Smart Central

USER MANUAL

Revision 1.0

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Contents

1. Digistat Smart Central

1.1 Information for the user

Please read carefully the following warnings.

The purpose of the system is to help with alarm management and shall not be used as a remote alarm system or as an alarm replicator.

Digistat Smart Central must not be used to replace the monitoring of the device alarms.

Up to a distance of 1m (3,28 ft) the Operator is able to read the notifications on Digistat Smart Central. Within a maximum distance of 4m (13,12 ft) it is possible for the Operator to see that there is an alarm.

This is true if:

- the Operator has a visual acuity of 0 on the logMAR scale or 6-6 (20/20) vision (corrected if necessary),
- the viewpoint is at the Operator's position or at any point within the base of a cone subtended by an angle of 30° to the axis horizontal to or normal to the center of the plane of display of the monitoring display or visual indication,
- the ambient illuminance in the range of 100 lx to 1 500 lx.

If the generic Alaris® Driver is in use it is necessary to wait at least ten seconds after disconnecting an infusion pump before connecting another.

Check that the medical devices are correctly connected by verifying that their data are displayed on the Smart Central.

	Use the sound check procedure to verify if the audio on the workstation/handheld device is correctly working (see related paragraph for the procedure).

	On the connected medical device where it is possible, generate an artificial alarm condition to verify that the corresponding alarm notification is correctly displayed on the Smart Central (it is suggested to perform this check at least once per shift).

	Digistat Smart Central acquires the information generated by the primary medical devices and display them. Therefore, Digistat Smart Central always reports what the primary medical devices communicate. The assignment of alarm priorities is decided according on the primary medical device. On Digistat Smart Central it is possible to decide the order of the medical devices, for every bed, in accordance to the customer preference: per device type, model / manufacturer. This kind of ordering is setup in Digistat Smart Central during deployment of the product according to the user request/preference. The color of every bed card (i.e. “bed area”) is always the color of the highest priority alarm among all alarms occurring on that bed.

1.2 Module selection

To select the Digistat Smart Central module:

- Click the corresponding icon on the lateral bar (Fig 1)

Fig 1

The Smart Central screen, shown in Fig 2, opens.

	In some Digistat configurations, the Smart Central module is the only one available and is automatically selected after user log in.

1.3 Digistat Smart Central functionality

The Smart Central screen displays a schematic representation overview of the situation of each patient in the ward (Fig 2).

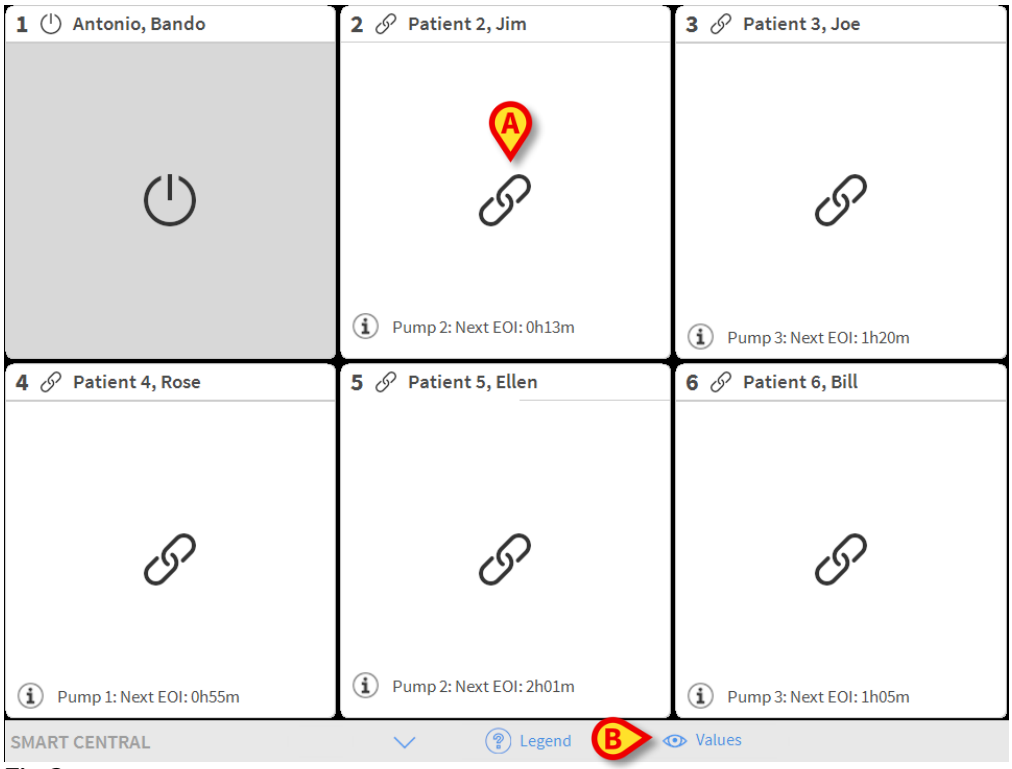


Fig 2

The screen is divided into rectangular areas, named “Bed areas” (Fig 2 **A**). Every area refers to a bed and displays information on the devices connected to the patient admitted to that bed. By default, only the data referring to alarmed beds is displayed (Fig 4), and only data relating to alarms is displayed. A bed is alarmed if at least one of the devices connected to the bed is alarmed. If multiple alarms occur at the same time on the same bed, the alarm with the highest priority is notified.
It is possible to display all the available data (both referring to the non-alarmed beds and referring to the non-alarmed devices on the alarmed beds) by clicking the “VALUES” button on the command bar (Fig 2 **B**).

To display all the available data:

- Click the **Values** button on the command bar (Fig 2 **B**)

The button will be selected. The available information will be displayed as in Fig 3.

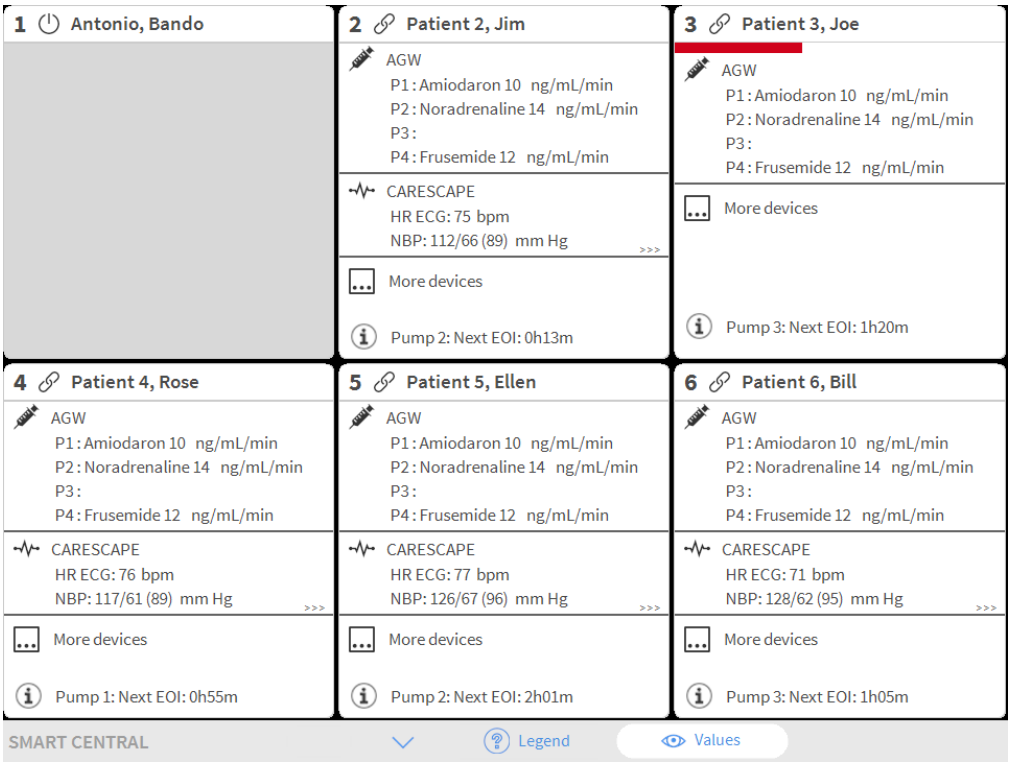


Fig 3

1.4 Bed areas

Each “Bed area” displays some of the data provided by the devices connected to the patient (Fig 4). The kind of data displayed depends on the design and configuration of the device.

If the “Bed area” is light blue, as in Fig 4, it means that there is at least one low priority alarm, and no medium and/or high priority alarms, coming from the connected devices.

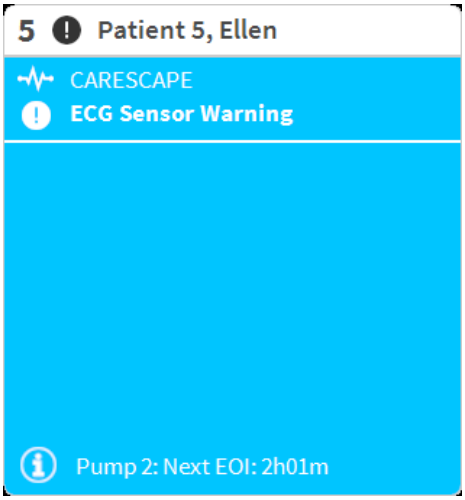


Fig 4

If the “Bed area” is yellow, as in Fig 5, it means that there is at least one medium priority alarm, and no high priority alarms, coming from the connected devices.

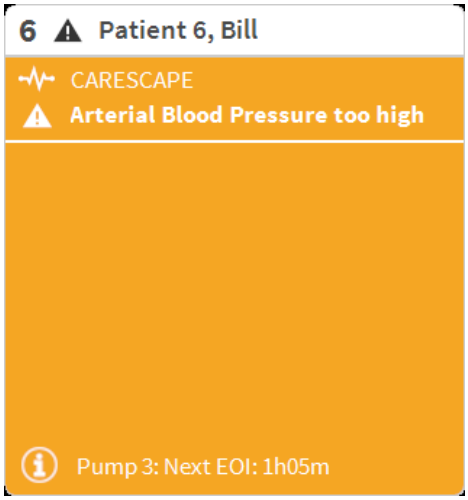


Fig 5

If the “Bed area” is red, as in Fig 6, it means that at least one of the connected devices is in high priority alarm state.

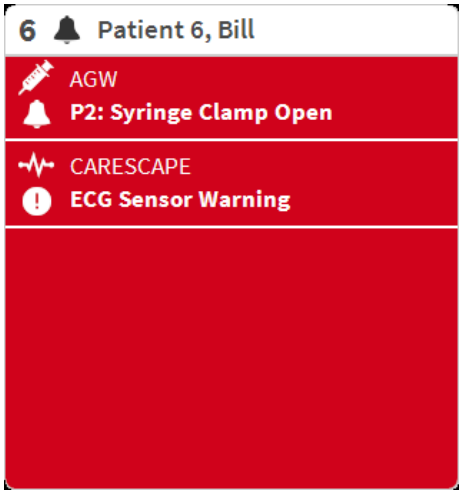


Fig 6

The connected beds from which no alarms are received appear as in Fig 7. No device data is displayed as this might distract the reading of possible alarms occurring on the other beds.

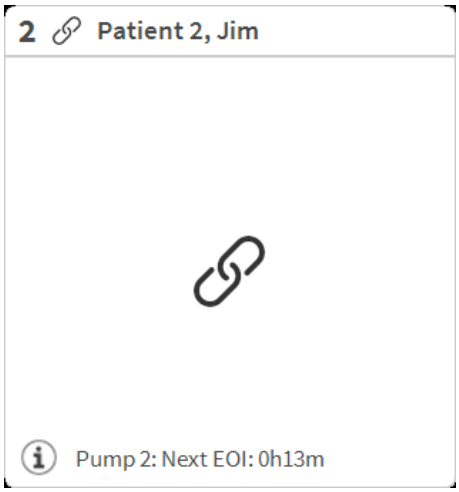


Fig 7

To display device data on these devices “pump” click the **Values** button on the command bar (Fig 2 **B**). The “Bed area” will appear as in Fig 8.

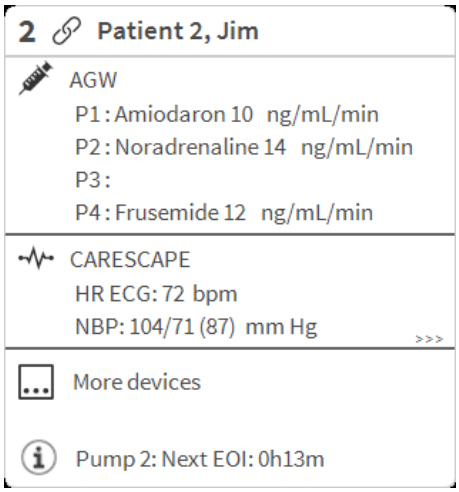


Fig 8

Disconnected beds are displayed as in Fig 9.

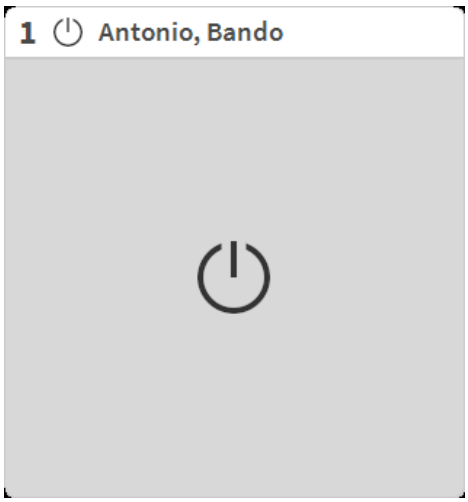


Fig 9

1.4.1 Bed area description

This section provides a detailed description of the way information is displayed on every “Bed area”. On top of the “Bed area” the bed number and the patient name are displayed (Fig 10). The icon means that the bed is connected to Smart Central and that Smart Central is currently receiving device data from the bed. If one of the devices connected to the bed is notifying a low priority alarm the icon is displayed instead.

If one of the devices connected to the bed is notifying a medium priority alarm the icon is displayed instead. If one of the devices connected to the bed is notifying a high priority alarm the icon is displayed instead.

Fig 10

The information in the bed area is divided by “Device type”. Each device type is characterized by a specific icon (Fig 11 **A**).

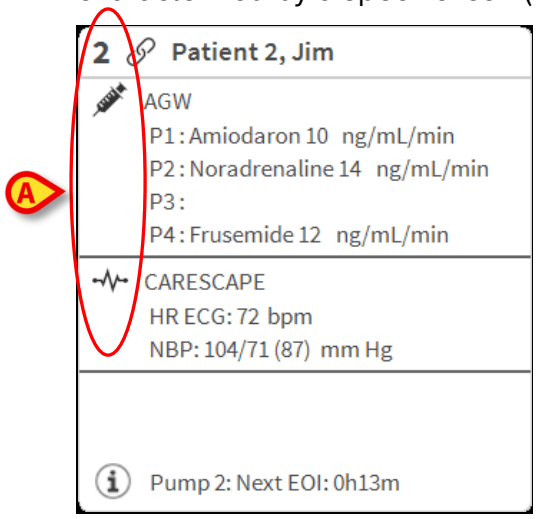


Fig 11

A legend is available showing which device type a specific icon refers to.

To display the legend:

- Click the **Legend** button on the command bar. See paragraph 1.5.1 for a detailed description

Data coming from the same kind of devices are grouped together. In Fig 12, for instance, two groups are indicated: infusion pumps and patient monitor.

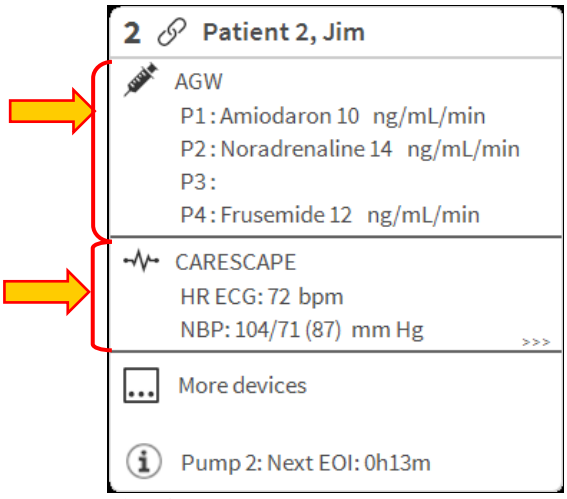


Fig 12

It is possible that not all the data coming from the devices is displayed in the box. If there is hidden data the >>> signal is displayed at the end of every group (see Fig 13 **A**).

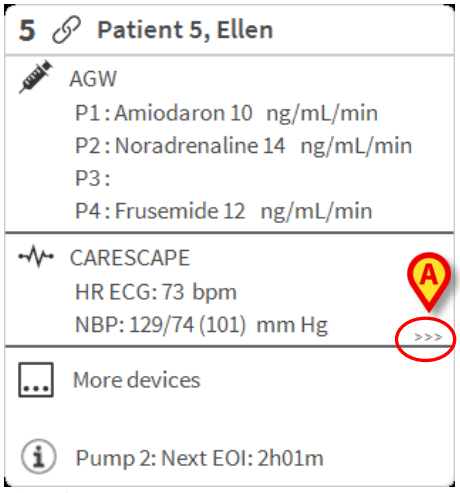


Fig 13

Hidden data can be displayed by clicking the “Bed area”, which is enlarged to full-screen mode (Fig 14). All the available information is displayed.

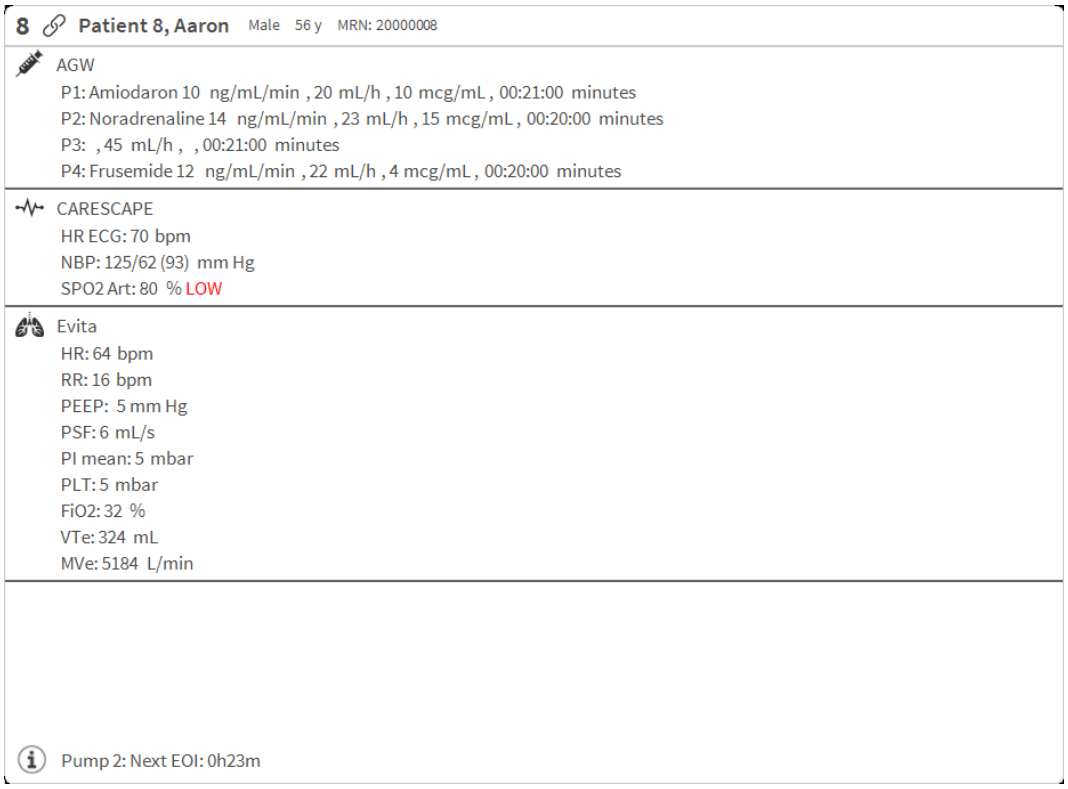


Fig 14

Additional information about the connected devices and the list of the possible disconnected devices are displayed at the bottom of the "Bed area" (Fig 15 **A**). Disconnected devices are indicated by the icon. Additional information is indicated by the icon.

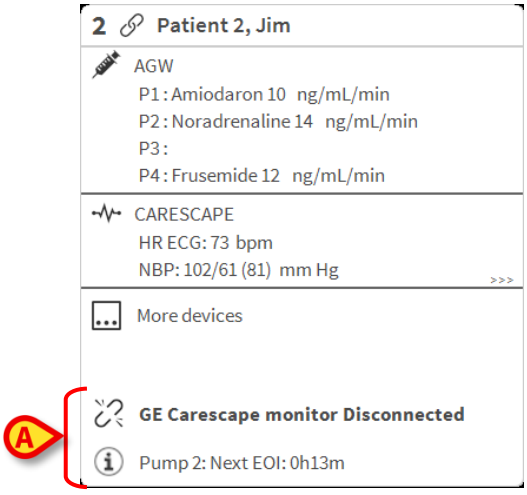


Fig 15

It is possible, by configuration, to associate messages to the displayed values. For instance it is possible to define a range of values that are "normal" and configure the system to inform the user if the collected values are outside this range. See for instance Fig 16 **A**, in which the values are defined as "Low".

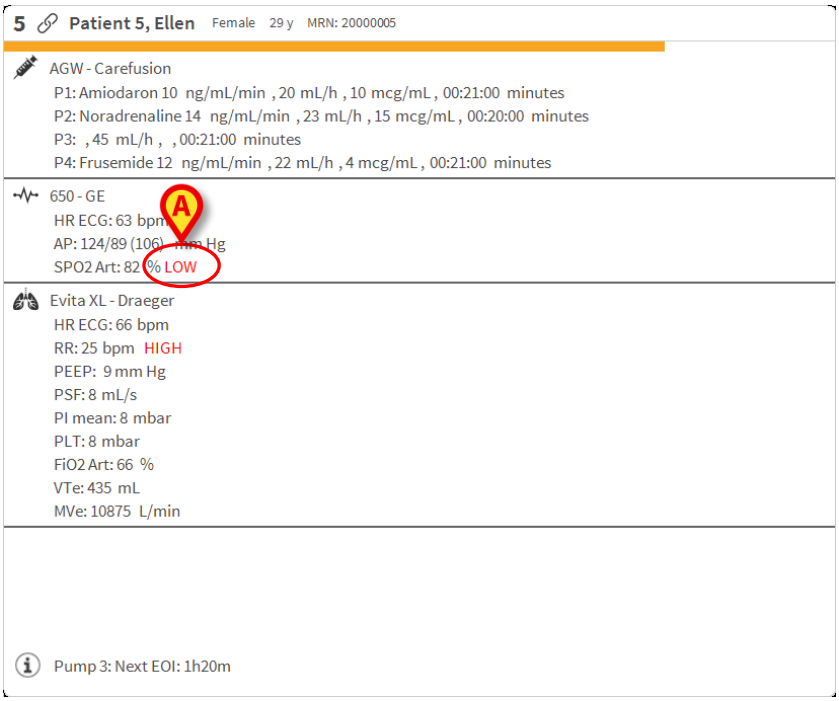


Fig 16

A visual feature on the upper bar on each “Bed area” keeps temporarily track of the last alarm notification provided after the “Bed area” has changed to a different priority alarm (or no alarm). This makes it possible to be aware of alarms occurring and rapidly passing (Fig 17).

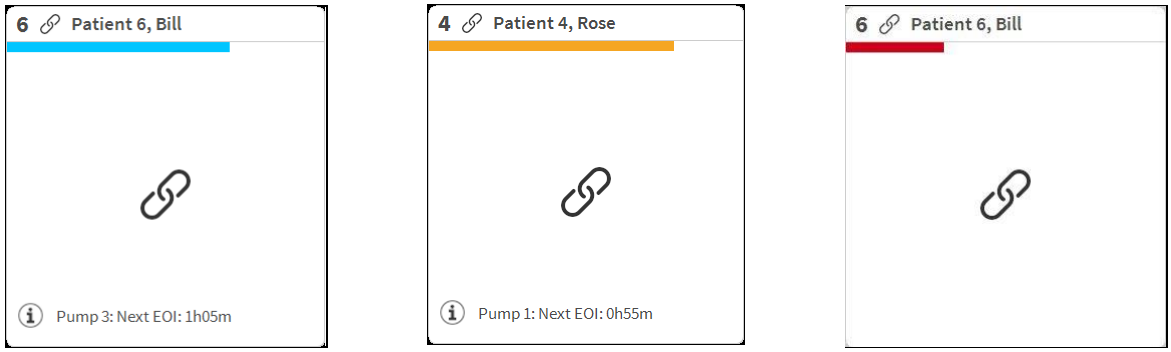


Fig 17

1.5 The Smart Central command bar

The buttons on the command bar of the Smart Central make it possible to perform different actions.

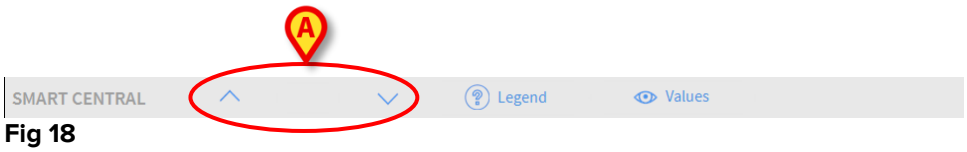


Fig 18

The arrow buttons (Fig 18 **A**) make it possible to scroll up and down the screen when it is not possible to display all the configured “Bed areas” at the same time.

When one (at least) of the non-displayed “Bed areas” is notifying an alarm, the corresponding button takes the color corresponding to the alarm priority level (blue = low; yellow = medium; red = high).

In case of multiple alarms the arrow color corresponds to the highest priority notified.

An icon can be displayed in the box between the arrow buttons (Fig 19). It indicates that there is an alarm on one of the “Bed areas” currently displayed.

Fig 19

The **Legend** button displays a window with the meaning of all the different icons that can be found while using the software (See paragraph 1.5.1).

The **Values** button displays all the available data (both referring to the non-alarmed beds and referring to the non-alarmed devices on the alarmed beds).

The **ICU** button contains an acronym indicating the ward currently displayed. If the system is configured to cover more than one ward, the button can be clicked to open a menu displaying all the configured wards.

1.5.1 Legend

The **Legend** button opens a window explaining the meaning of all the different icons that can be found while using the software.

To display the “Legend”:

- Click the **Legend** button

The following window is displayed (Fig 20).

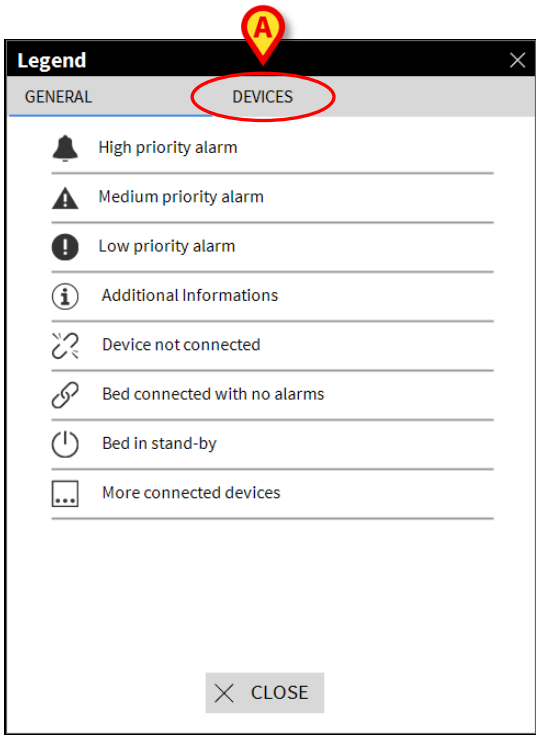


Fig 20

The window lists the “General” icons that can appear in different contexts. Another list of icons, those indicating the connected devices, can be displayed by clicking the “DEVICES” button indicated in Fig 20 **A**.

To see the “Devices”:

- Click the **Devices** button indicated in Fig 20 **A**

The “Devices” legend is this way displayed (Fig 21)

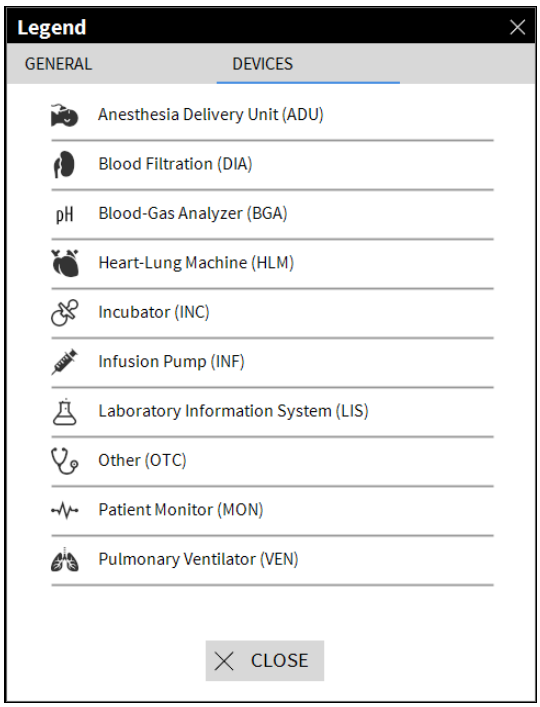


Fig 21

On this window all the possible icons are listed. Alongside the icon the device name is specified, with the corresponding abbreviation / acronym (e.g. INF refers to infusion pumps, MON to patient monitors and so on).

1.6 Events list

It is possible to display a detailed list of all the events occurred for a patient.

To display the events list:

- Click the “Bed area” referring to the bed to be displayed (Fig 22)

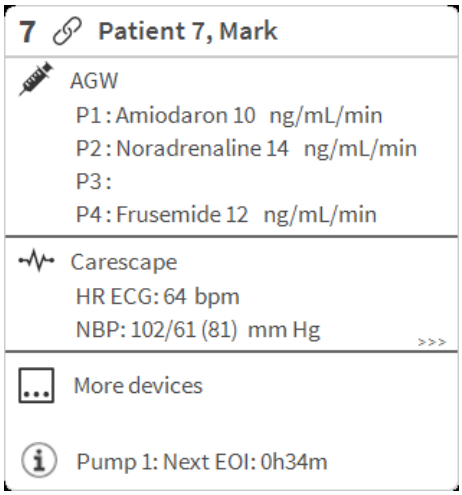


Fig 22

The events list will be displayed on the right (Fig 23).

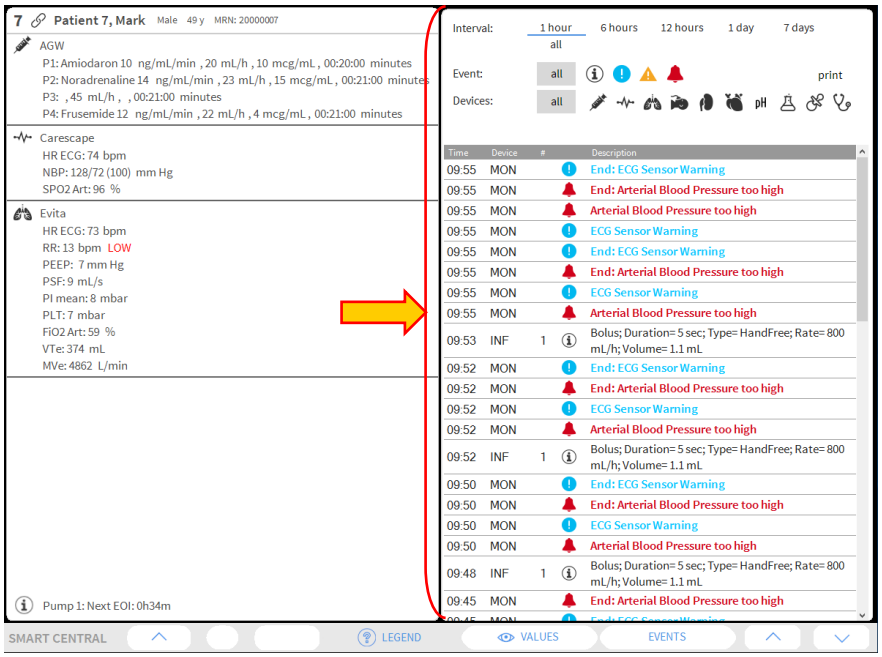


Fig 23

The vertical bar indicated in Fig 23 delimiting the Events area, can be dragged left/right to resize the area.

1.6.1 Events list description

The table shown in Fig 24 contains the list of all the events occurred on all the devices connected to the selected patient during their stay.

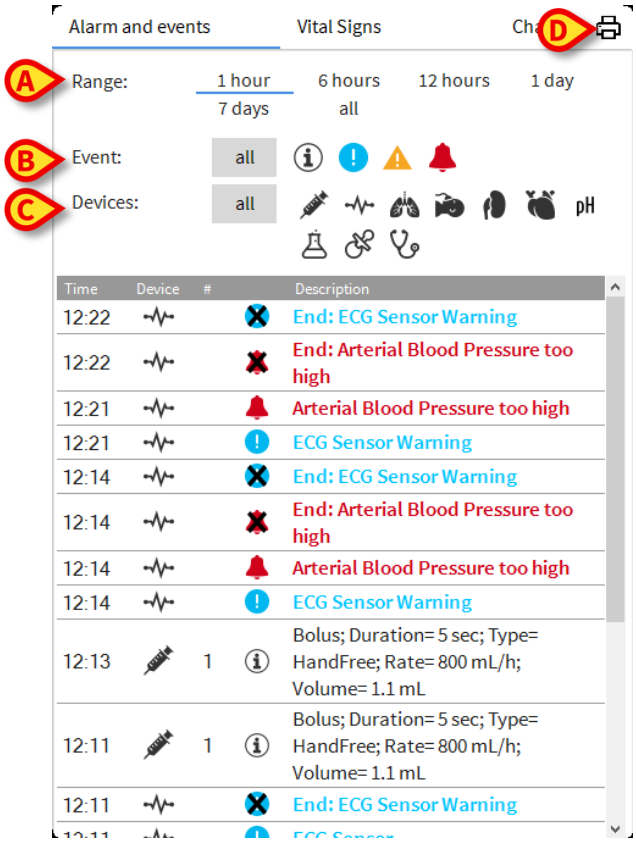


Fig 24

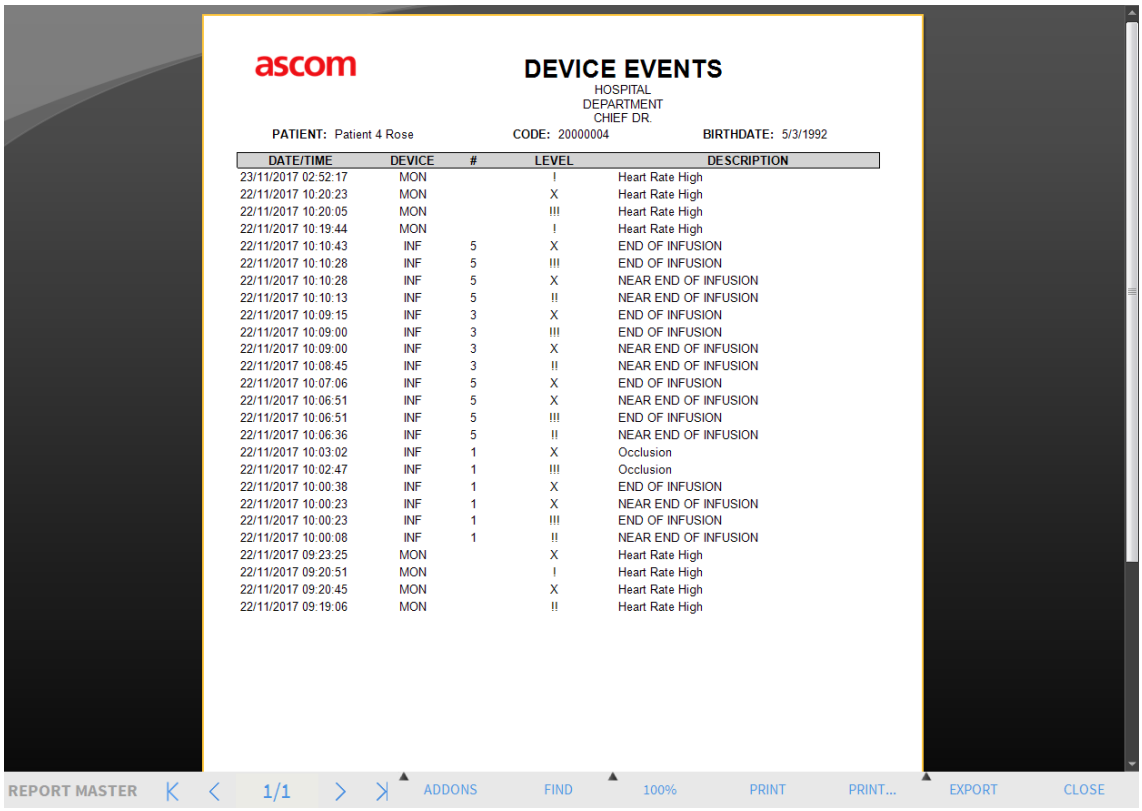
The time period to which the events list refers can be selected using the "**Range**" filters (Fig 24 **A**).

The "**Event**" buttons indicated in Fig 24 **B** are also filters making it possible to display only certain types of events. The **All** button, selected by default, displays all the events occurred in the selected time period. The button only displays the "Information" events; the buttons only display the low and medium priority alarms; the button only displays the high priority alarms. Multiple selections is possible to display two kinds of events at the same time (i.e. only low and medium priority alarms).

The "**Device**" buttons indicated in (Fig 24 **C**) are also filters making it possible to display only the events referring to a specific device. The **All** button, selected by default,

displays all the events occurred in the selected time period; the button only displays the events referring to the infusion pumps; the button only displays the events referring to patient monitors and so on... The full list of icons with their explanation can be found in the "**Legend**" window (see paragraph 1.5.1). Multiple selection is possible to display the events referring to two or more devices at the same time.

The **Print** button indicated in Fig 24 **D** makes it possible to print the list of events displayed (Fig 25).



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DEVICE EVENTS

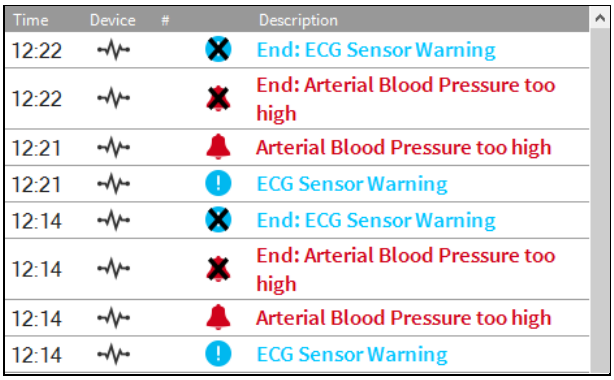
HOSPITAL
DEPARTMENT
CHIEF DR.

PATIENT: Patient 4 Rose **CODE:** 20000004 **BIRTHDATE:** 5/3/1992

DATE/TIME	DEVICE	#	LEVEL	DESCRIPTION
23/11/2017 02:52:17	MON		!	Heart Rate High
22/11/2017 10:20:23	MON		X	Heart Rate High
22/11/2017 10:20:05	MON		!!!	Heart Rate High
22/11/2017 10:19:44	MON		!	Heart Rate High
22/11/2017 10:10:43	INF	5	X	END OF INFUSION
22/11/2017 10:10:28	INF	5	!!!	END OF INFUSION
22/11/2017 10:10:28	INF	5	X	NEAR END OF INFUSION
22/11/2017 10:10:13	INF	5	!!	NEAR END OF INFUSION
22/11/2017 10:09:15	INF	3	X	END OF INFUSION
22/11/2017 10:09:00	INF	3	!!!	END OF INFUSION
22/11/2017 10:09:00	INF	3	X	NEAR END OF INFUSION
22/11/2017 10:08:45	INF	3	!!	NEAR END OF INFUSION
22/11/2017 10:07:06	INF	5	X	END OF INFUSION
22/11/2017 10:06:51	INF	5	X	NEAR END OF INFUSION
22/11/2017 10:06:51	INF	5	!!!	END OF INFUSION
22/11/2017 10:06:36	INF	5	!!	NEAR END OF INFUSION
22/11/2017 10:03:02	INF	1	X	Occlusion
22/11/2017 10:02:47	INF	1	!!!	Occlusion
22/11/2017 10:00:38	INF	1	X	END OF INFUSION
22/11/2017 10:00:23	INF	1	X	NEAR END OF INFUSION
22/11/2017 10:00:23	INF	1	!!!	END OF INFUSION
22/11/2017 10:00:08	INF	1	!!	NEAR END OF INFUSION
22/11/2017 09:23:25	MON		X	Heart Rate High
22/11/2017 09:20:51	MON		!	Heart Rate High
22/11/2017 09:20:45	MON		X	Heart Rate High
22/11/2017 09:19:06	MON		!!	Heart Rate High

Fig 25

The events table is displayed below (Fig 26).



Time	Device	#	Description
12:22			End: ECG Sensor Warning
12:22			End: Arterial Blood Pressure too high
12:21			Arterial Blood Pressure too high
12:21			ECG Sensor Warning
12:14			End: ECG Sensor Warning
12:14			End: Arterial Blood Pressure too high
12:14			Arterial Blood Pressure too high
12:14			ECG Sensor Warning

Fig 26

The events table provides the following information:

- Event time (indicated as hh:mm)
- Type of device in which the event occurred
- Number (in case of infusion pumps it indicates the pump number)
- Alarm priority level
- Event description
- The black cross on the alarm symbol indicates the end of the corresponding alarm

1.7 Dashboard configuration

If the Smart Central is configured as a “Dashboard” Smart Central, some additional functionalities are available. These are the “Vital Signs” and “Charts” functionalities, described below (Fig 27 **A**).
Both functionalities are accessible from the “Notification area”.

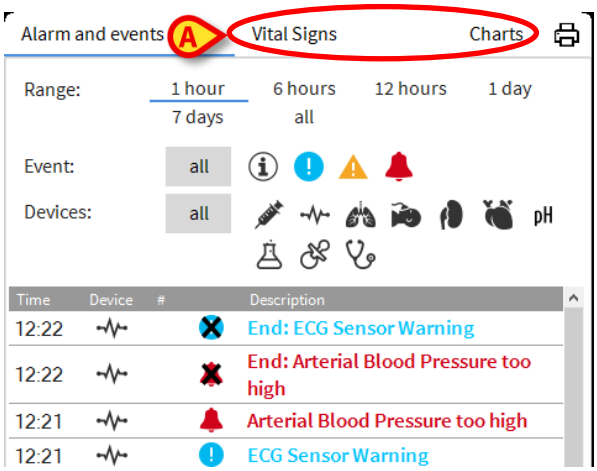


Fig 27

1.7.1 Vital Signs

Click the Vital Signs button to activate the “Vital Signs” functionality (Fig 28 **A**).

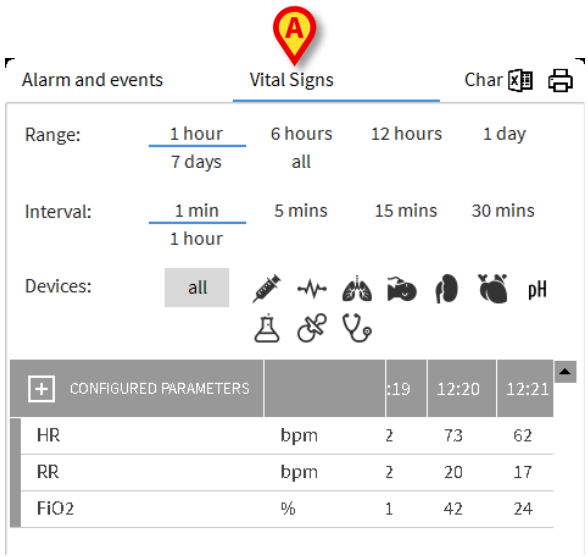


Fig 28

“Vital signs” makes it possible to display in a table some selected patient parameters (Fig 29). The displayed parameters are defined by configuration. In the table they are grouped by acquisition device.

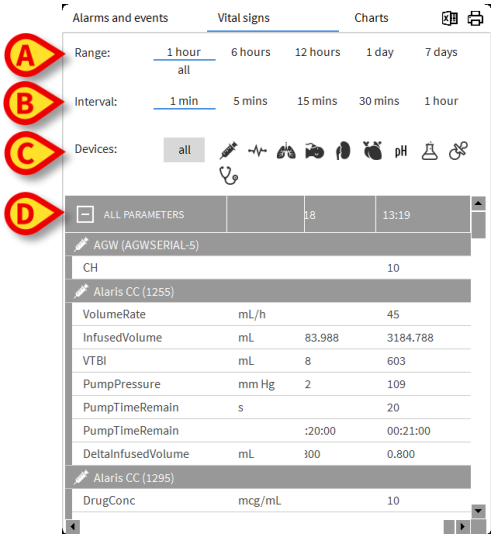


Fig 29

Use the “Range” filter (Fig 29 **A**) to display the time span within which the parameters are acquired. For instance: if **1 hour** is selected the table displays the parameters acquired from one hour in the past to the present time; if **6 hours** is selected the table displays the parameters acquired from six hours in the past to the present time, and so on.

Use the “Interval” filter (Fig 29 **B**) to define the values acquisition interval (i.e., depending on the interval selected, the values displayed in the table are acquired each minute, every 5 minutes, every 15 minutes, and so on).

Use the “Devices” filter (Fig 29 **C**) to display only the values acquired by the selected devices.

Click on “Configured Parameters” (Fig 29 **D**) to display all the acquired parameters (1 minute interval).

The “all” option displays all the acquired parameters (1 minute interval).

A task in the database deletes the previous data at a set time.

Click the print button  to create a print report of the displayed parameters.

Click on the excel icon  to export the data to an XLS file.

1.7.2 Charts

Click the **Charts** button to activate the “Charts” functionality (Fig 30 **A**).

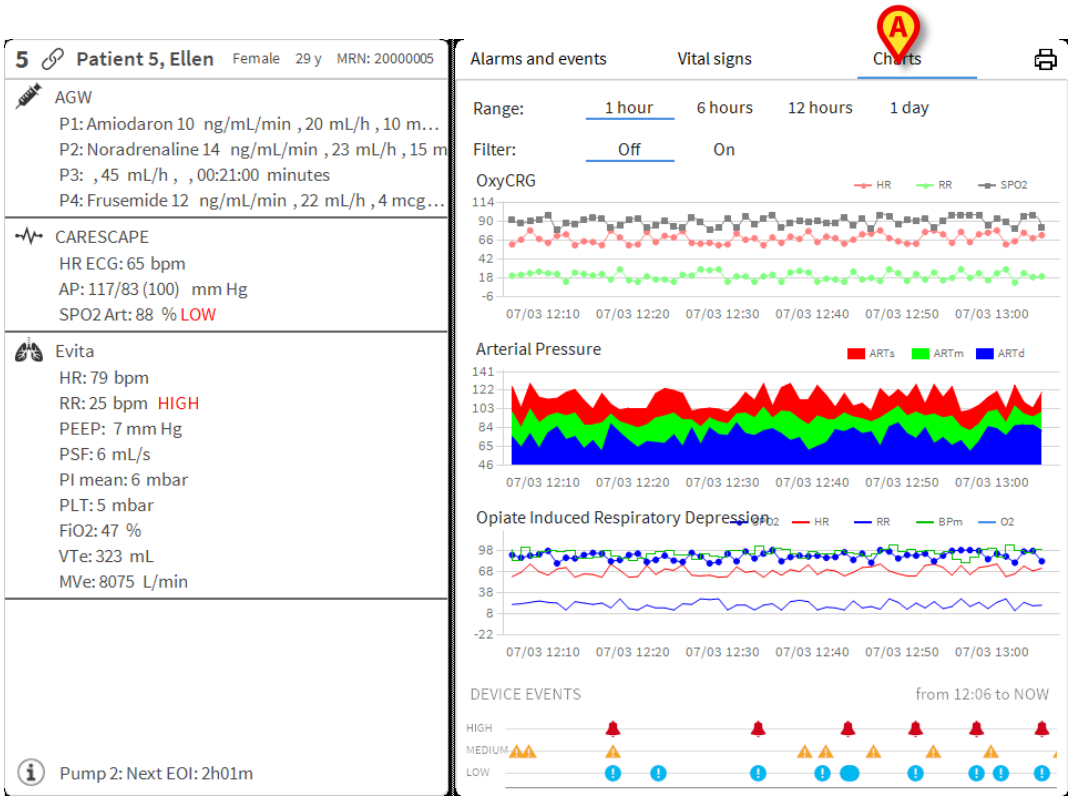


Fig 30

“Charts” makes it possible to display different charts drawn from the acquired parameters (Fig 31). The charts show the configured parameters as trends. The number of charts, their contents and names are defined by configuration.

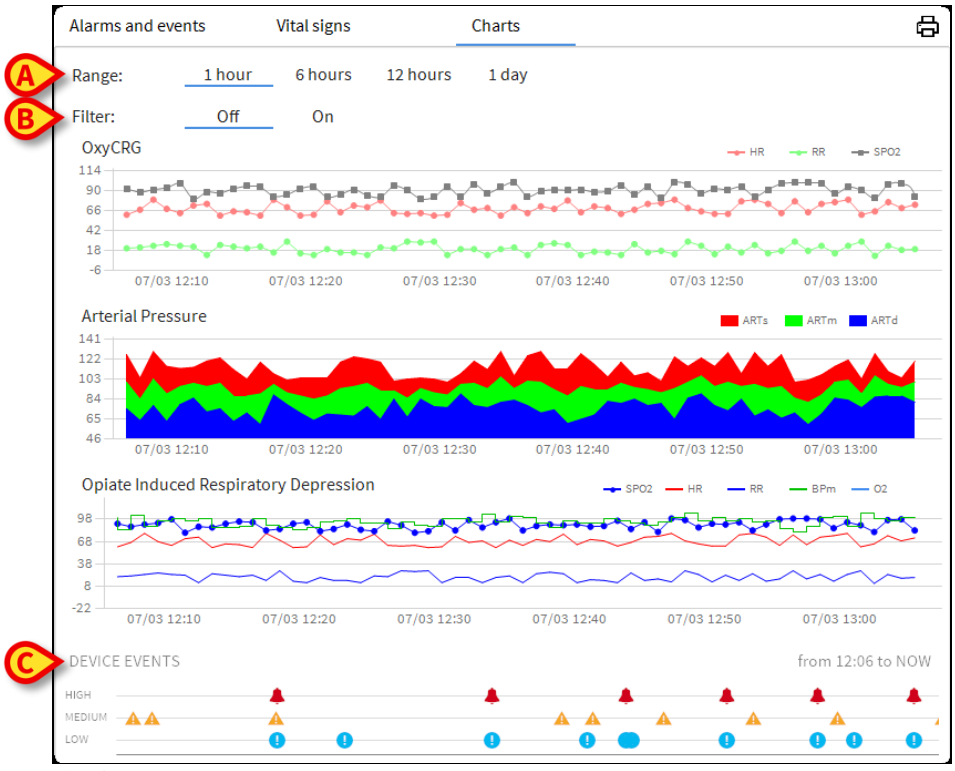


Fig 31

Use the “Range” filter (Fig 31 **A**) to define the time span to which the charts refer. For instance: if **1 hour** is selected the charts display the trends starting one hour in the past until present time; if **6 hours** is selected the charts display the trends starting six hours in the past until present time, and so on.

Use the “Filter” option (Fig 31 **B**) to activate an algorithm that approximates the charts values in a way making it possible to better display and evaluate the trends. If this option is activated the acquired data are grouped five by five. Each group of five is then ordered. Then only the middle value of five is kept, while the other four are discarded. This procedure eliminates the lowest and highest values (i.e. artefacts) and provides a “normalised” chart.

The chart indicated at the bottom of the page (Fig 31 **C**) is always present and displays on three rows the device events. Each event is positioned according to its priority level and time of occurrence.

Click any chart to display a vertical cursor making it possible to display the values of all charts at a given time (Fig 32 **A**).

Fig 32

1.7.3 Alarms statistics

A printed report of the alarm statistic history can be generated by accessing the System Report menu, displaying graphical statistics inclusive of event summaries and event details.

To print an Alarm statistic report:

- Click Menu button on the control bar
- Click on System Reports
- Click Smart Central Dashboard

From the prompted window will be possible to select the data source between All patients available or the selected patient, as well as the customizable Date Range.

- Click on Generate button

A print preview of the selected Event statistics will open.

1.8 Notification area

A notification area is displayed on the right of the Smart Central screen, reporting various notifications sent by the connected devices (Fig 33 **A**).

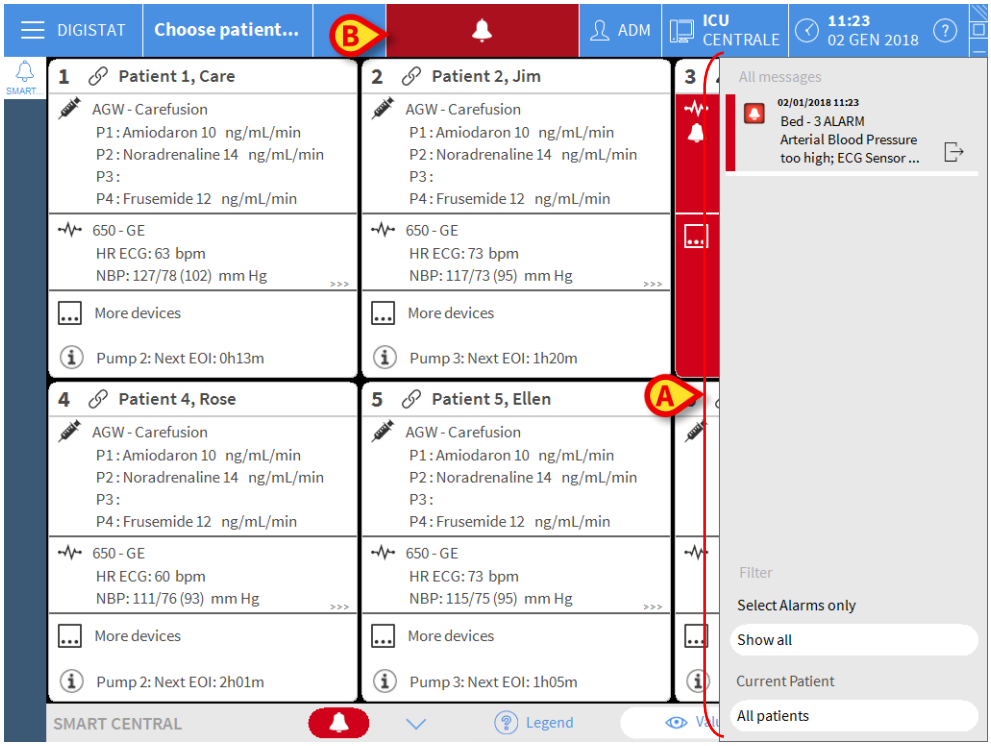


Fig 33

The notification area can be, by configuration:

- Always visible
- Automatically displayed when a new notification comes
- Only visible after user click on the Digistat button on Control Bar (Fig 33 **B**).

The different messages are displayed in chronological order, (most recent on top - Fig 34 **A**) and by criticality (High priority alarms on top, then medium priority, then low priority).

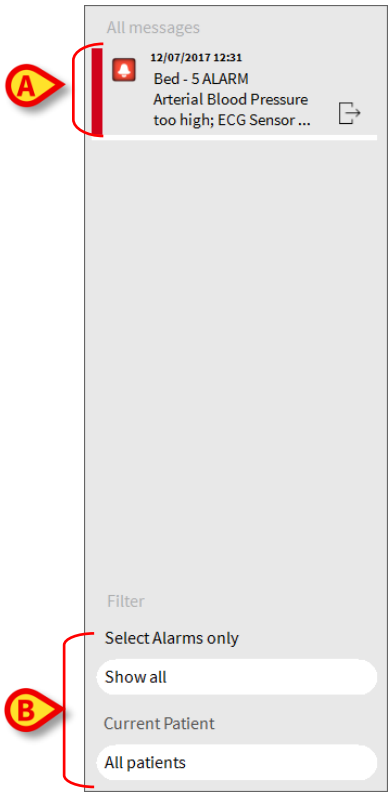


Fig 34

Each notification is characterized by the colour corresponding to the priority level (red for high priority, yellow for medium priority, blue for low priority).

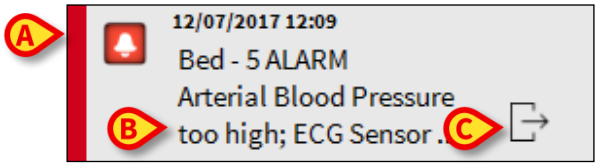


Fig 35

In the message box (Fig 35), the following information is displayed:

- Date-time of occurrence
- The number of the bed from which the message comes
- The actual message text
- An icon characterizing the message type (Warning, Alarm, Info - Fig 35 **A**)
- An icon indicating the message category (Fig 35 **B**)
- A “Callback” button. Click the button to access the patient station on which the notification occurred (Fig 35 **C**)

At the bottom of the area, four different filters are available, making it possible to choose the type of message to be displayed (Fig 34 **B**). The available filters are:

- Only alarms
- All messages
- Messages relating only to the selected patient

- Messages relating to all patients

1.9 Alarms notification

The purpose of the system is to help with alarm management and shall not be used as a remote alarm system or as an alarm replicator.

By default, the Smart Central screen displays the device data referring to a bed only if there is an alarm notification coming from at least one of the devices connected to that bed.

In a condition of “No alarms” the Smart Central screen would appear as in Fig 36, where five connected “Beds” are displayed and where no devices on any of the beds is in alarm state.

Fig 36

Each time an alarm occurs on one of the devices, the data relating to the bed to which the device is connected is displayed. In Fig 37, for instance, bed 3 is notifying a high priority alarm. A short text specifying the kind of alarm occurring is displayed on the “Bed area”.

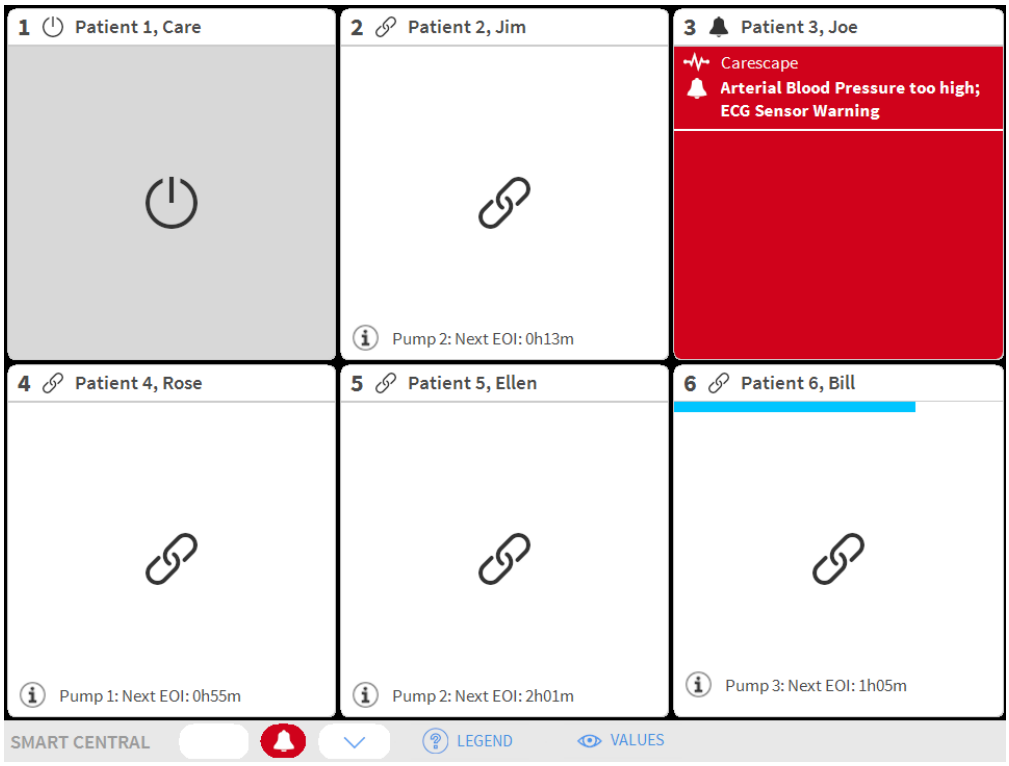


Fig 37

In addition, a sound notification is provided. Three different sounds exist, one for each alarm priority level. In case of multiple alarms, the sound corresponding to the one with highest priority is provided.

The occurrence of alarms is also notified on the command bar by the arrow-buttons indicated in Fig 38, Fig 39 and Fig 40.

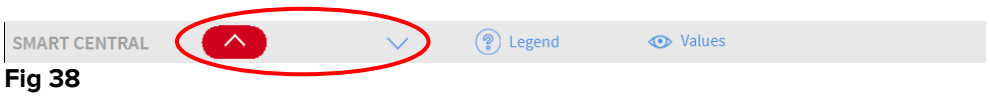


Fig 38

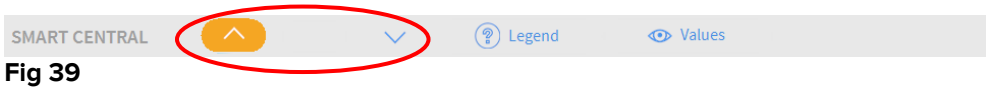


Fig 39

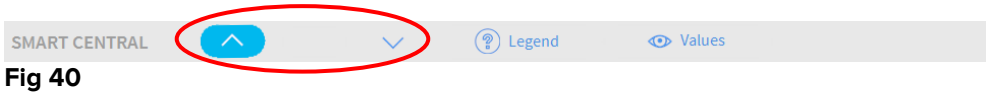


Fig 40

These buttons make it possible to scroll up and down the screen when it is not possible to display all the configured “Bed areas” at the same time.

When one (at least) of the non-displayed “Bed areas” is notifying an alarm, the corresponding button takes the color corresponding to the alarm priority level (blue = low; yellow = medium; red = high).

In case of multiple alarms the arrow color corresponds to the one with the highest priority.

An icon can be displayed within the box between the arrow buttons (Fig 41). It indicates that there is an alarm on one of the “Bed areas” currently displayed.

Fig 41

A visual feature on the upper bar on each “Bed area” keeps temporarily track of the last alarm notified after the “Bed area” has changed to a different priority level alarm (or no alarm). This makes it possible to be aware of alarms occurring and rapidly passing.
When the state of a “Bed area” changes to a lower level alarm (or no alarm), the color relating to the previous alarm (Fig 42) remains on the heading bar for a certain configurable time.

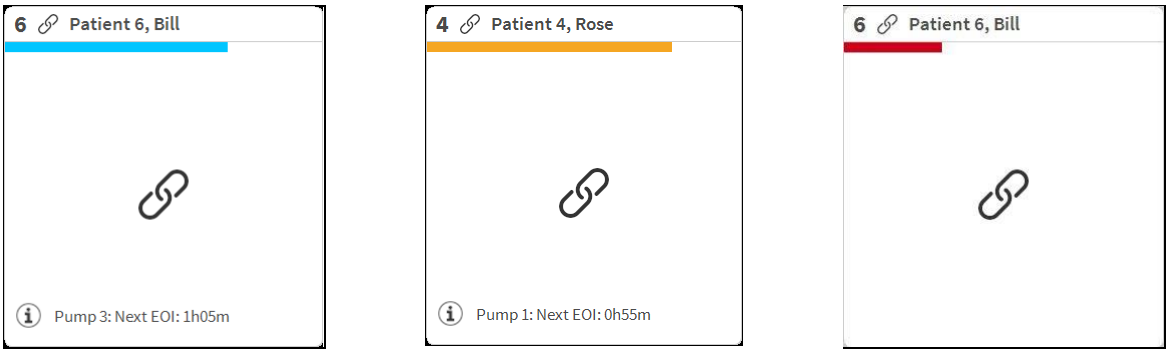


Fig 42

1.9.1 Alarms notification on Control Bar

Alarms are also notified on the Digistat Control Bar, so that they are always visible in case other Digistat modules are installed and currently selected.

Fig 43

The button color depends on the alarm priority level (cyan=low; yellow=medium; red=high). For high and medium priority alarms, the button flashes.

- Click the button to display the notification area (Fig 43 **A**)

The notification disappears when the alarm conditions no longer exist.

1.10 Sound Check procedure

The Sound Check procedure shall be performed at least once per shift.

When Smart Central is started, it provides a specific sound indicating that the sound notification of alarms is working properly.

If the sound is not provided the user can perform a “Sound Check” procedure. To perform the “Sound Check” procedure

- Click the **Menu** button on Control Bar (Fig 44)

Fig 44

The following menu is displayed (Fig 45).

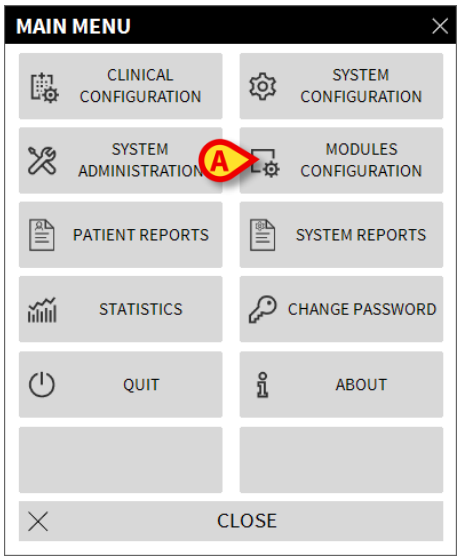


Fig 45

- Click on **Modules Configuration** (Fig 45 **A**)

The following menu opens (Fig 46).

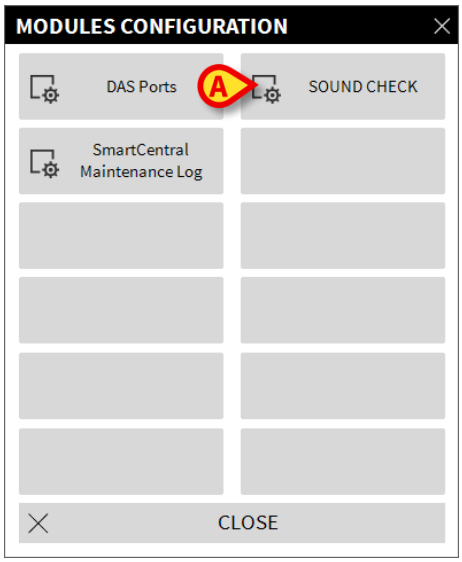


Fig 46

- Click on **Sound Check** (Fig 46 **A**)

The following pop-up window opens, asking whether a sound is heard or not from speakers (Fig 47).

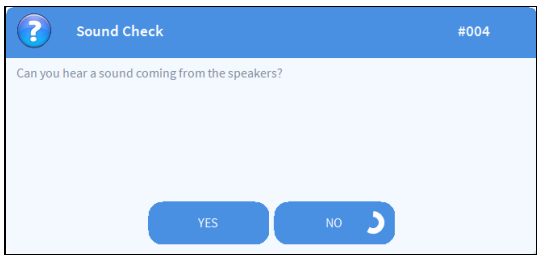


Fig 47

If a sound is heard, then click **Yes**. The pop-up window disappears and nothing else happens (meaning that the system is working correctly).
If no sound is heard, then click **No**. The pop-up window disappears and a notification is displayed on Control Bar, meaning that an error occurred while checking the sound notification system (Fig 48 and Fig 49).

Fig 48

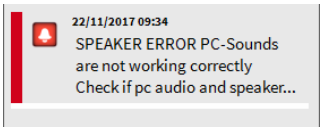


Fig 49

The notification remains while working with Smart Central. It disappears when another “Sound Check” procedure is performed and a “YES” answer is provided in the end.
The notification button can be clicked to display a more detailed explanation of the error occurred.

1.11 Smart Central Video

The Smart Central module can be configured to support the video stream of a webcam. This feature enables the visual monitoring of the patient area.

If the Smart Central Video feature is enabled and properly configured, the Smart Central main screen is like the one reported below (Fig 50).

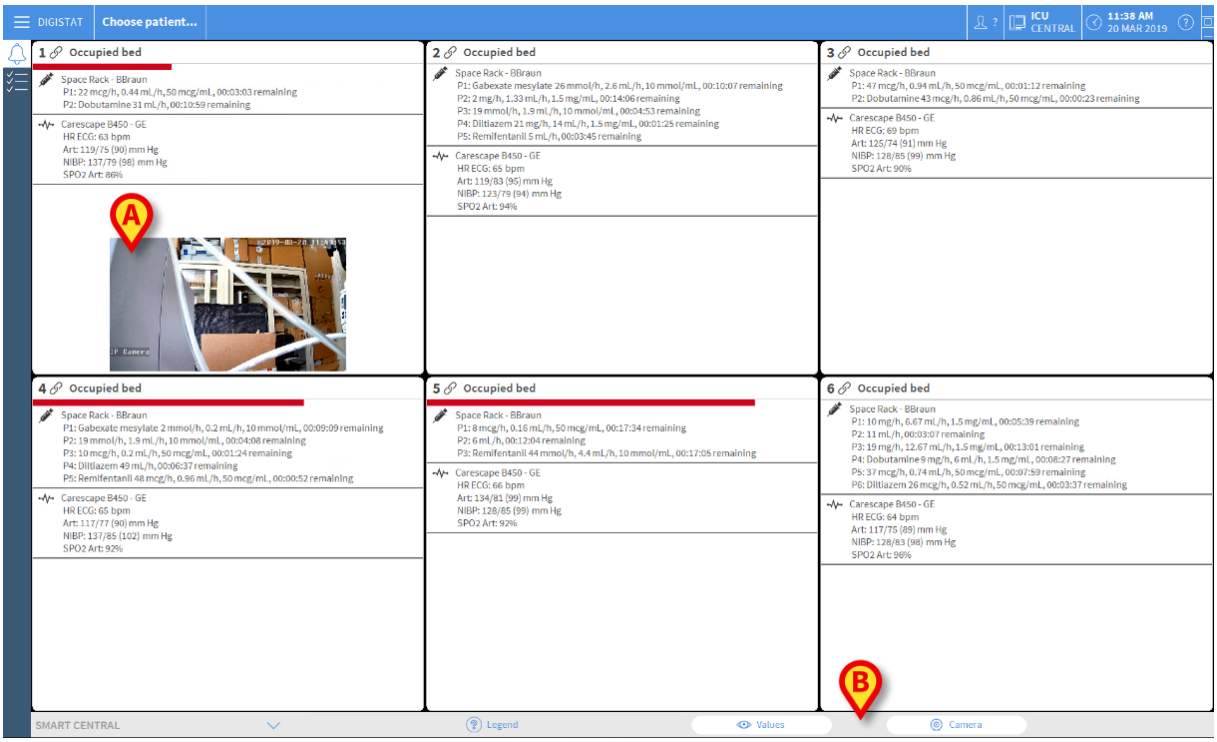


Fig 50

A thumbnail is displayed in the “bed area”, showing the real-time video stream of the webcam (Fig 50 **A**). The thumbnail size is configurable.

An additional button is present in the Smart Central command bar.

➢ Touch the button Camera to toggle (show or hide) the webcam thumbnail (Fig 51).

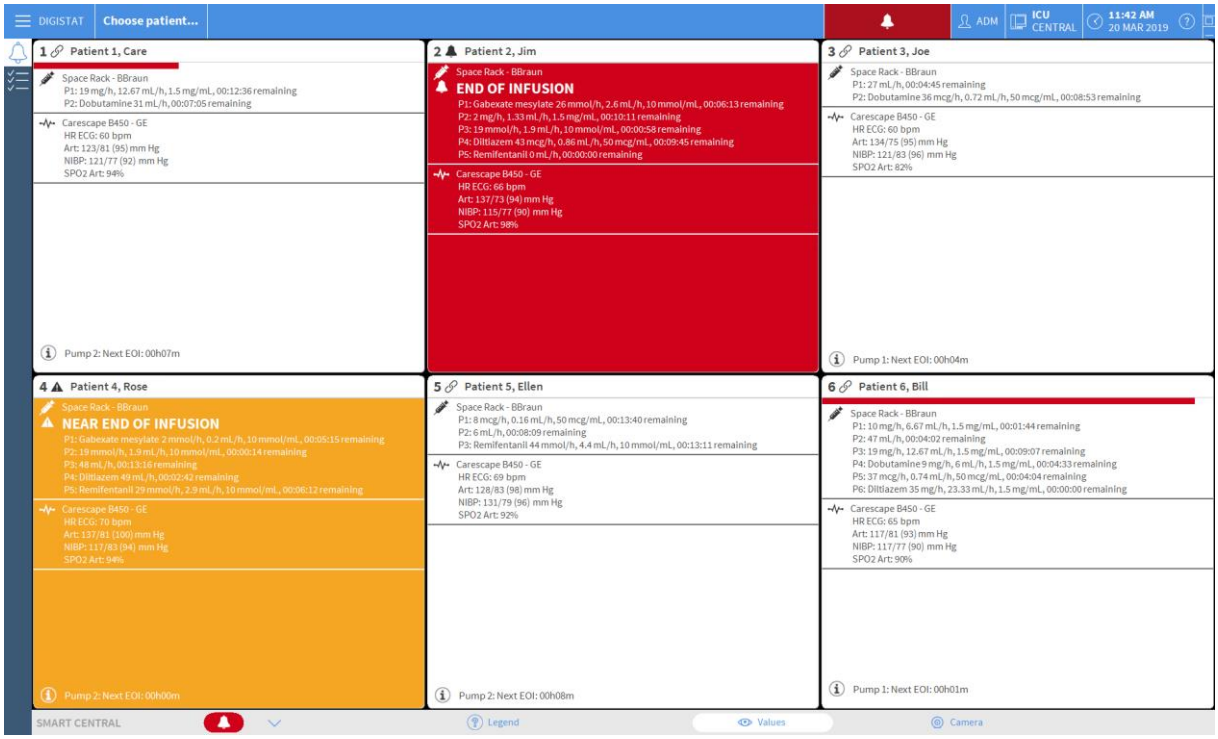


Fig 51

➢ Touch the relevant Bed Area (Fig 50 **A**) to enlarge the video (Fig 52):

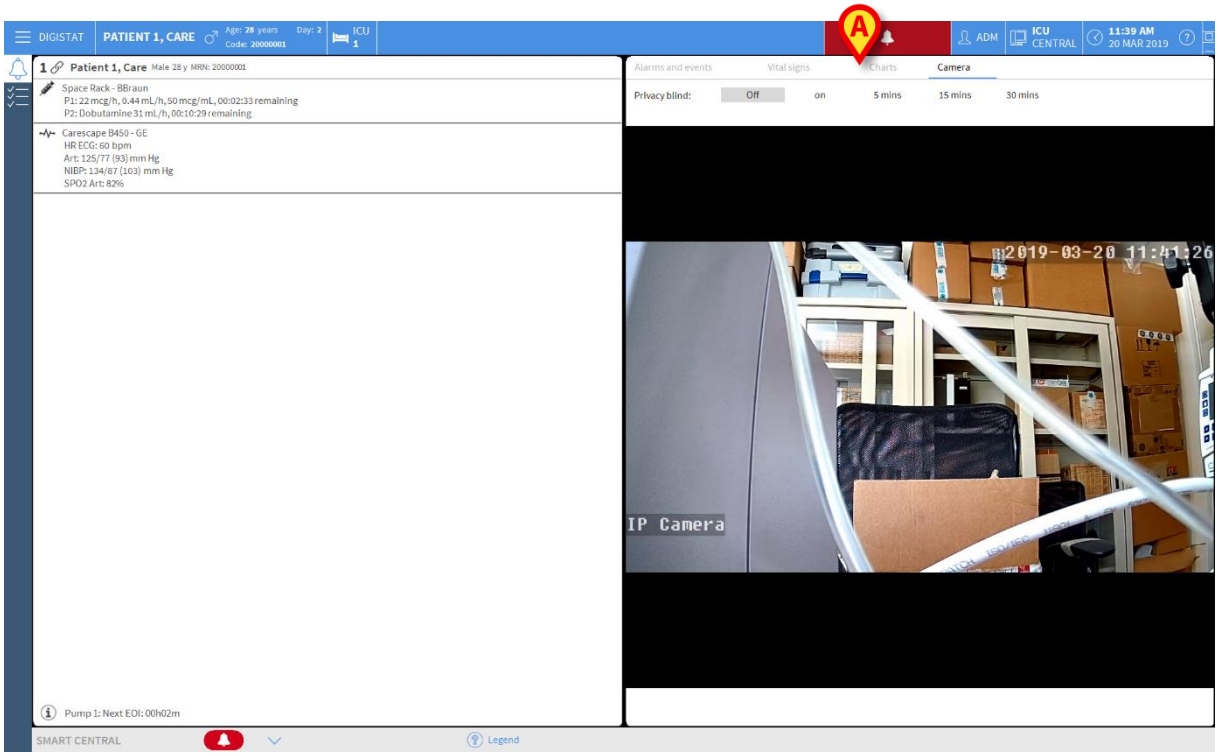
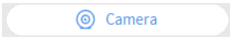


Fig 52

The patient Dashboard displays an additional tab, labelled as **Camera**, corresponding to the enlarged view.

The Camera tab is shown first if the 

button is selected in the Smart Central main screen:

➢ Touch the **Camera** label to select the Camera tab in the Dashboard, if not currently selected.

The “Privacy Blind” feature allows the user to turn off the webcam of the considered patient: this can be done either permanently or for a certain time interval. During the Privacy Blind mode no video stream can be viewed. The Privacy Blind mode is disabled by default.

The Privacy Blind mode is indicated by the icon in the Smart Central screen and in the Bed Area screen.

The Privacy Blind button bar is represented below

➢ Touch the On button to enable the Privacy Blind mode.

When selected, the **On** button is highlighted.

In Privacy Blind mode the Bed Area is like the one shown below (Fig 53):

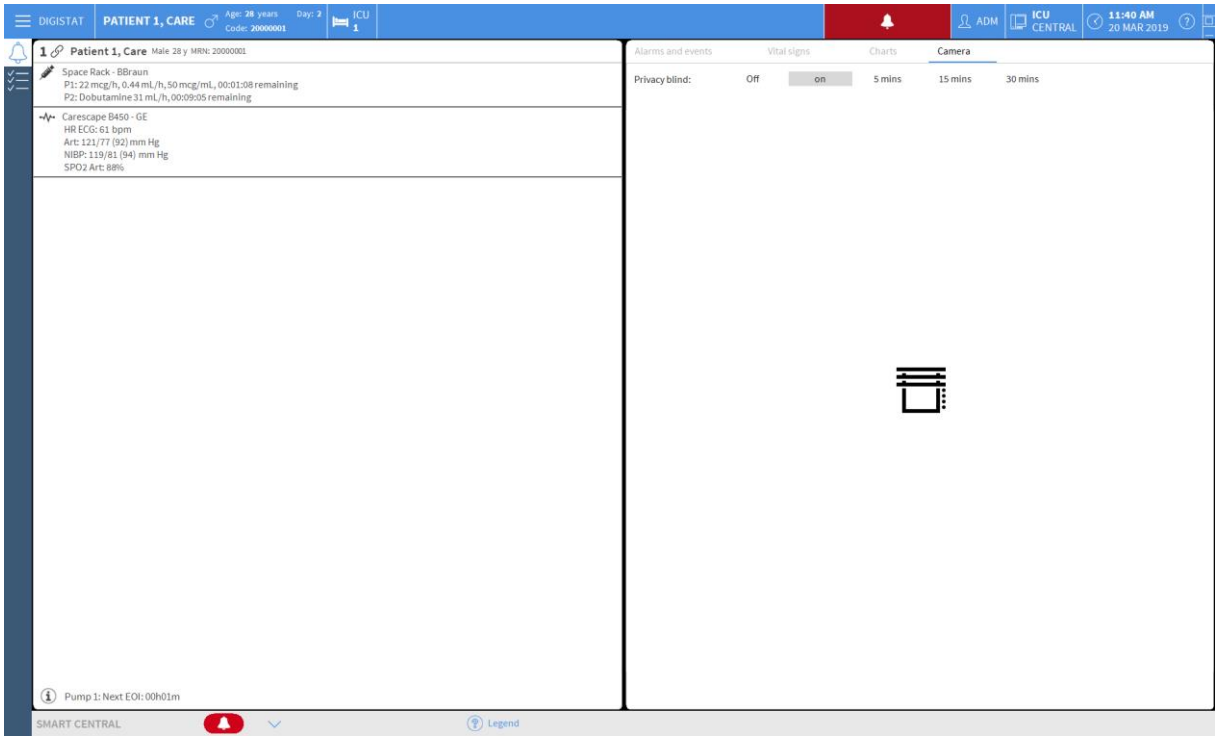


Fig 53

In Privacy mode the Smart Central screen is like the one shown below (Fig 54):

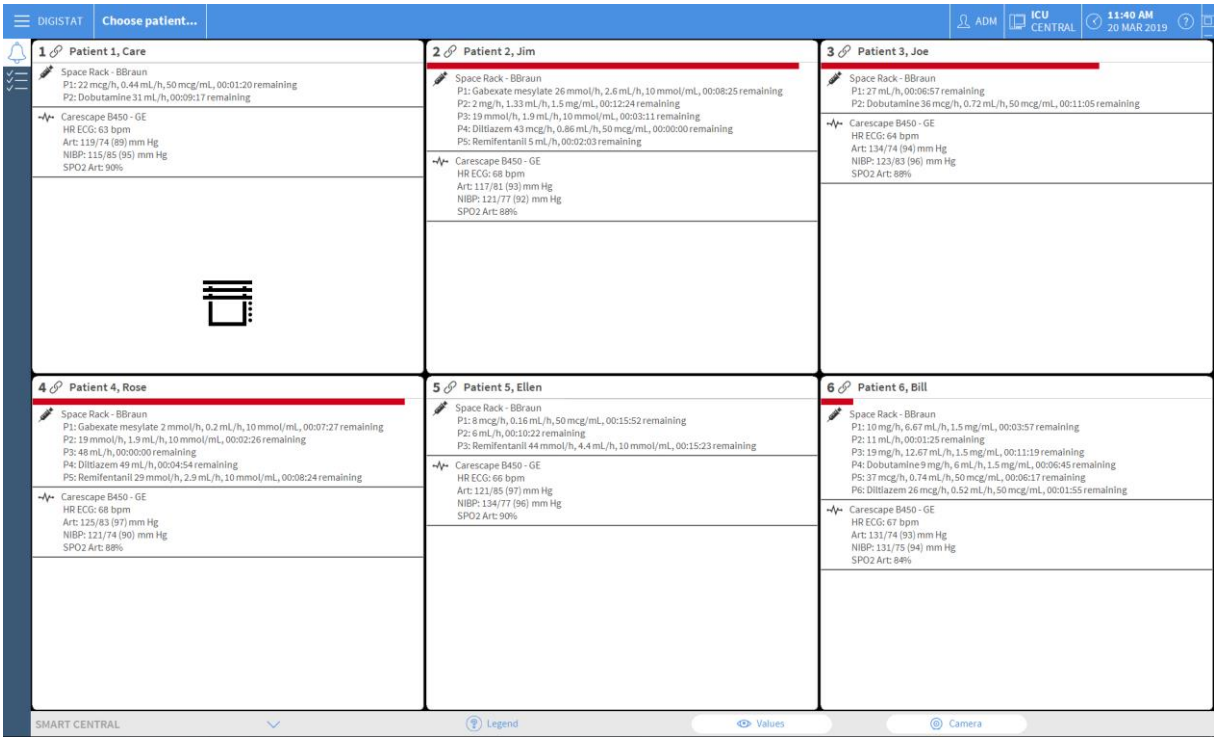


Fig 54

- Touch the **Off** button to disable the Privacy Blind mode.

To activate the Privacy Mode only for certain time interval:

- Touch the **5 mins** or **15 mins** or **30 mins** buttons to enable the Privacy Mode for 5 or 15 or 30 minutes.

The selected button in the button bar is highlighted.

After the selected time interval, the Privacy Mode automatically turns off.

1.12 Patient admission, selection and search

Although Smart Central is commonly used as a monitor in the ward or unit to facilitate alarms notification and management, in some installation it is possible, for users having specific permissions, to use patient admission, search and selection tools.
To access these functionalities:

➢ Click the **Patient** button on Control Bar (Fig 55 **A** and Fig 56).

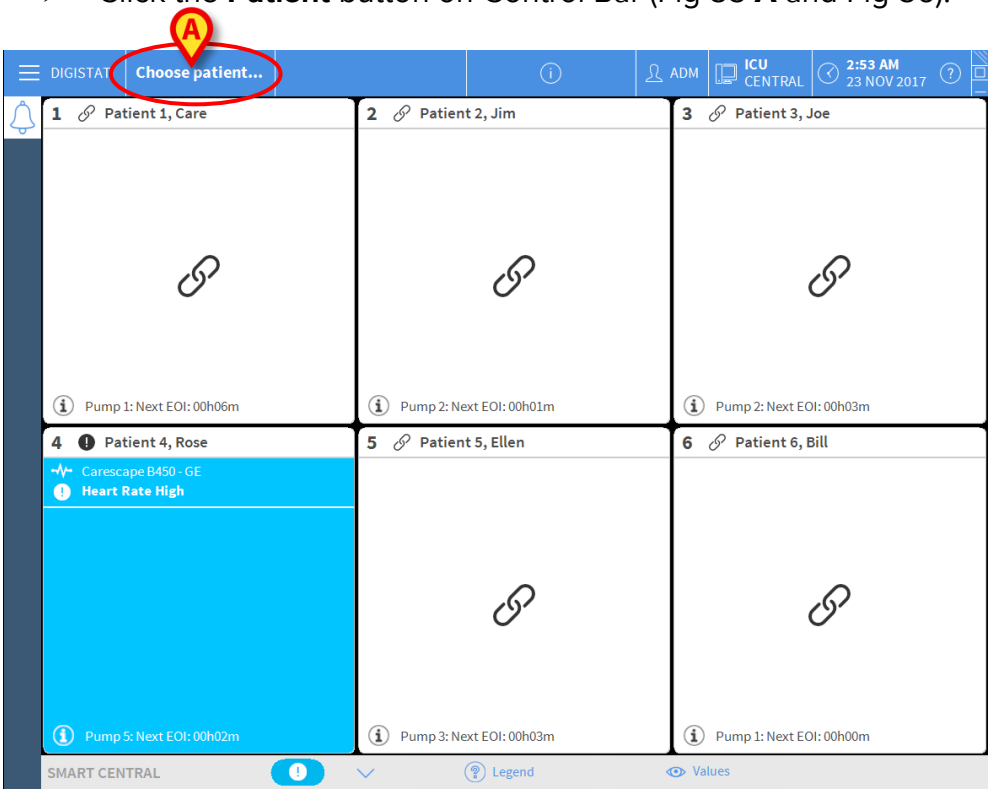


Fig 55

Fig 56

The “Anonymous Patient” screen is displayed by default (Fig 57).

1.12.1 The “Anonymous Patient” screen

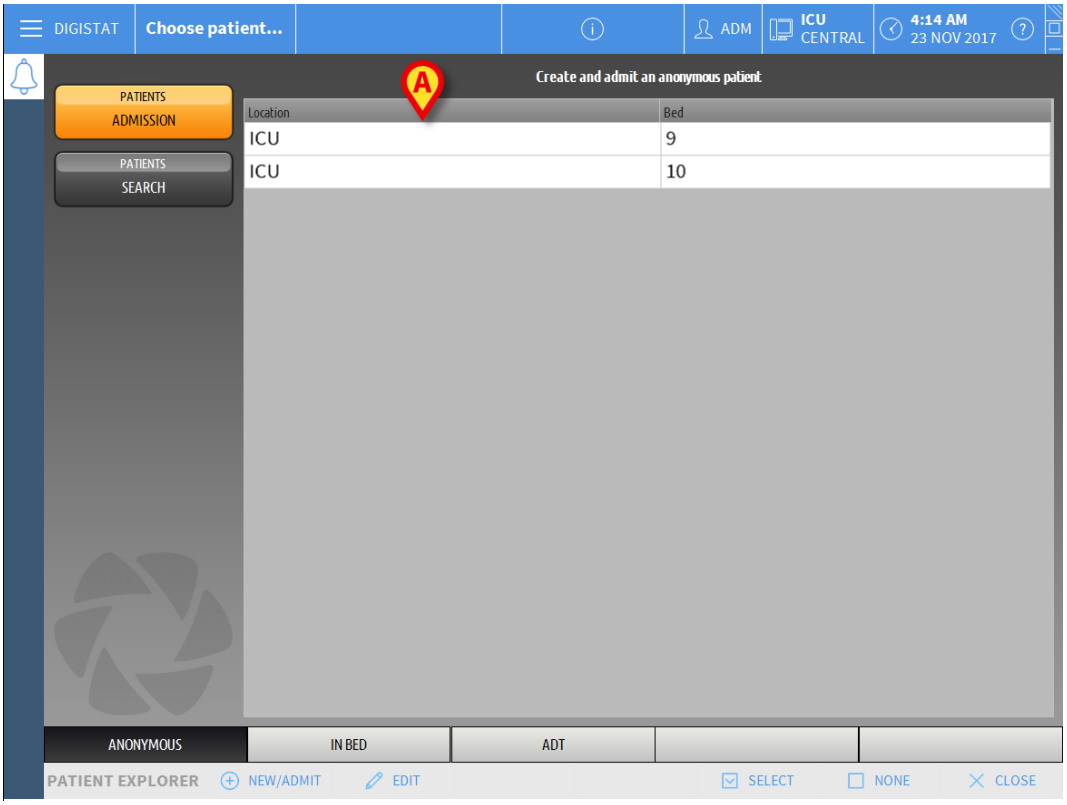


Fig 57

The “Anonymous Patient” screen makes it possible to admit a patient whose data are not yet available. In the area indicated in Fig 57 **A** all the available beds are listed.

To admit an anonymous patient to a bed,

- Double click the row corresponding to the wanted bed

User confirmation is required (Fig 58).

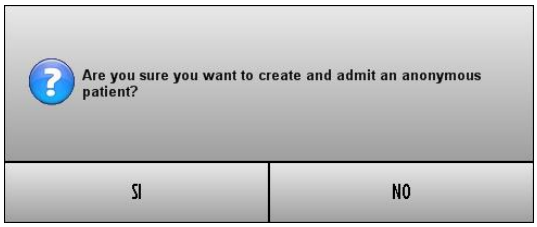


Fig 58

- Click **Yes** to admit the patient. The Smart Central screen related to that patient is then displayed. A temporary name is automatically assigned (Patient 10 - Fig 59 **A**)

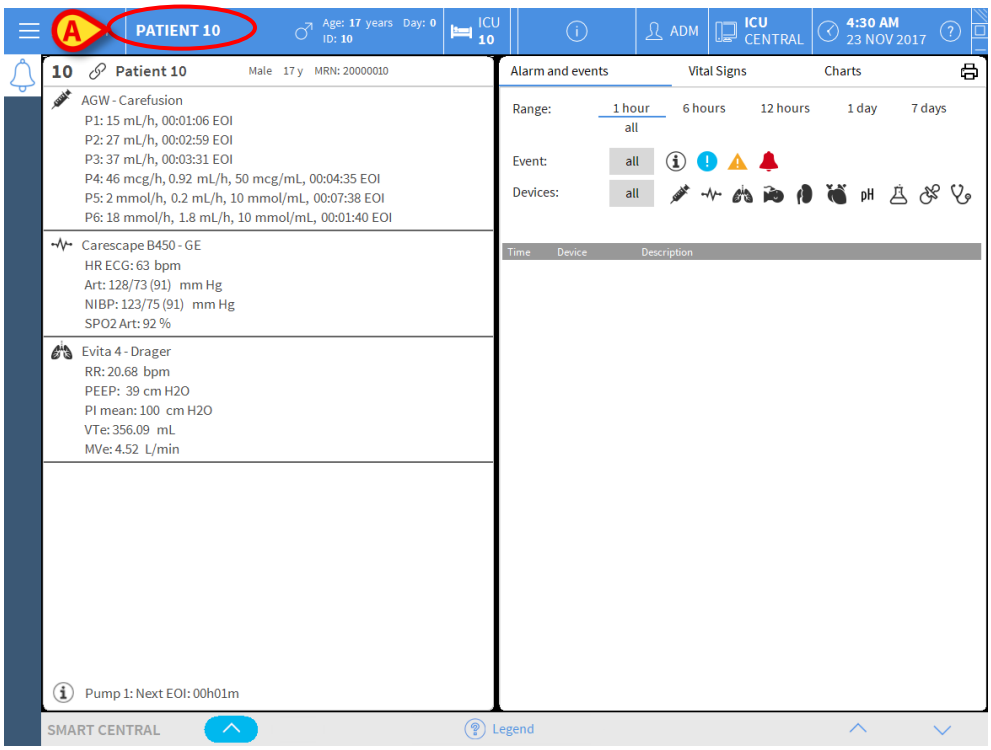


Fig 59

➢ Use the “Edit patient” functionalities to later complete the patient data (see paragraph 1.14.2)

1.12.2 Admitted patients list

To display the list of admitted patients:

➢ Click the **In Bed** button on the command bar (Fig 60 **A**)

The list of beds configured in the domain is this way displayed (Fig 60 **B**).

Fig 60

The rectangular buttons on the screen (Fig 60 **B**) represent the beds configured in the workstation domain (usually the beds of a specific ward). If a patient is admitted to a bed, the patient name is displayed on the area (Fig 61 **A**). Below the patient name you can read the admission date. Areas with no name correspond to empty beds (Fig 61 **B**).

Fig 61

- Click one of the areas to select the corresponding patient

The name of the selected patient is displayed on the **Patient** button on Control Bar (Fig 62).

Fig 62

The system displays the current situation of the selected patient on the Smart Central (i.e. the corresponding “Bed area”) in full-screen mode (Fig 63).

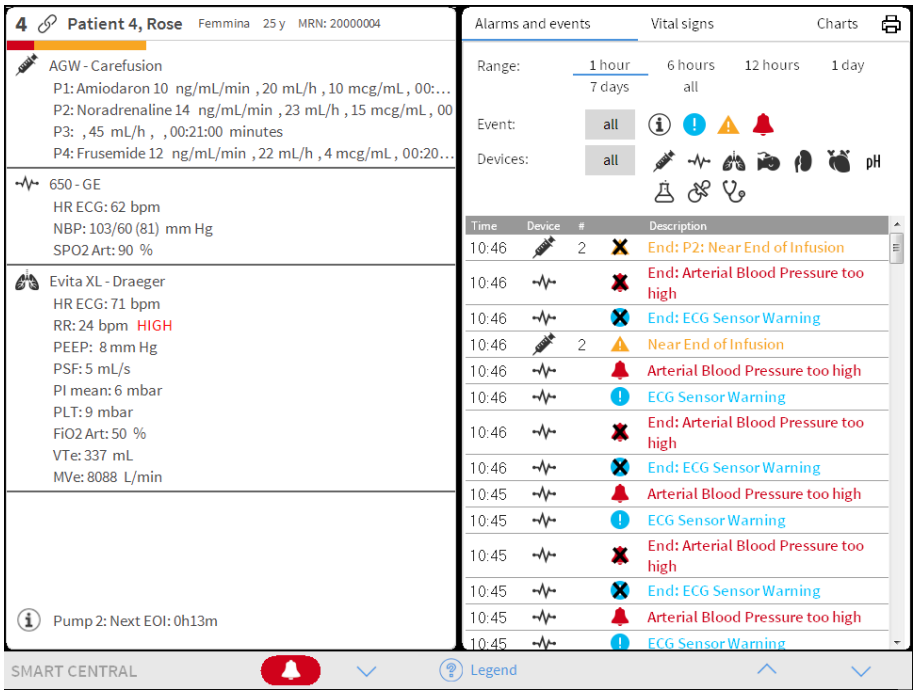


Fig 63

1.12.3 Patients from ADT

If a specific software component is installed server-side, the Smart Central system can acquire patient data from the Healthcare Structure ADT.
If the system is so configured, and if bed information is provided, then the patient can be directly admitted to bed by the ADT. In this case the ward staff will automatically see the new patients on the list of admitted patients (Fig 60).
Otherwise, the patients assigned to the department by the ADT will be listed on a specific screen. To access this screen:

- Click the ADT button on the command bar (Fig 64 **A**)

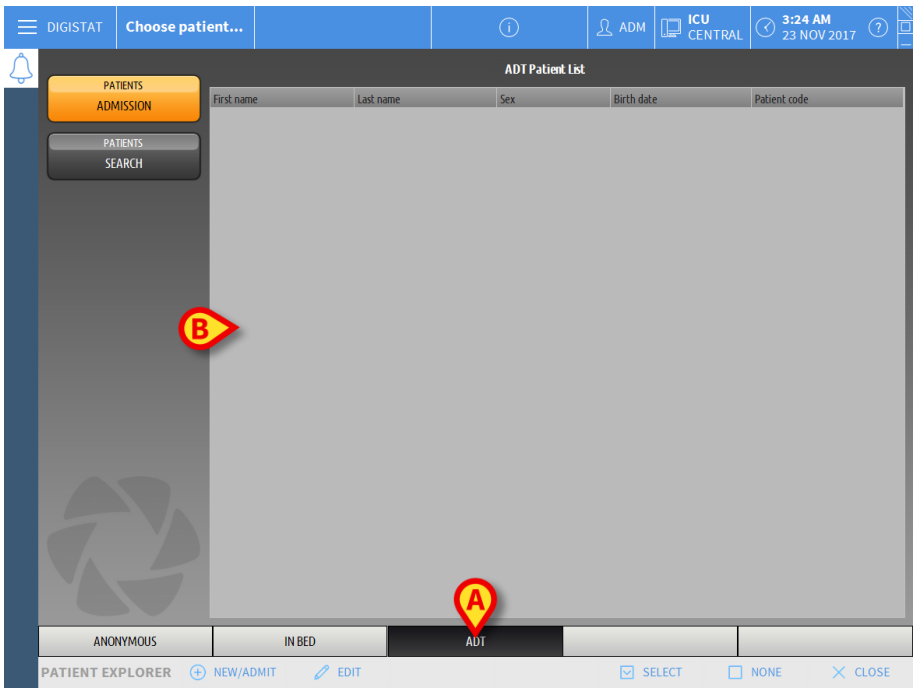


Fig 64

Patients assigned by the ADT are listed on the area indicated in Fig 69 **B**.
For each patient the following information is provided:

- First name
- Last name
- Sex
- Birthdate
- Patient Code

To select a patient

➢ Double click the row corresponding to the patient

The **New/Admit Patient** window, containing the available patient data will be displayed (Fig 65).

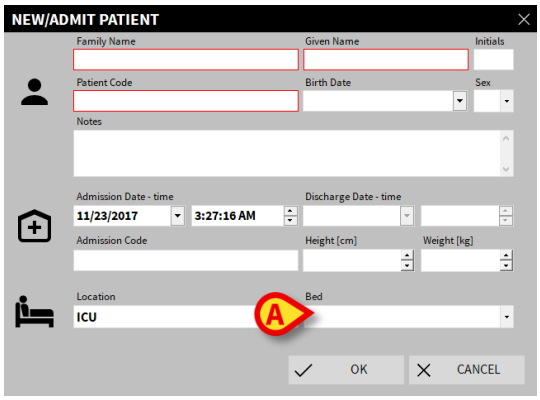


Fig 65

➢ Specify the bed number in the field indicated in Fig 65 **A**

1.12.4 Direct patient admission

It is possible to directly admit a patient to a bed by entering patient data. To do that, use the New/Admit patient functionality, which is described in paragraph 1.14.1.

1.13 Patient search

To search for a patient's data on the Digistat database:

➢ Click the 

button indicated in Fig 66 **A**

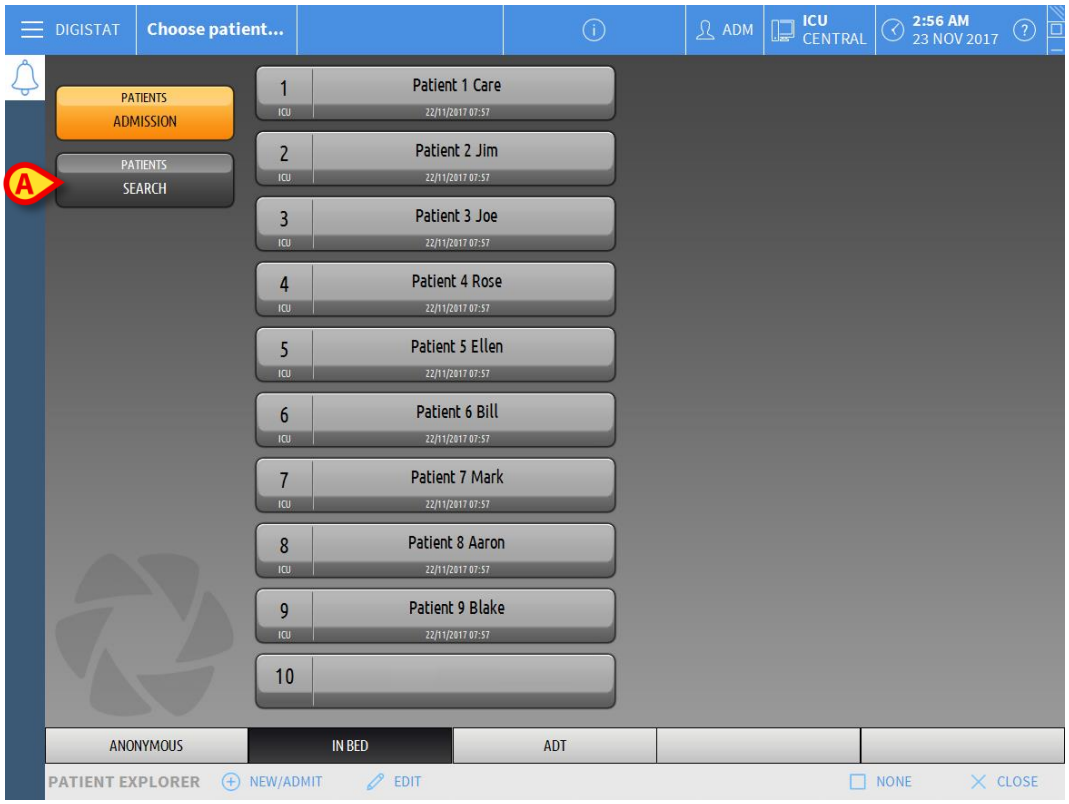


Fig 66

The following screen will open (Fig 67).

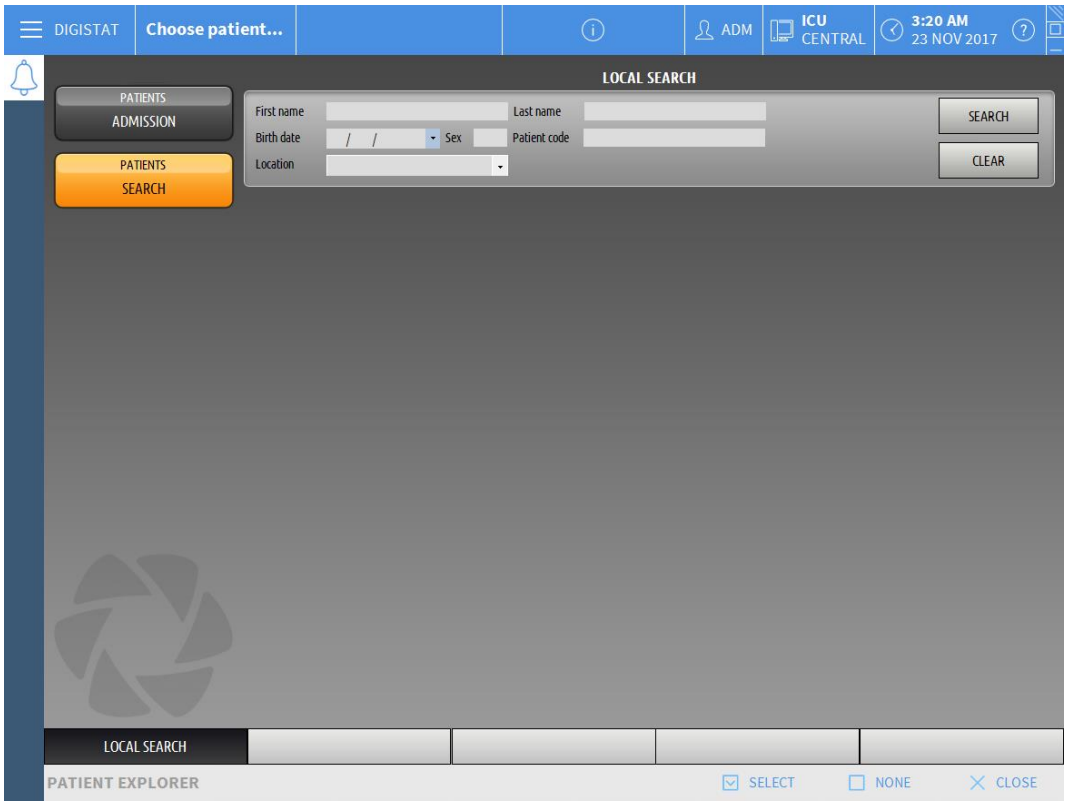


Fig 67

The search fields in the upper area make allow relevant patient's information to be searched (Fig 68).

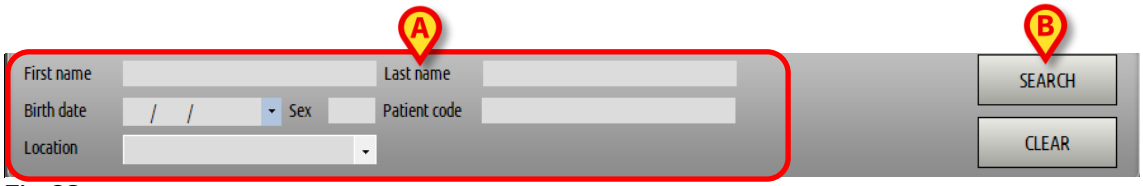


Fig 68

To search for a patient:

- Enter the data of the patient you are searching for in one or more fields (Fig 68 **A**).
- Click the **Search** button (Fig 68 **B**).

The central area displays in a table the list of all the patients whose data match those specified.

The system displays the list of patients who satisfy all the search parameters entered.

For example: if a search is performed by entering the patient's date of birth, the result will list all patients born on that date. If a search is performed by entering the patient's date of birth **and** sex the result will list only the men or women born on that date.

- Click the **Search** button without entering any value in the search fields to display the list of all the patients registered in the database
- Use the **Clear** button to clear the search filters

1.13.1 The search results

The search results are shown in the central part of the screen (Fig 69).

Family Name	Given Name	Sex	Birthdate	Patient Code
Patient	Test	M		3342
Patient 1	Care	M	03/11/1990	20000001
Patient 2	Jim	M	07/05/1993	20000002
Patient 3	Joe	M	07/05/1989	20000003
Patient 4	Rose	F	03/05/1992	20000004
Patient 5	Ellen	F	03/09/1987	20000005
Patient 6	Bill	M	03/11/1967	20000006
Patient 7	Mark	M	03/12/1967	20000007
Patient 8	Aaron	M	01/12/1960	20000008

Fig 69

The results are displayed in alphabetical order of the family name. The information provided for each result depends on the configuration in use. In the example shown in Fig 69 the columns indicate the family name, first name, sex, patient code and date of birth of every patient. It is possible that not all the data will be available for a patient, in which case the area corresponding to the missing information is empty.

To select a patient on the list:

➢ Double click the row corresponding to that patient

1.14 The Command bar

The command bar (Fig 70) contains buttons making it possible to perform different actions.

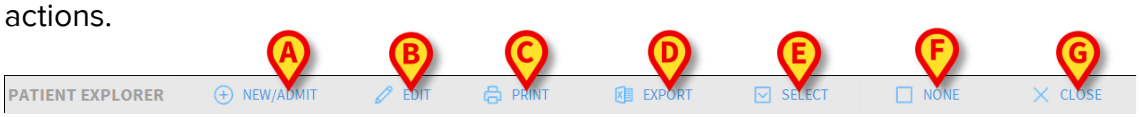


Fig 70

1) **New/Admit Patient** (Fig 70 **A**) – This button makes it possible to enter a new patient in the database and to admit him/her to a bed (see paragraph 1.14.1 for the detailed procedure).

2) **Edit Patient** (Fig 70 **B**) – This button makes it possible to edit the patient's data (see paragraph 1.14.2).

3) **Print** (Fig 70 **C**) - This button, when enabled, prints the grid currently displayed on screen.

4) **Export** (Fig 70 **D**) - This button, when enabled, makes it possible to export the current data to an XLS file.

5) **Select** (Fig 70 **E**) - This button makes it possible to select a patient.

6) **None** (Fig 70 **F**) – This button makes it possible to deselect a patient when he/she is selected. After clicking the **None** button, the name of the previously selected patient disappears from the **Patient** button (see paragraph 1.14.8).

7) **Close** (Fig 70 **G**) – This button closes the search screen (see paragraph 1.14.9).

1.14.1 New/Admit patient

The **New/Admit Patient** button (Fig 71) makes it possible to enter a new patient in the database and to admit them into a bed.

Fig 71

To enter a new patient:

➢ Click the **New/Admit Patient** button

The following window opens (Fig 72).

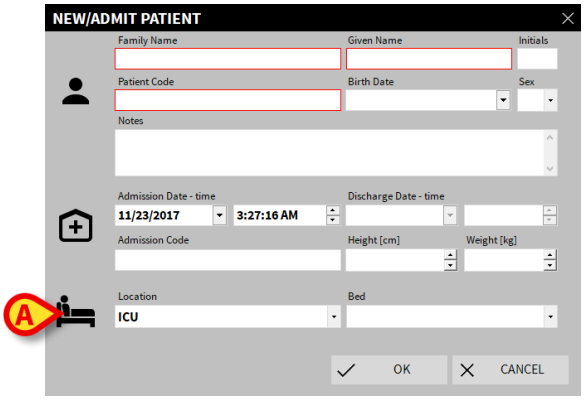


Fig 72

- Enter the new patient's data. The fields highlighted in pink are mandatory
- Click **Ok** to confirm

The new patient is registered in the database and admitted to the bed/department specified in the "Location" and "Bed" fields (Fig 72).

1.14.2 Edit patient

The **Edit Patient** button (Fig 73) makes it possible to edit the data of a selected patient.

Fig 73

Remember that this button can only be used if a patient is selected. The name must appear on the **Patient** button of the Digistat Control Bar (Fig 74).

The "edit" operations performed are always for the patient whose name appears on the **Patient** button (Fig 74).

Fig 74

To edit the patient's data:

- Select the patient whose data must be edited
- Click the **Edit Patient** button

A menu containing different options opens (Fig 75).

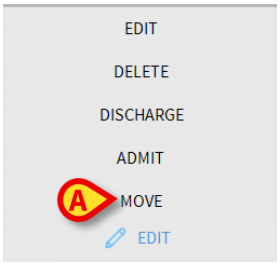


Fig 75

Each of these options makes it possible to perform a different operation. The functions of the different buttons on the menu are described in the following sections.

1.14.3 Move

The **Move** button (Fig 75 **A**) makes it possible to register the transfer of the patient selected to a different bed and/or a different location.

To transfer a patient:

- Select the patient

The name of the selected patient is displayed on the **Patient** button.

- Click the **Edit Patient** button

A drop-down menu containing various options opens (Fig 75).

- Click the **Move** button (Fig 75 **A**)

The following window opens (Fig 76).

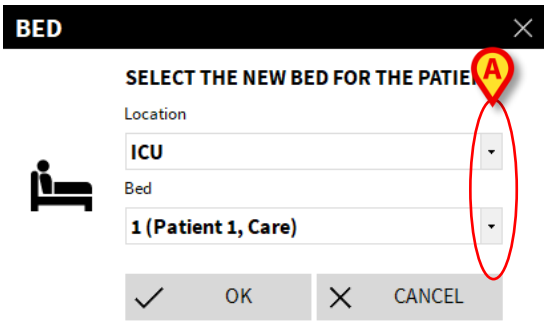


Fig 76

- Use the arrow buttons (Fig 76 **A**) to select the bed to which the patient will be transferred

The upper button opens a list of all the locations available.
The lower button opens a list of all the beds available in the location selected.

If the name of a patient appears alongside the bed number, the bed is already occupied.

➢ Click **Ok** to confirm

If an occupied bed is selected and the **Ok** button is clicked, a pop-up message is provided, asking whether we want to exchange the patients in the two beds.

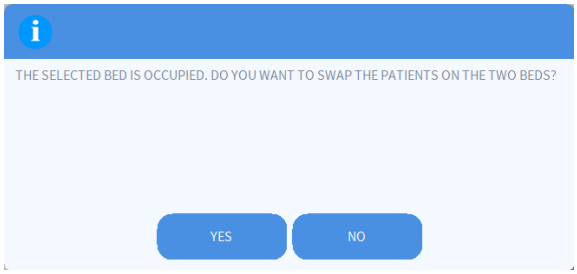


Fig 77

1.14.4 Admit

The admission button is disabled. The admission procedure is performed together with the “New patient” recording procedure. See paragraph 1.14.1.

1.14.5 Discharge

The **Discharge** button makes it possible to register the discharge of a patient.

To discharge a patient

➢ Select the patient

The name of the selected patient is displayed on the **Patient** button.

➢ Click the **Edit Patient** button

A menu containing various options opens (Fig 78).

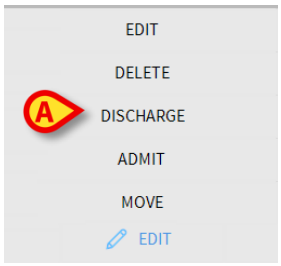


Fig 78

➢ Click the **Discharge** button (Fig 78 **A**)

A pop-up message requesting confirmation of the operation opens (Fig 79).

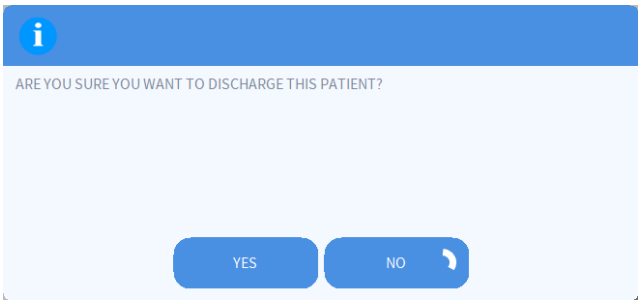


Fig 79

➢ Click **Yes** to proceed with the discharge of the patient

This action opens the window containing the patient's data (Fig 80 – unlike the window shown in Fig 72, here you can change the date and time of discharge).

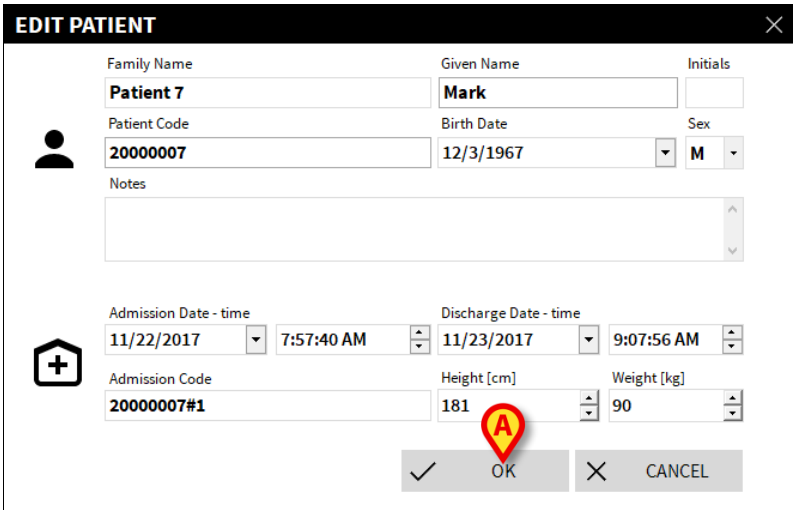


Fig 80

➢ Click **Ok** to complete the discharge procedure (Fig 80 **A**)

1.14.6 Delete

The **Delete** button makes it possible to delete all data of a patient from the database.

To delete a patient's data:

➢ Select the patient

The name of the selected patient is displayed on the **Patient** button.

➢ Click the **Edit Patient** button

A menu containing various options opens (Fig 81).

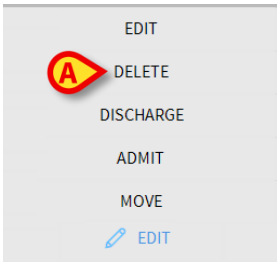


Fig 81

- Click the **Delete** button (Fig 81 **A**)

A pop-up message requesting confirmation is provided (Fig 82).

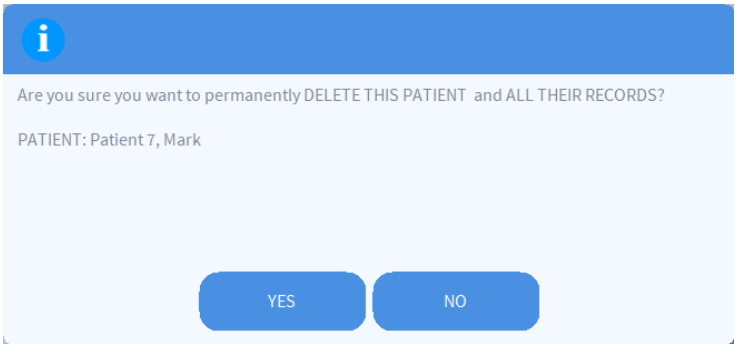


Fig 82

- Click **Yes** to proceed with the deletion procedure

Once a patient has been deleted it is no longer possible to access any document regarding him/her acquired through the Product Digistat. Therefore, it is necessary to perform this operation with extreme caution. Only users with specific permissions are enabled to delete a patient.

1.14.7 Edit

The **Edit** button makes it possible to edit data of a selected patient.

To edit a patient's data:

- Select the patient.

The name of the selected patient is displayed on the **Patient** button.

- Click the **Edit Patient** button

A menu containing various options opens (Fig 83).

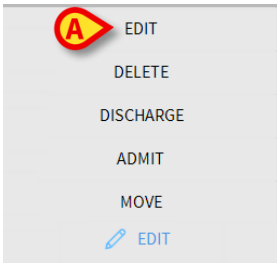


Fig 83

- Click the **Edit** button (Fig 83 **A**)

A window containing the patient's data opens (Fig 84).

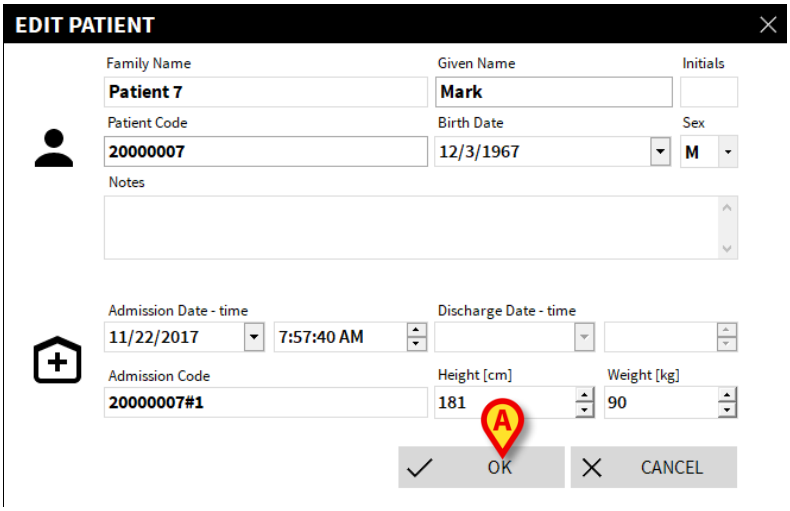


Fig 84

- Edit the patient's data
- Click **Ok** to confirm (Fig 84 **A**).

1.14.8 Deselect patient

The **None** button (Fig 85) makes it possible to deselect the selected patient (whose name is shown on the PATIENT button).

Fig 85

To deselect a patient:

- Click the **None** button (Fig 85)

The patient's name disappears from the **Patient** button.

1.14.9 Close

The **Close** button (Fig 86) makes it possible to close the search screen.

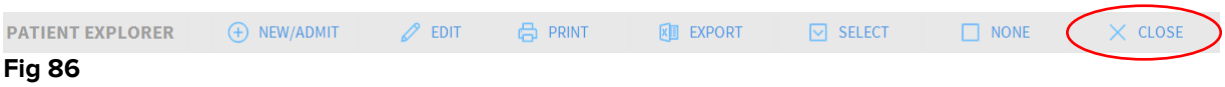


Fig 86

To close the patient search screen:

- Click the **Close** button on the screen (Fig 86)

2. Bedside configuration

The Smart Central system can be configured to be “locked” to a single bed. In this case the screen displays the data of the connected bed in full-screen mode. In Fig 87 the workstation is locked to bed 2.

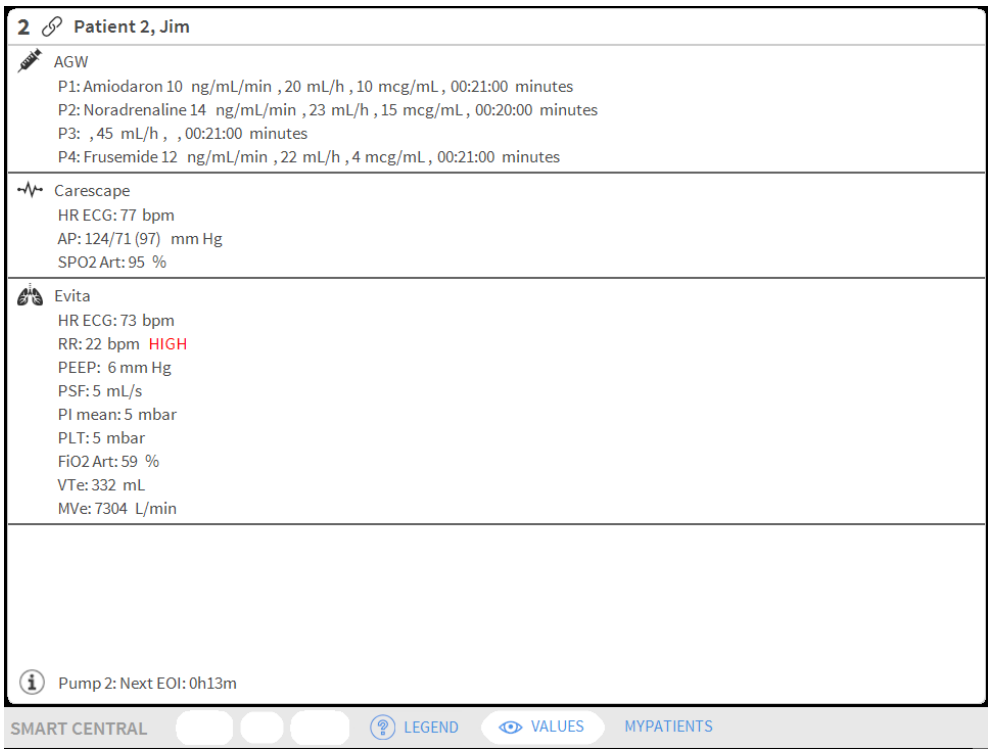


Fig 87

The “Bed area” is the same as described above.

Three buttons are in the command bar.

Use the **Legend** button to display the “Legend” window explaining the meaning of the different icons (see paragraph 1.5.1).

Use the **Values** button to display the device values when no alarm is provided (see paragraph 1.4.1).

Use the **MyPatients** button to select other beds to be displayed on the screen (see next section).

2.1 My Patients

The “My patients” functionality makes it possible to display up to 4 additional “Bed areas” on a “Bedside” workstation (maximum 5 in total, depending on configuration).

To use this functionality:

- Click the **MyPatients** button on the command bar

The following window opens (Fig 88).

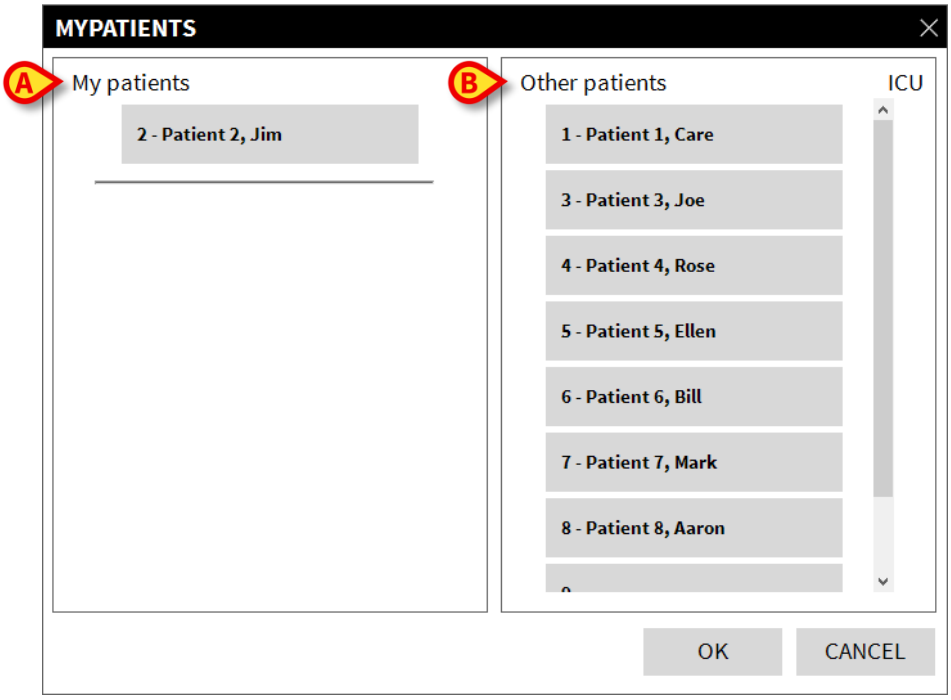


Fig 88

On the left, in the “My patients” column, is the list of “Bed areas” currently displayed (Fig 88 **A**). Each box represents a “Bed area”. The box on top represents the patient to which the workstation is locked.

On the right, in the “Other Patients” column, all the existing “Bed areas” are listed (Fig 88 **B**).

To select a “Bed area” to be displayed on screen,

- Click the corresponding box for the patient in the “Other Patients” column

The box disappears from the “Other Patients” column (right) and is displayed on the “My Patients” column (Left). A maximum of 4 additional “Bed areas” can be selected (depending on configuration).

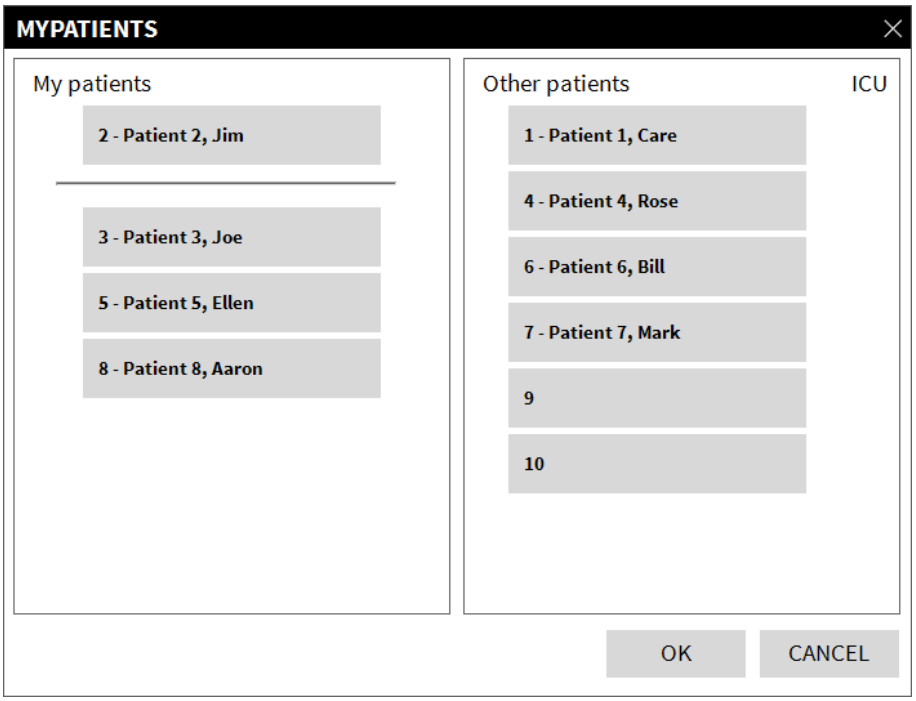


Fig 89

In Fig 89 “Bed areas” 3, 5 and 8 are selected.

- Then click the **Ok** button

The Smart Central screen is displayed as shown in Fig 90.

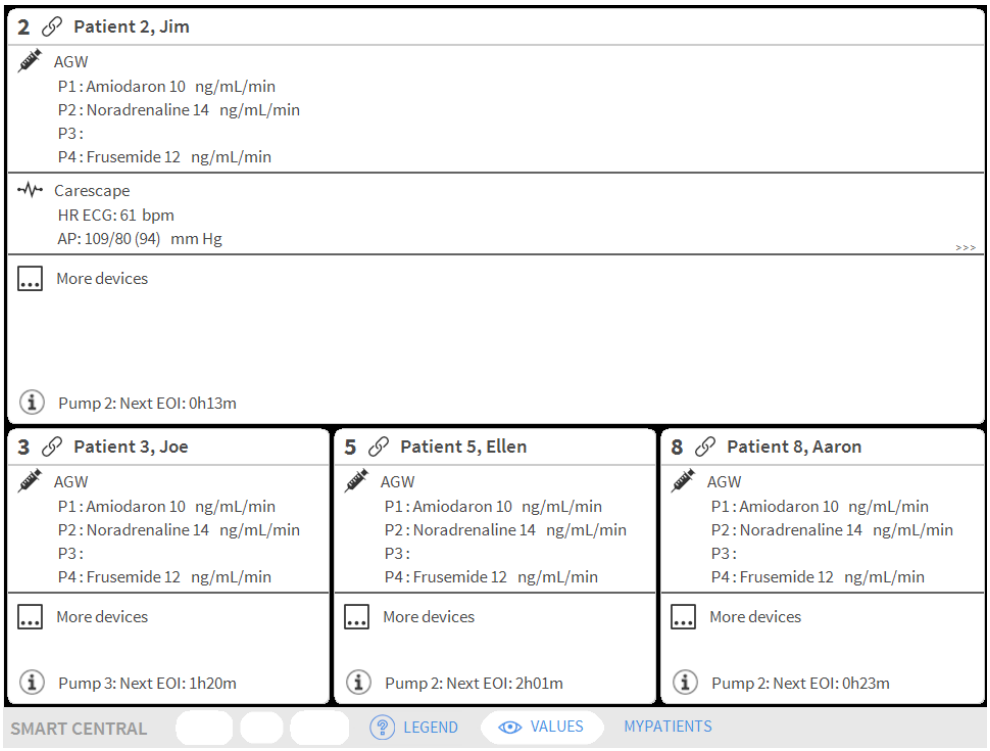


Fig 90

The “Bed area” to which the workstation is locked is number 1 (large, on top). “Bed areas” 3, 5, 8 are displayed underneath the locked “bed area” and are smaller.

The additional “Bed areas” can be enlarged.

- Click on one of the additional “Bed areas” to enlarge it. Click again to bring it back to the original proportions

In order to remove one or all the additional “Bed areas”,

- Click the **MyPatients** button on the command bar

The “My Patients” window is displayed (Fig 89).

To remove an additional “Bed area”,

- Click the box corresponding to the “Bed area” to be deselected in the “My Patients” column

The box disappears from the “My Patients” column (left) and is displayed on the “Other Patients” column (Right). The deselected “Bed area” will not displayed anymore.