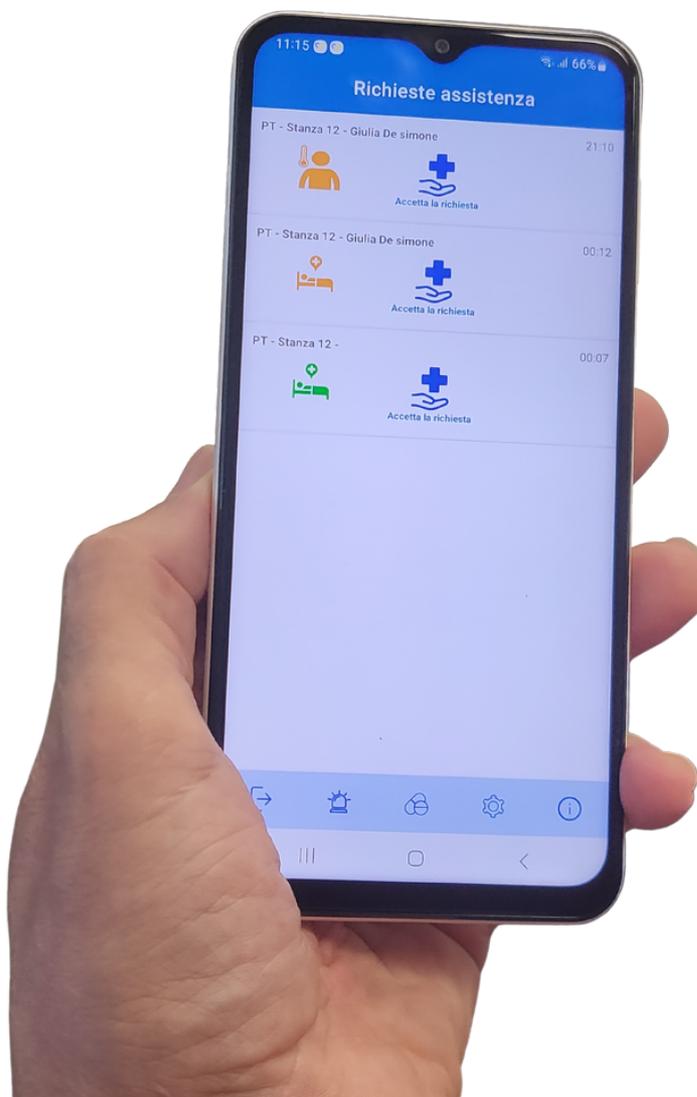
With the request of assistance by the the activation of the headboard and the bathroom alarm, in "Dashboard" it will be possible to see all the request of assistance with the type of request, the name of the patient, the number of the room and the time passed from the request.

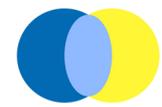




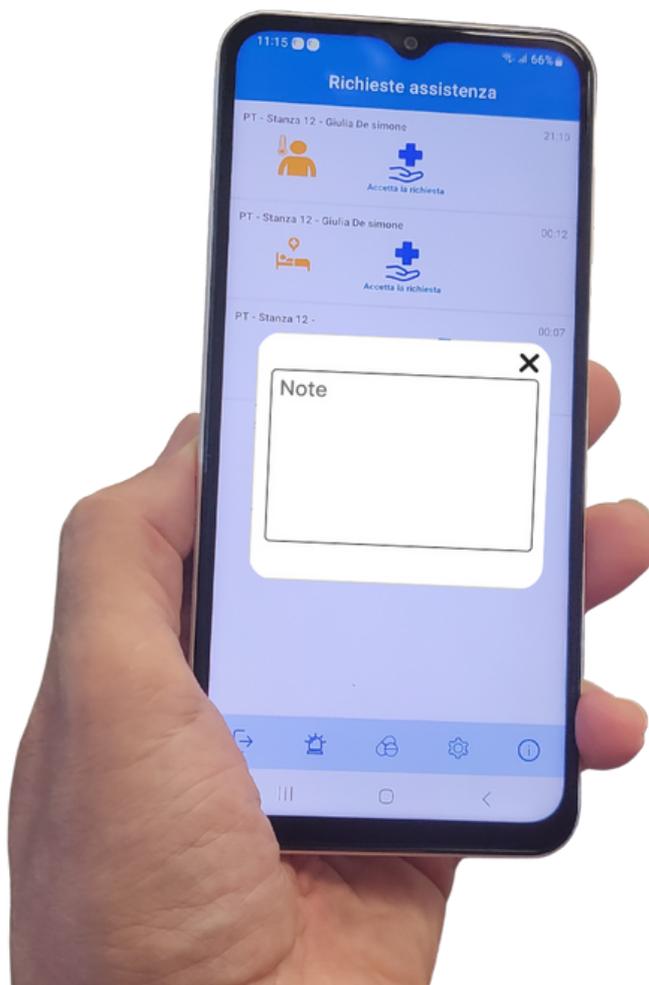
3.2. Assistance Call System visualization- App

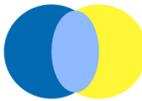
At the same time, accessing to the App with given credentials, healthcare workers can see the notification of a request of assistance.





Taking charge of the call, it will be possible to add **notes** during the closing process of the request of assistance.



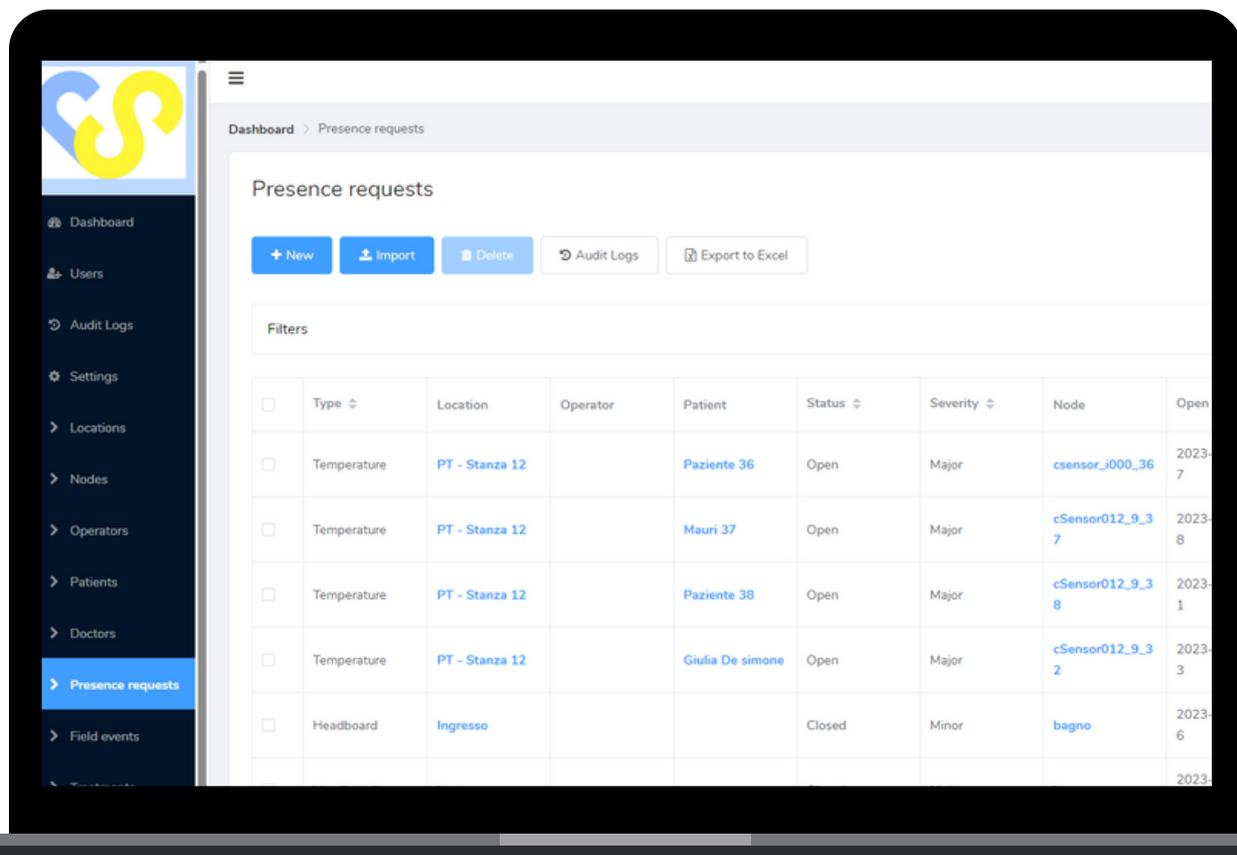


3.3 Presence requests

In the “presence requests” section, it will be possible to visualize the assistance call history, with the possibility to download the datas, selecting filters.

It will be possible to visualize the type of alarm, the number of the room, the operato in charge, the patient, the status, the severity, time and date when the call was activated, time ad date in which

the call had been closed and the duration of the intervention.



Dashboard > Presence requests

Presence requests

+ New Import Delete Audit Logs Export to Excel

Filters

<input type="checkbox"/>	Type	Location	Operator	Patient	Status	Severity	Node	Open
<input type="checkbox"/>	Temperature	PT - Stanza 12		Paziente 36	Open	Major	cSensor_i000_36	2023-07-07
<input type="checkbox"/>	Temperature	PT - Stanza 12		Mauri 37	Open	Major	cSensor012_9_37	2023-07-08
<input type="checkbox"/>	Temperature	PT - Stanza 12		Paziente 38	Open	Major	cSensor012_9_38	2023-07-01
<input type="checkbox"/>	Temperature	PT - Stanza 12		Giulia De simone	Open	Major	cSensor012_9_32	2023-07-03
<input type="checkbox"/>	Headboard	Ingresso			Closed	Minor	bagno	2023-07-06
								2023-07-06

4. Management of Therapy

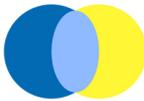
4.1 Management of Therapy in Residential Facilities- Uploading of Assisted's Therapy

After the uploading of the patient's anagraphic, it will be possible to upload the therapy. In the "Treatments" section, clicking on "New" is possible to upload the medicine and its description. In addition to the picture, the date of beginning and end and the frequency, the prescriber needs to be added. A NFC Tag will be applied to the daily dispense in order to guarantee the administration of the RIGHT THERAPY to the RIGHT PERSON at the RIGHT TIME.

The screenshot shows the 'New Treatment' form in the CentroStella application. The form is displayed on a laptop screen. The breadcrumb navigation at the top reads 'Dashboard > Treatments > New Treatment'. The form fields are as follows:

- Summary:** A text input field with a red asterisk indicating it is required.
- Images:** A dashed box containing a plus sign, indicating an image upload area.
- Start Date / Time:** A date and time picker field showing '2023-08-24 08:00' with a green border.
- Patient:** A text input field with a red asterisk indicating it is required.
- Dispenser:** A text input field.
- Frequency:** A dropdown menu with 'Select' as the current option and a red asterisk indicating it is required.

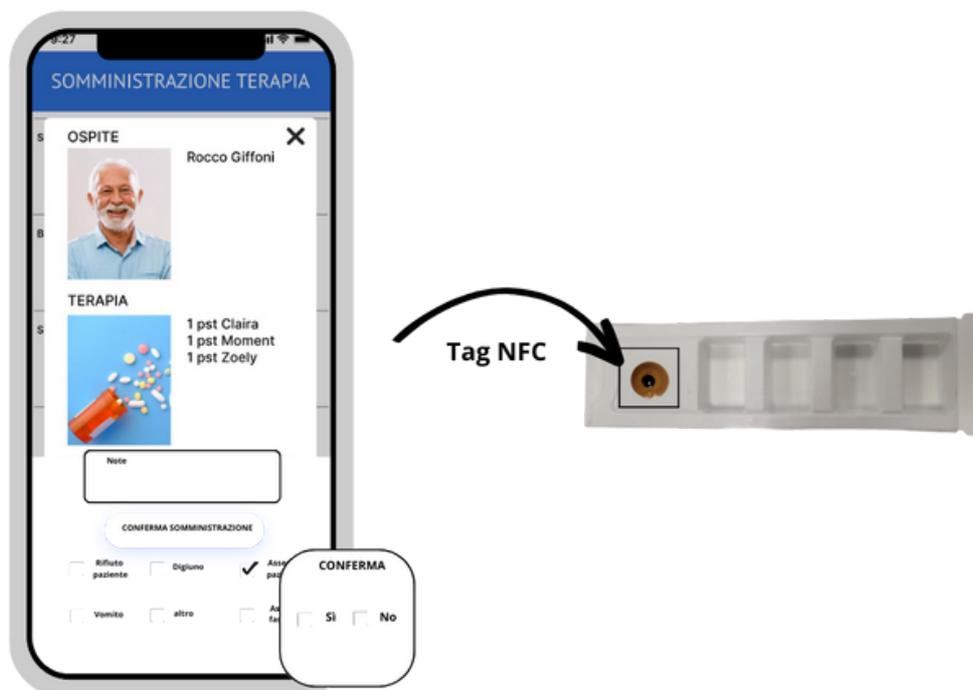
At the bottom of the form, there are three buttons: 'Save' (blue), 'Reset' (grey), and 'Cancel' (grey).

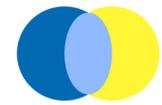


4.2 Administration of the Therapy

Getting the smartphone with the App closer to the patient's dispenser, the First Name and Last Name of the guest with the picture, a notes field, the "confirm administration" button to push once the administration of the therapy is completed will appear.

In case the therapy is not administered, under the confirmation button there are 6 voices (patient's refuse, fast, patient's absence, vomit, other, medicine's lack) that can be chosen to motivate the non-administration of the therapy. Once one of the voices is picked, a confirmation button. Clicking "yes", the page will automatically close; clicking "no", the page will return to the administration confirmation screen.



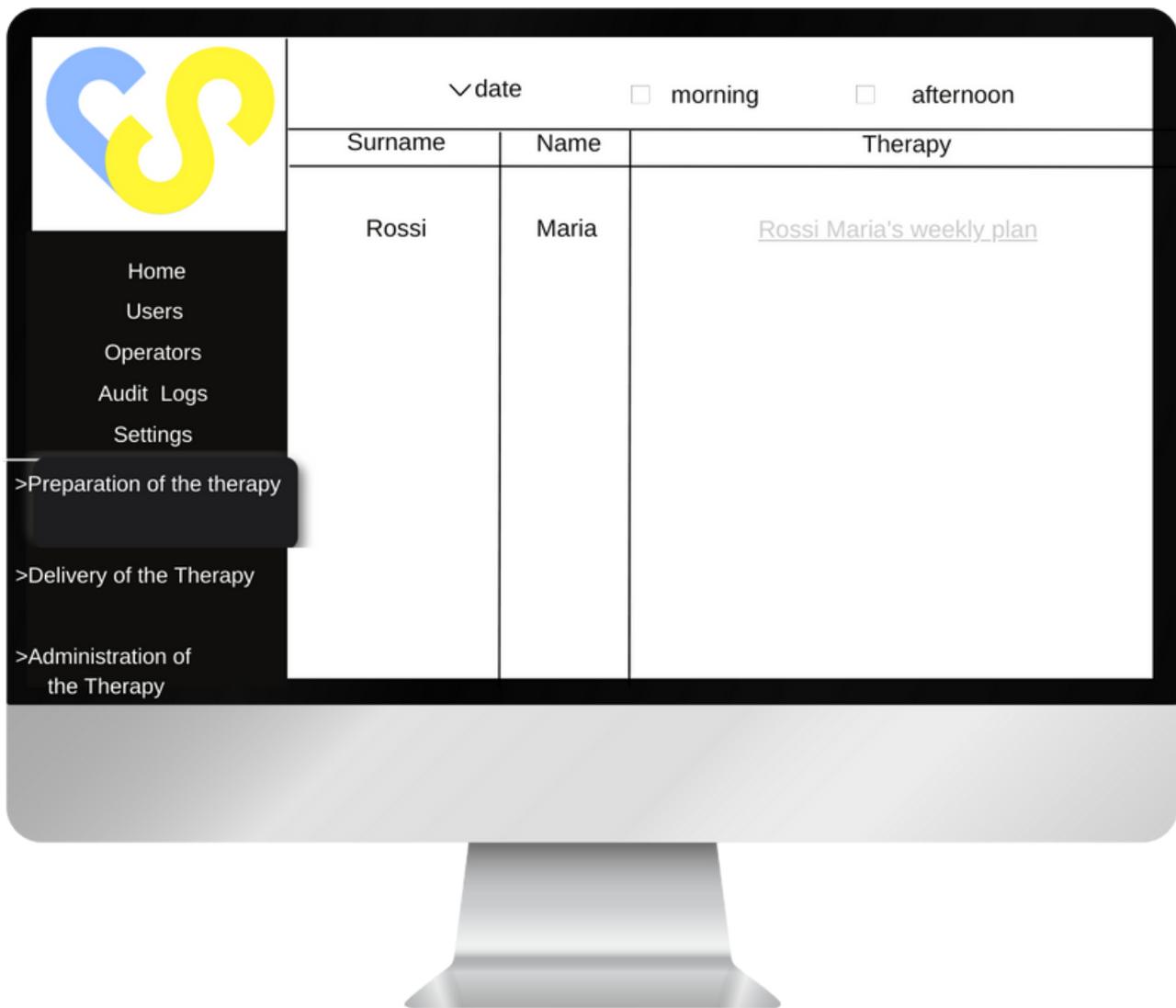
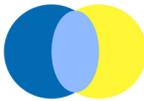


4.3 Management of Therapy at home- Uploading of assisted's therapy

As for the assisted in Residential Facilities, accessing to CentroStella with given credentials is possible to upload the therapy of the assisted. After uploading the assisted's anagraphic signaling the time slot for the delivery of the dispenser (day and time), in the section "therapy plans" the description of the therapy (max. 250 characters), the picture of the medicines to administrate, the date and the time of the beginning of the treatment, the fequency of administration, the prescriber and the time slot previously selected need to be inserted.

4.3.1 Time slot selection

Through the PC, on CentroStella in the "preparation of the therapy" section, it's possible to select the date (clicking on the arrow down) and the time slot (previously uploaded in the anagraphic's section) for the delivery of the dispenser. Once the time slot in selected, a list of people will be available (Surname, Name and therapy).



Clicking on "weekly plan" of the single patient, it's possible to see the weekly table in which the therapy to be prepared will be available.



Clicking on the medicines listed, it's possible to see the pictures of the medicines previously uploaded.

Surname, name 	monday	tuesday	wednesday	thursday	friday	saturday	sunday	monday	<input type="checkbox"/>
morning	<u>ramipril</u> 								
afternoon (lunch)									
afternoon									
night									

4.4 Preparation of the Therapy

4.4.1 Assisted selection

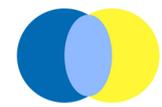
In order to know who is the owner of the dispenser that needs to be prepared, the nurse in charge will have to bring the smartphone closer with App downloaded to the iPill Box's NFC Tag. This way, a picture of the assisted, the Surname, the Name, the address and the time slot for the delivery of the dispenser can be confronted with what stated of the PC.



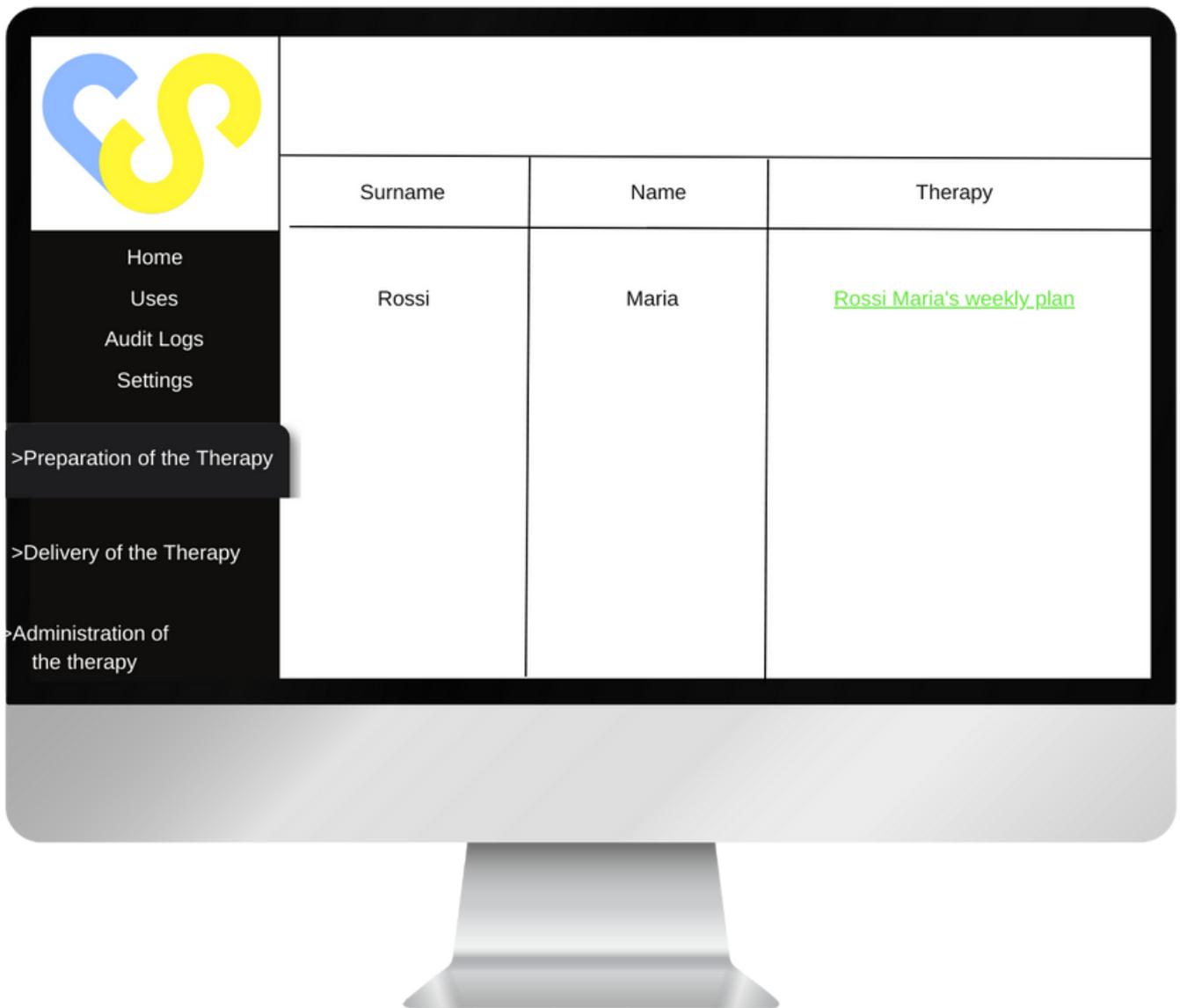
According to what has been stated on the weekly table, the nurse in charge will prepare the dispenser. The iPill Box will be uploaded with the logic that the assisted won't be without therapy.

At the end of the operation, the nurse in charge will have to click on the given square in order to confirm the preparation of the dispenser.

Surname, name	monday	tuesday	wednesday	thursday	friday	saturday	sunday	monday	<input checked="" type="checkbox"/>
									
morning									
afternoon (lunch)									
afternoon									
night									



At this point, the therapy of the assisted will pass from grey to green to indicate the effective uploading.





4.5 Management of dispenser's delivery- Anagraphic of Operators

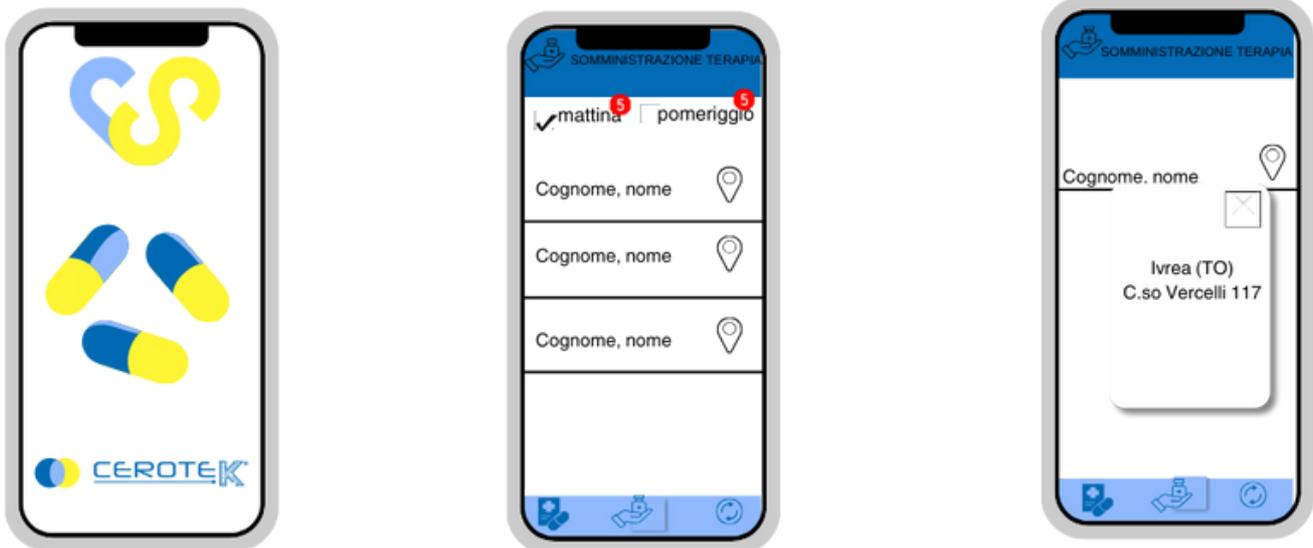
After uploading the datas of the operators in charge for the delivery of the dispenser on CentroStella, it will be possible to assign the assisted to go to. According to the shifts registered, in the "Delivery of the Therapy" section will appear the list of the operators. Selecting the operator, the day and "morning" or "afternoon", it will be possible to consult the daily delivery plan. Selecting the given square, it will be possible to assign the deliveries to take care of (the name, from the "assisted" column, will move to the "delivery in charge" column).

The screenshot displays the 'Delivery of the therapy' section of the CentroStella application. The interface features a sidebar menu on the left with options: Home, Users, Audit Logs, Settings, >Preparation of the therapy, >Delivery of the therapy (highlighted), and >Administration of the Therapy. The main content area has a header with filters: 'operator' (dropdown), 'date' (dropdown), 'morning' (checkbox), 'afternoon' (checkbox), and a download icon. Below the header is a table with the following structure:

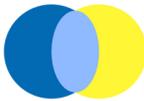
assisted		delivery in charge	delivery completed
Rossi Maria	✓		

4.6 Administration of the Therapy- Delivery of the Therapy

On the phone of the operator in charge of the delivery of the therapy, a page in which is possible to select "morning" or "afternoon" will appear on the "administration of therapy" section. Choosing one of the two options (the number of assisted assigned will be visible) a list of the people assigned according to the time slot selected will appear.

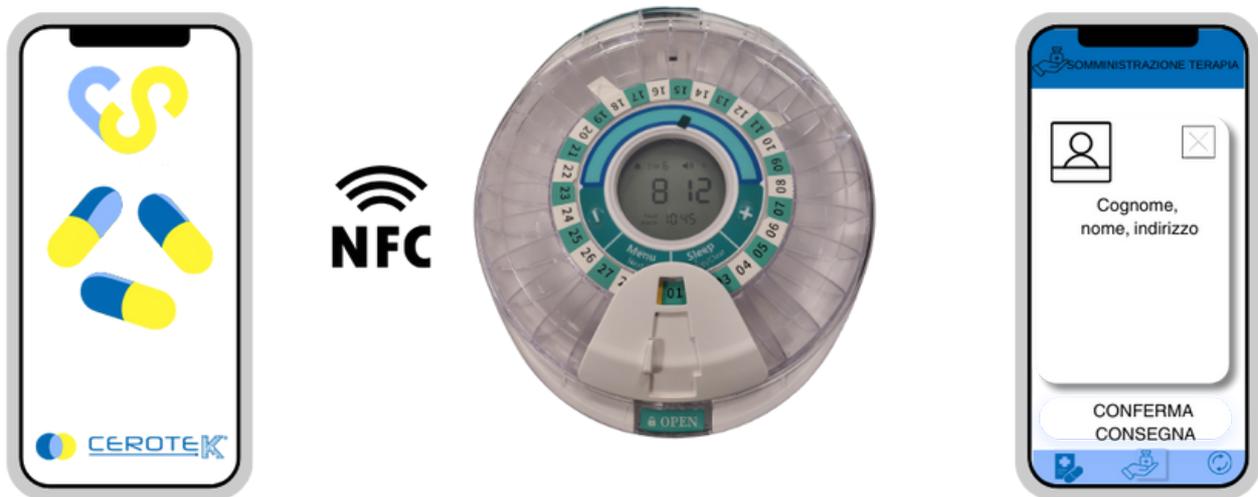


During the time slot indicated, the operator in charge will go to the assisted's house for the iPill Box delivery.



To verify that is the right person, the operator will have to bring the smartphone, with the given App, closer to the dispenser's NFC Tag.

At this point, a page with the picture, Name, Surname and address of the assisted will appear.



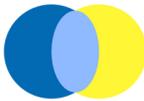
To confirm the actual delivery and close the operation, the operator will have to click on "confirm delivery".

4.7 Update of the dispenser

When the dispenser is delivered, the operator will have to update the dispenser, bringing the smartphone with the App closer to the dispenser. This way, the dispenser will respect any changes made on CentroStella.

Once the updating is completed, the confirmation of the update will appear on the smartphone. The name of the assisted and the address will disappear from the "administration of the therapy" section and the counter number is decremented.





In the same way, on CentroStella, in the "delivery of the therapy" section, it will be possible to consult the historization of all the deliveries charged. Selecting the operator, the name of the assisted will appear under the "delivery completed" column. It will be possible to download the data of the day of delivery.

The screenshot displays the CentroStella web application interface. On the left is a dark sidebar menu with the following items: Home, Users, Operators, Audit Logs, Settings, >Preparation of the therapy, >Delivery of the Therapy (highlighted), and >Administration of the Therapy. The main content area features a header with a search filter set to 'operator', a date dropdown, and checkboxes for 'morning' and 'afternoon'. A download icon is located in the top right corner. Below the header is a table with the following structure:

assisted		delivery in charge	delivery completed
	✓		Rossi Maria

6. Doktorbag

6.1 Master Data

6.1.1 uploading doctors' master data

On CentroStella, in the "doctors" section, a list of the doctors registered will appear. Selecting the given icon +, the master data of the single doctor will be uploaded. It will be necessary to insert the Surname, Name, the Specialization, the Structure, the phone number and the email address.

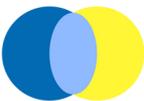
The screenshot shows a web application interface for managing doctors. On the left is a dark sidebar with a navigation menu: Home, Users, Operators, Doctors (highlighted), Audit logs, Settings, Thresholds, Measurements, and Home Assistance. The main content area is titled "Doctors" and features a teal "+" icon in a circle. To the right of the title are two radio buttons: "active" (selected) and "not active". Below this are six input fields arranged in two columns: *Name, *Surname, *Structure, *Specialized in, *Email address, and *Phone number. At the bottom of the form are three buttons: SAVE, RESTORE, and CANCEL.

In case of people with difficulty in self-monitoring, an operator will regularly go to the assisted's house to help them use the medical devices. Both with autonomous assisted and with the ones with difficulty in self-monitoring, the measurement and registration of the parameters within a pre-established period of time is planned.



Each doctor will have the possibility to access with given credentials to their own profile. This way, it will be possible to check the trends of their patients, both from the list of patients and selecting the Residential Facility. Clicking on “see measurements”, you will be redirected to the “measurements” section of the patient selected.





6.1.2 uploading assisted's master data

On CentroStella, after uploading the doctors' master data, the assisted's master data will be filled. There will be the photo, Surname, Name, the Social Security Card, the address, email address and the state (if they're autonomous or with caregiver). In the case of the ones with caregiver, it will be necessary to insert their datas. In the case of a person with difficulty in self-monitoring, the day (Monday, Tuesday, Wednesday, Thursday, Friday) and the time during which the operator can show up to help the assisted in the use of Doktorbag will be inserted.

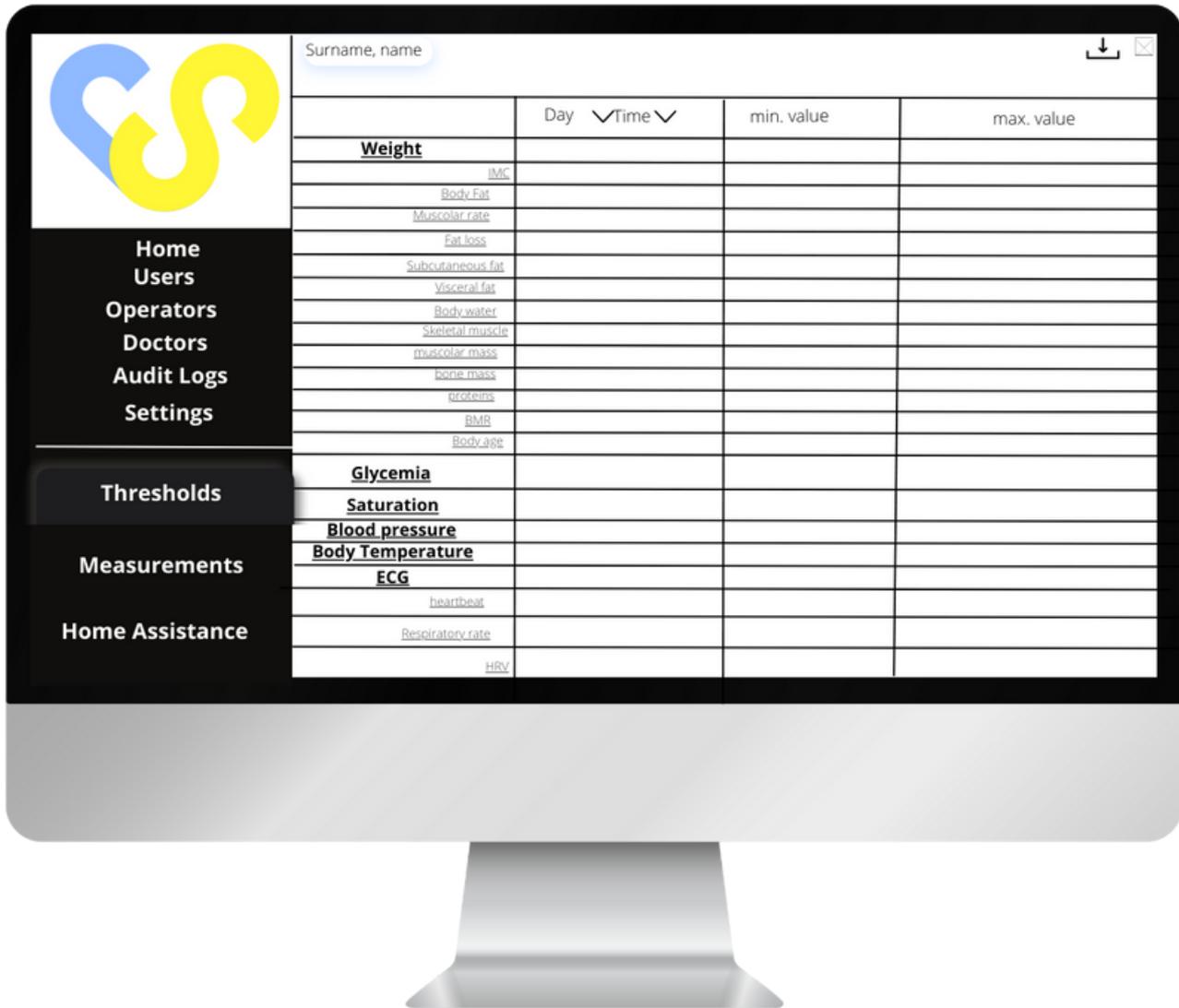


In the case of the assisted who doesn't need assistance using doktorbag, there will be a scheduling for each parameter in order for Memo as reminders to take the measurements to be generated.



6.2 Thresholds

For each assisted, in the “Thresholds”, thresholds values for each parameter are set. They will be the reference values for the datas detected with the devices of Doktorbag.



6.2.1 Scheduled measurements

(person who doesn't need assistance)

For the assisted without difficulty in self-monitoring, each measurement is scheduled. For each parameter, it will be possible to insert the day and the time when to take the measurement. Close to the established time, a memo will be send to remind taking the measurement. In case of failure to detect the value, there will be no alarm.

6.3 Measurements

Selecting the assisted, in the “measurements” section all the measurements taken at home will appear. If there is an increase or a decrease of the value’s number, there will be a **red arrow** (upward to signal the increase, downward to signal the decrease) under “trend”. If there’s a continuity with the past measurements, the **arrow** will be **green** and horizontal. It will be possible to access to the past datas selecting the dates desired with the possibility to download a file clicking on the given icon.

Surname, name	From	To	Min/Max	Value	Trend
Weight					
BMI					→
Body fat					↓
Muscular rate					
Fat Loss					
Subcutaneous fat					
Visceral fat					
Body water					
skeletal muscle					
Muscular Mass					
Bone mass					
Proteins					
BMR					
Body age					
Glycemia					
Saturation					
Blood pressure					
Body temperature					
Hydration					
ECG					
heartbeat					
Respiratory rate					
HRV					

In case of parameters outside of the thresholds values (**red arrow**), Centrostella will generate an alarm. The intervention will be at discretion of healthcare workers.

Clicking on the single parameter, a section will open with the trend and the dates in which the measurements had been taken.

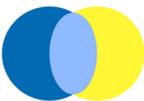


6.3.1 Alarms

From the homepage, in “measurements”, it will be possible to see the number of alarms notifications of the values detected.

Clicking on "measurements", the subcategory “alarms” will appear. It will open a page with the Surname and the Name of the assisted and the data detected with the given threshold values of reference.

Surname, name	parameter	min/max	value
<u>Rossi Maria</u>	glycemia		

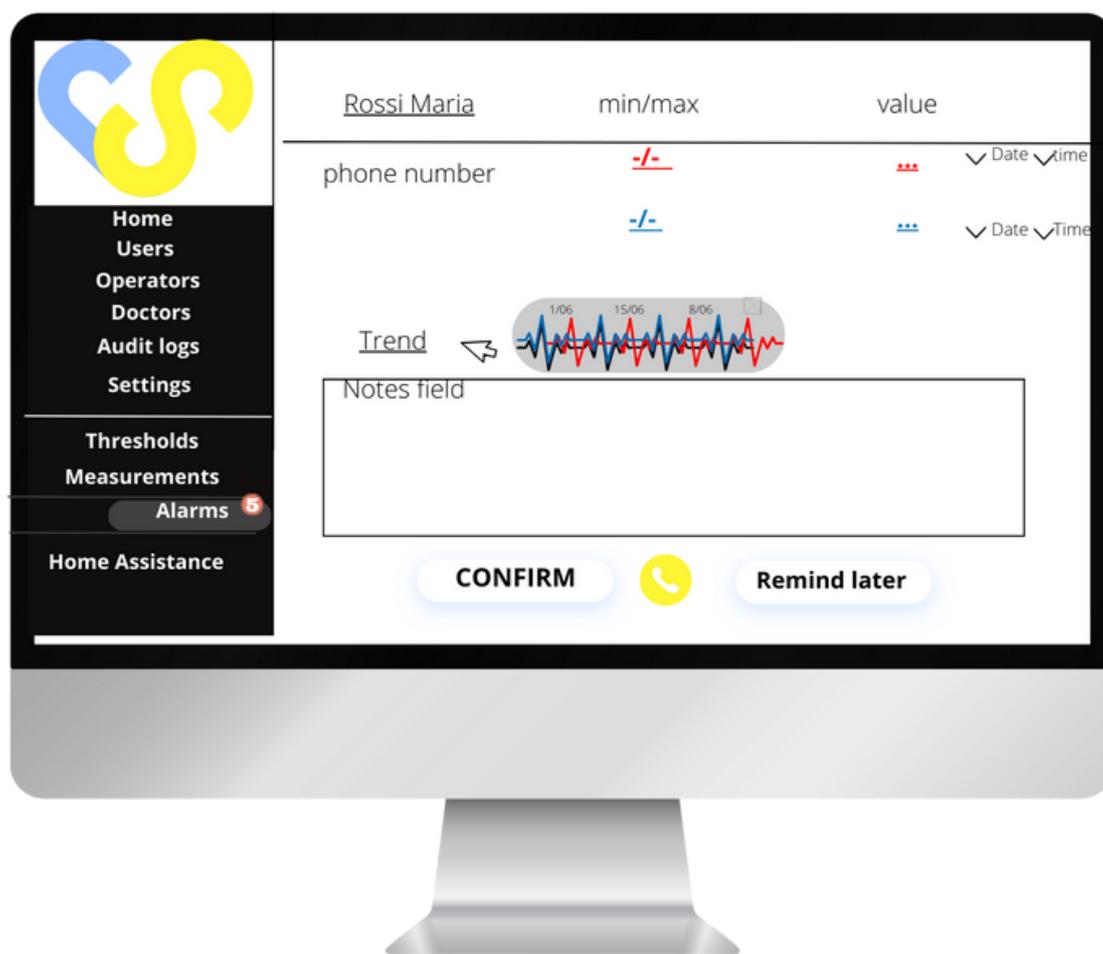


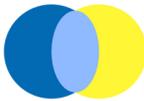
Clicking on the name of the assisted, a page will open with the phone number previously inserted, the value with an abnormal outcome and the thresholds in between which it should be.

There will be a notes field in which it will be possible to insert the modality of management of the problem (with a phone call, for a retake of the measurement taking command of the patient's tablet, calling 118, etc). In the case of the retake of the measurement, the new value will be superimposed in blue to the trend already existing.

It will also be possible to see the trend of the last month of the measurement interested.

Clicking "confirm", the alarm taken in charge will close and the notification will disappear. Clicking on "remind me later", it will be possible to go back to the homepage and postpone the taking charge. Clicking on the given icon, the call will start. (note: in **RED** -> abnormal value; in **BLUE** -> retaken measurement, in **BLACK** the trend of the previous measurements).





6.4 MANAGEMENT OF OPERATORS' SHIFTS

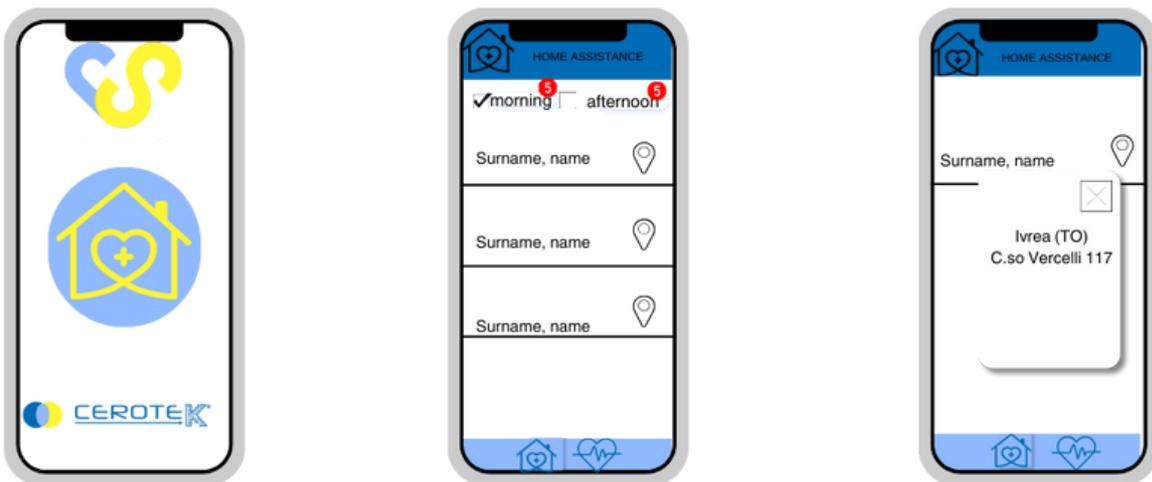
6.4.1 Home Assistance- Operators' master data (pc)

After inserting the datas of the operators in charge of assisting in the use of Doktorbag, it will be possible to assign the assisted to go to. According to the shifts registered, in the “home assistance” section a list of the operators will appear. Selecting the operator, the day and “morning” or “afternoon”, it will be possible to see the daily plan of the assistance to take place. Selecting the given box, it will be possible to assign the assisted to take in charge to the operator (the name, from “assisted” will pass to “assistance in charge”).



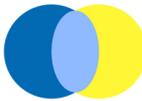
6.4.2 Home Assistance (APP)

With the given App, on the phone of the operator that manages home assistance, in the section “home assistance” will appear a window in which it will be possible to select “morning” or “afternoon”. Clicking on these two voices (with given counter of the number of assisted assigned), a list of people to take in charge will appear according to the time slot selected.

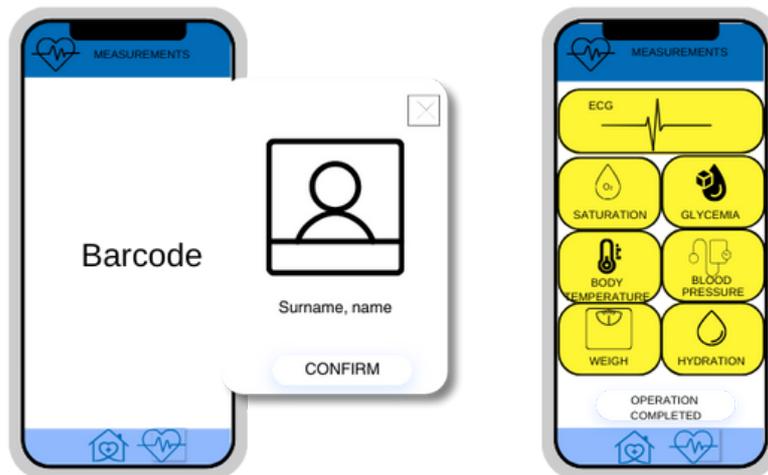


During the time slot indicated, the operator in charge will go to the house of the assisted. To verify that it is the right person, the operator will have to open the “measurements” section for the reading of the Social Security Card through the barcode.

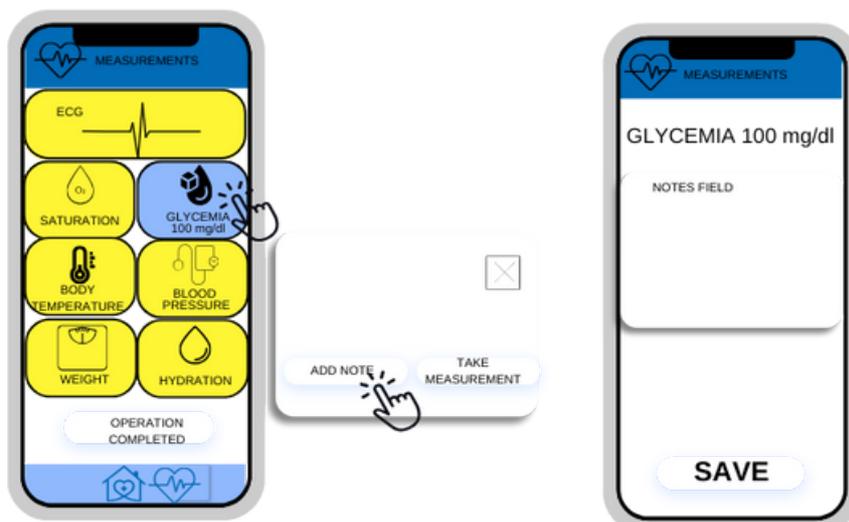


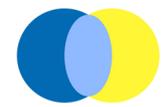


With the reading completed, the picture of the assisted, the surname and name will appear. The operator will have to click on “yes” or “no”. If it’s the right person, clicking “yes” the “measurements” section of the assisted will automatically open.

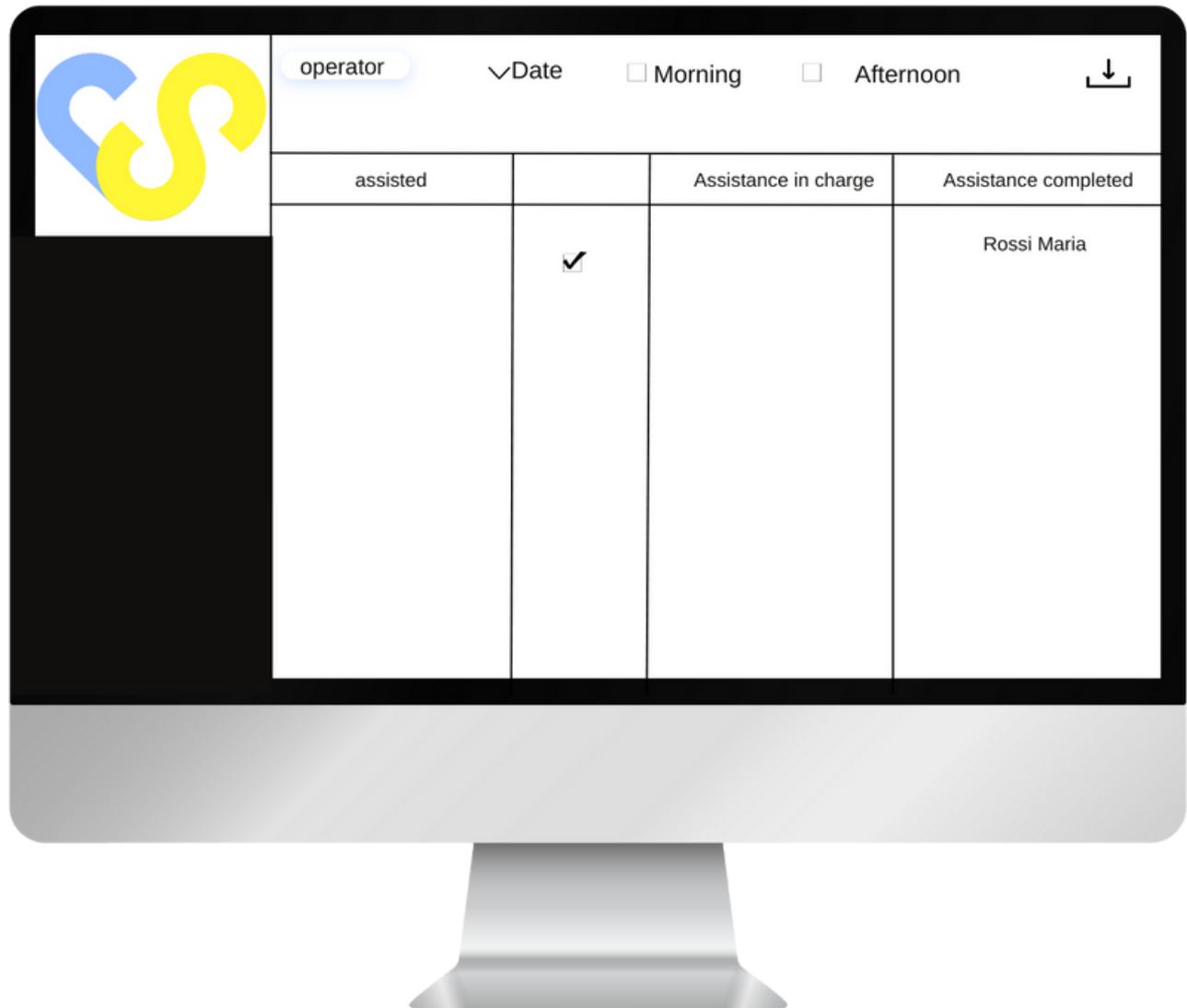


With the devices in Doktorbag, the operator will take the measurements that will automatically be registered on the operators’ app and on CentroStella. Clicking on the single parameters, the measurement will start and its completing will be signaled with the color change from **YELLOW** to **LIGHT BLUE**. Clicking on the single parameter (with the value detected written down) the operator will be able to add notes on the data detected or decide to retake the measurement. Otherwise, the operator can close the window by clicking “operation completed“. This way, the assisted will disappear from the list of people to go to.

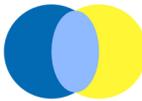




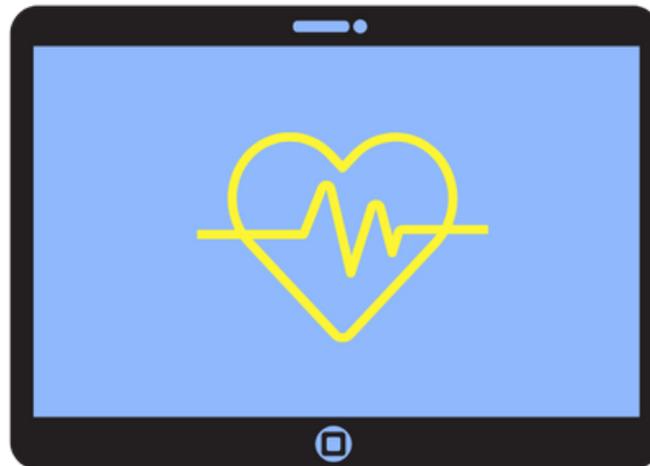
On CentroStella, in the section “home assistance”, it will be possible to see the history of the assistances taken in charge. Selecting the operator, the name of the assisted will appear under the “assistance completed” column. At that point, it will be possible to download the datas of the days of assistance (the form to be defined).



Following the generation of alarms (that will occur due to the lack of the measurements taken or for abnormal values different from the thresholds prefixed), in case of technological assisted it will be possible to effectuate a call (it's the assisted to start it) between the operators and the assisted. This way, it's possible to request and give assistance to the people at home. The service via call is available within a certain time (ex. from 9 to 18).

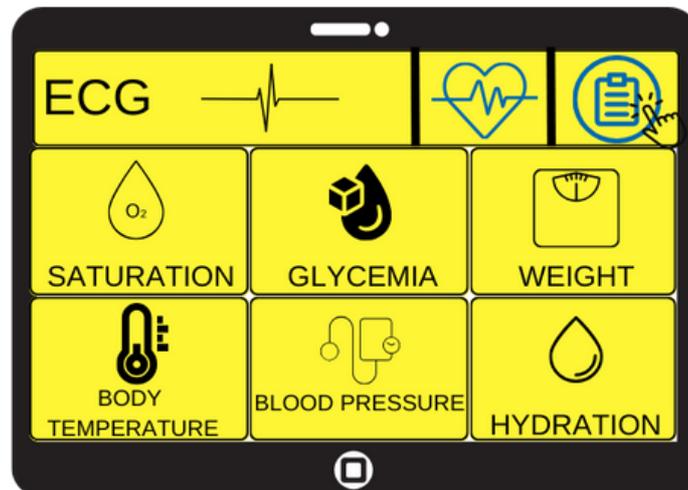


6.5 Tablet

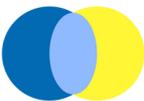


With the tablet in the Doktorbag, it will be possible for the person who needs assistance to take the measurements autonomously.

Clicking on the measurements' icon, a window for the reading of the Social Security Card will open. After the reading of the Social Security Card, the "measurements" page will automatically open.

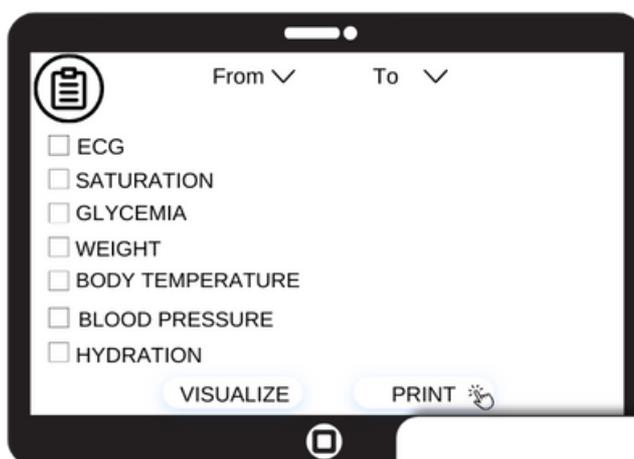
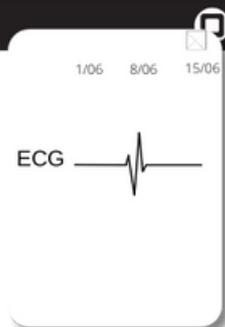
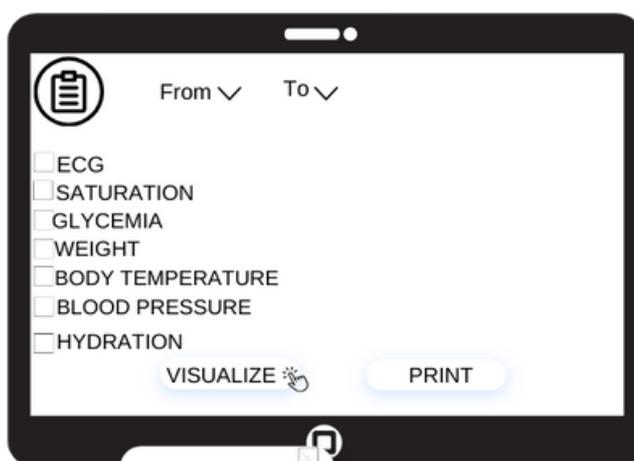


Clicking on the single icons using the given devices, it will be possible to take the measurements. The color of the value selected will pass from **YELLOW** to **LIGHT BLUE** once the measurement has been taken. In this case, a note field is not expected, there will only be the possibility to retake the measurement.



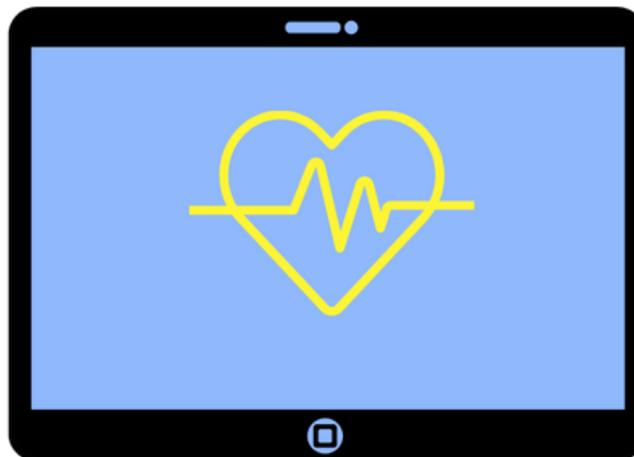
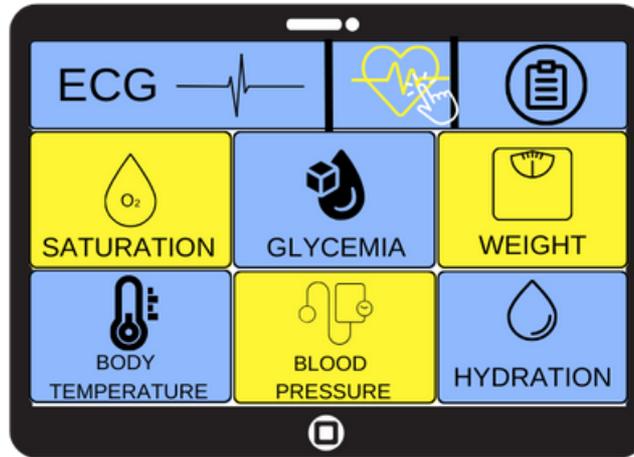
Clicking on the icon of reporting (), a page from which is possible to download the measurements selecting the parameter and the slot of time whose progress you want to view will open.

Once you have selected the parameter (or more than one) and the date/dates, it will be possible to download (in Exel, for example) a document to sent via email to the email address previously uploaded to the master data. Clicking on "visualize" a preview of the file created will open, clicking on "print" the file will be sent via email.



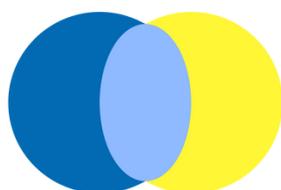


Clicking on the measurements icon () you will be redirected to the home page, closing the operations.



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