Smart Central Mobile User Manual

Version 16.0

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Smart Central Mobile

For information about the Product environment, precautions, warnings and intended use see USR ENG Digistat Care and/or USR ENG Digistat Docs (depending on the modules installed - for the Digistat Suite EU) or USR ENG Digistat Suite NA (for Digistat Suite NA). The knowledge and understanding of the appropriate document are mandatory for a correct and safe use of Smart Central Mobile, described in this document.

1. Introduction

Smart Central Mobile supports alarm management by providing contextual information from multiple sources and presenting it to the staff in a clear and concise way.

Smart Central Mobile is available for Android and iOS. The screen layout is slightly different in the two Operating Systems, but the functionalities and procedures are the same. This manual mainly shows, as example, screenshots taken from an Android environment. Wherever significant differences occur, these will be highlighted in the figures and described in the text.

2. Application start-up

To start the Smart Central Mobile application

- Touch the corresponding row on the handheld device screen (Fig 1 **A** – Left is Android, right is iOS).

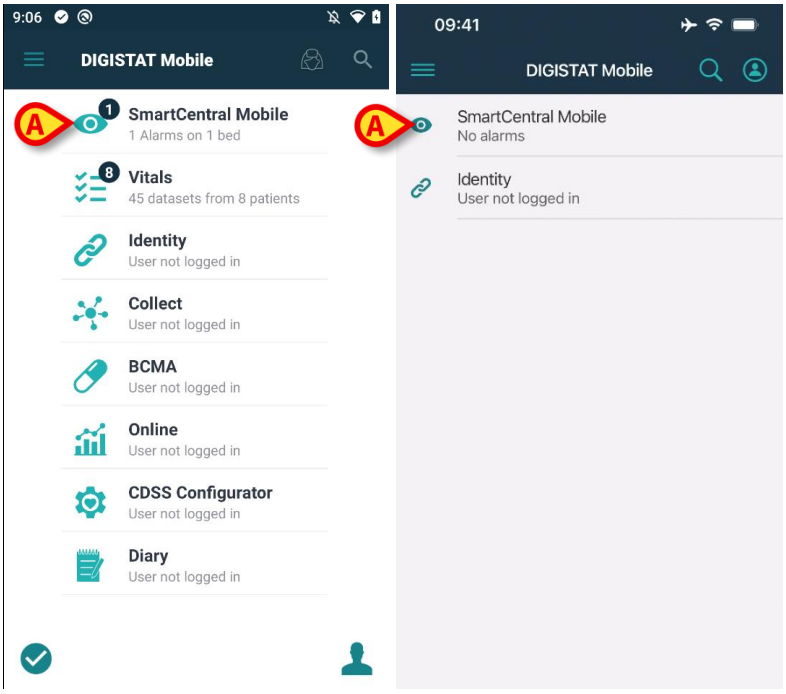


Fig 1

The Smart Central screen, shown in Fig 2 (Android) and Fig 3 (iOS), opens. If the row of the application is touched while an alarm condition is raised (indicated by a red number on the application symbol), then the Smart Central screen will present the list of alarmed beds.

3. Smart Central screen

The Central screen displays a schematic summary of the status of the medical devices connected to each bed configured in the specific handheld device. On Android (Fig 2), if all the beds of the domain are assigned to the user, these are shown as horizontal tiles and they are divided into two groups depending on whether or not they have been assigned to the User through the *MyPatients* functionality. The “Patient assignment functionality” is described in the document *USR ENG Mobile Launcher*. The assigned beds, in fact, are grouped under the label "My patients" (Fig 2 **A**), while the other beds under the label "Unassigned patients" (Fig 2 **B**).

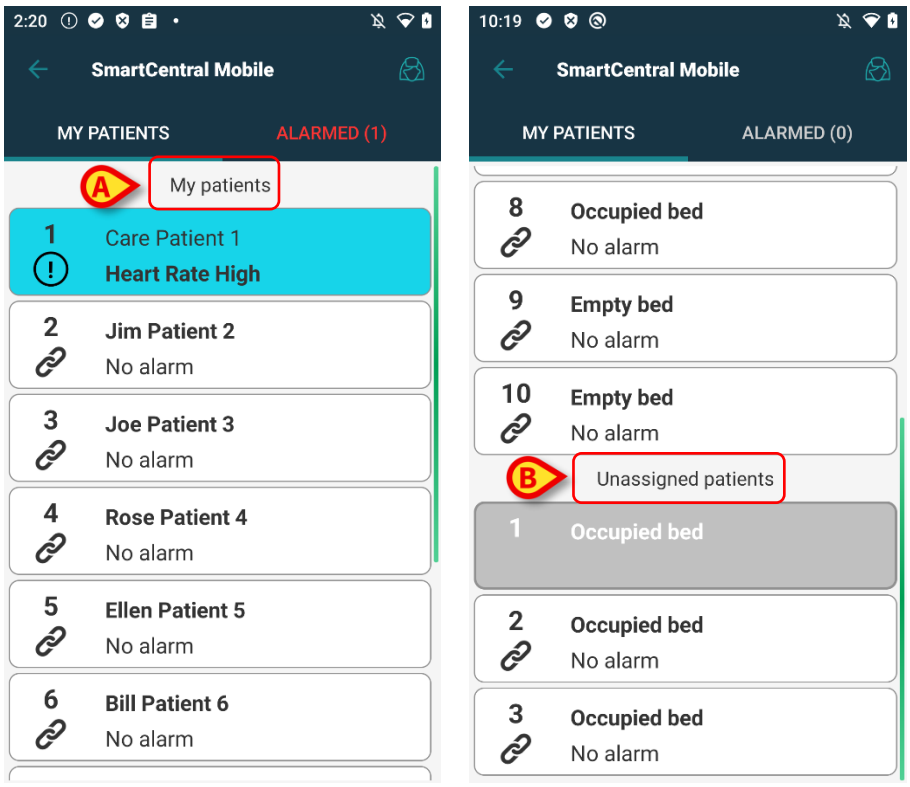


Fig 2

On iOS the patients belonging to the user domain are displayed. On iOS MyPatients functionality is not available; also on iOS the Unassigned patients are not displayed. The iOS Central screen is shown in Fig 3.

Fig 3

On Android, It is possible to opt for a visualization of the beds/patients as a set of squares (Fig 4) only if all the patients are assigned to the User and if the system option **ShowBedCards** of SMARTCENTRALMOBILE application is flagged to true. This “bed cards” view is not available on iOS.

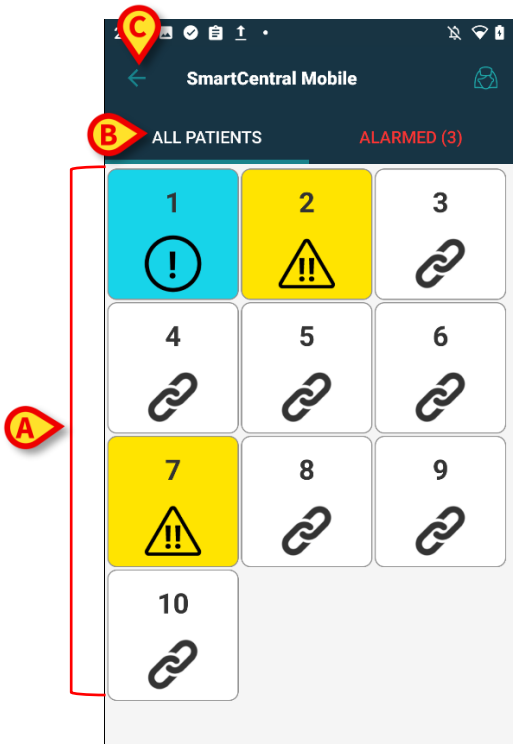


Fig 4

The squares or tiles displayed on screen represent the beds configured in the handheld device (Fig 4 **A**). The squares/tiles visible on a single screen form the “domain” of beds covered by the handheld device. The “domain” is defined by configuration.

The number or letter displayed inside the square/tile indicates the bed number or letter. On each square or tile, the status of the connected medical devices is indicated in graphic form by the background color and the related icon:

1	All the medical devices connected to the bed are on hold or there are no medical devices associated to the bed.
6	There is at least one connected medical device running.
1	At least one of the connected medical devices is sending a low priority alarm.
7	At least one of the connected medical devices is sending a medium priority alarm.
8	At least one of the connected medical devices is sending a high priority alarm.

The first case of the above-illustrated scheme is that in which no device sends data from the bed. In this case, if the user touches the grey tile, the Smart Central application displays a screen with a “No devices found” indication (Fig 5).

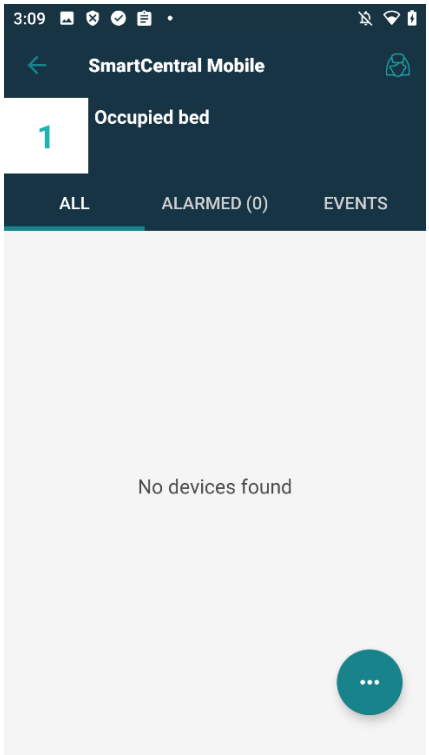


Fig 5

It is possible to use the filters indicated in Fig 4 **B** to display either all the configured beds or only the beds sending an alarm.
It is possible to configure the Smart Central application to wake the screen if an alarm is raised to the user and the mobile device is on a flat support (a desktop, a table, etc.). This possibility is not available on iOS.

Exit
Touch the backward button (Fig 4 **C**) to exit the application and go back to the Home screen.

4. Medical devices list

Touch one of the squares on the Central screen to display the list of medical devices connected to the bed (Fig 6).

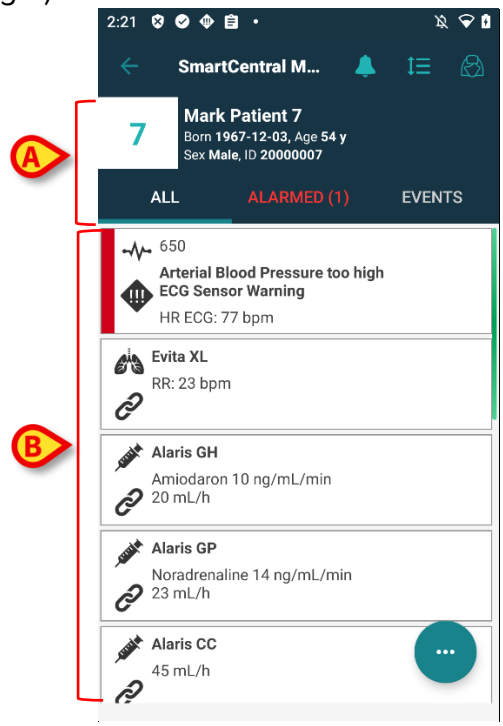


Fig 6

This screen consists of two areas: a heading area (Fig 6 **A**) and the medical devices list (Fig 6 **B**). When an alarm is raised, the “Alarmed” label is colored in red and the number of total alarmed devices is displayed in brackets. The “Events” tab displays the list of all the events related to the selected patient (Fig 7).

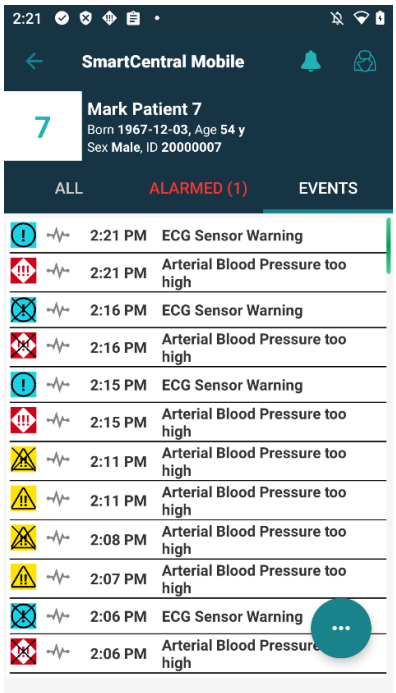


Fig 7

The events list can include, depending on the context in which the application is used:

- alarms;
- user events;
- device status messages;
- patient events.

4.1 Heading

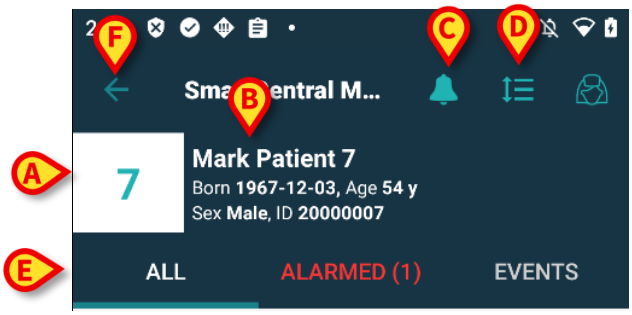


Fig 8

In the heading area (Fig 8) the following information and tools are available:

- Bed number (Fig 8 **A**).
- Patient data and personal information (Fig 8 **B**).
- The bell icon (Fig 8 **C**) indicates that there is at least one medical device alarmed on at least one of the other beds (not currently displayed). If the red bell icon is clicked on, the Smart Central screen will display the list of alarmed patients.
- The icon indicated in Fig 8 **D** can be used to enlarge the device-area and to display more information for each connected medical device. The kind of information displayed depends on the configuration and on the specific device. On iOS this icon is different, but the position and function are the same – ( : icon on iOS).

➢ Touch the icon again (Fig 8 **D**) to go back to compact display mode.

➢ Use the filters indicated in Fig 8 **E** to display either all the connected medical devices, or only the ones providing notifications, or the logged events.

➢ Use the back-arrow button (Fig 8 **F**) to go back to the Central screen.

4.2 Devices list

On the lower part of the “Bed” screen the individual medical devices are represented as shown in Fig 9:

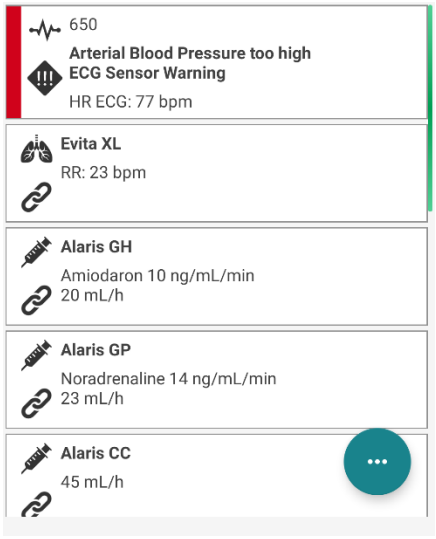


Fig 9

Each medical device is represented within a “card”. Each “card” displays the following information:

- The medical device type, indicated by an icon. The list of possible icons changes according to the healthcare organization needs. Here are some common examples.

	Infusion Pump
	Respirator
	Cardiac Output Measurement Machine

- The medical device status, indicated by one of the following icons:

	**On hold**
	**Running**
	**Sending a low priority alarm**
	**Sending a medium priority alarm**
	**Sending a high priority alarm**

In the case of an alarmed device, the medical device status is indicated also by a rectangle displayed on the left of the card that is colored according to the alarm severity level:

- cyan (low priority alarm);
- yellow (medium priority alarm);
- red (high priority alarm).

For each medical device, some basic information is displayed inside the “card”. The type of information depends on the configuration.
In case of alarm, the “card” displays the alarm message.

4.3 Menu Button

The button indicated in Fig 10 **A** opens a menu allowing direct access to some specific functionalities.

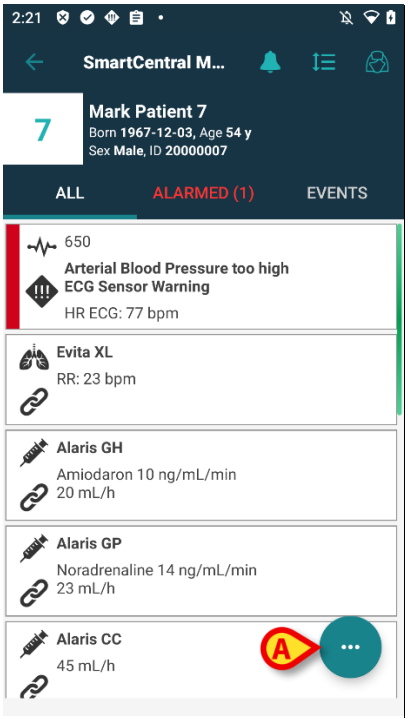


Fig 10

➢ Tap the  button to open the menu (Fig 11).

Fig 11

The actual options present on the menu depend on the configuration in use and the availability of the related functionalities.

The possible options are:

- Webcam – it displays the video stream of a configured webcam (see section 6).
- Waveforms – it displays near real time waveforms collected by medical devices (see section 7).
- Share – it is a feature that allows the sharing of data with third parties applications (see section 1.8).

In addition, specific buttons to directly access other Digistat modules and the currently selected patient data can be displayed, in a variable number according to availability and the original configuration. The modules are:

- CDSS Configurator Mobile;
- Diary;
- Online Mobile.

See the related modules' User Manuals for operating instructions.

On iOS only the "Share" and "Waveforms" options are available.

➢ Tap the  button to hide the menu.

If none of these options is available the menu is not present. If only one option is available the specific option icon is displayed.

5. Device Events history

Each “device card” can be selected to access the list of all the events related to the considered medical device (Fig 12).

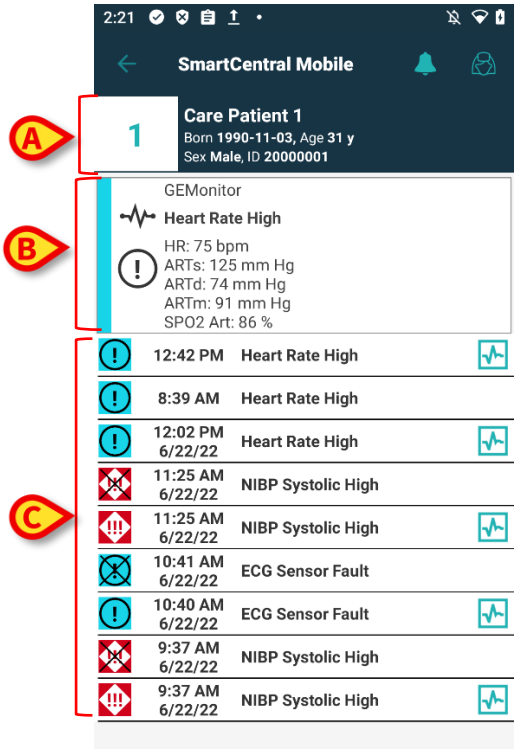


Fig 12

This screen consists of three areas:

- **Patient data** (Fig 12 **A**).
- **Medical device current data** - the data displayed depends on the device type and parameters’ configuration (Fig 12 **B**).
- **Device events history** - all the events related to the device are listed and displayed in chronological order. For each event, a short description and the time of occurrence are provided (Fig 12 **C**). The beginning time (which coincides with the appearance of the alarm itself) and end time (indicated with the crossed alarm icon) of the alarms are also given.

The crossed icon on the left indicates that a certain event is over. In the figure shown in Fig 13, for example, the event started at 10:40 AM (Fig 13 **A**) and ended at 10:41 AM (Fig 13 **B**).

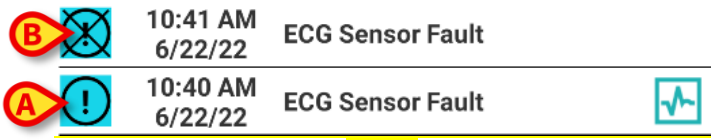


Fig 13

Waveforms snapshot

- Tap the icon (if present - Fig 14 **A**) to display the snapshot of the waveform related to the corresponding event.

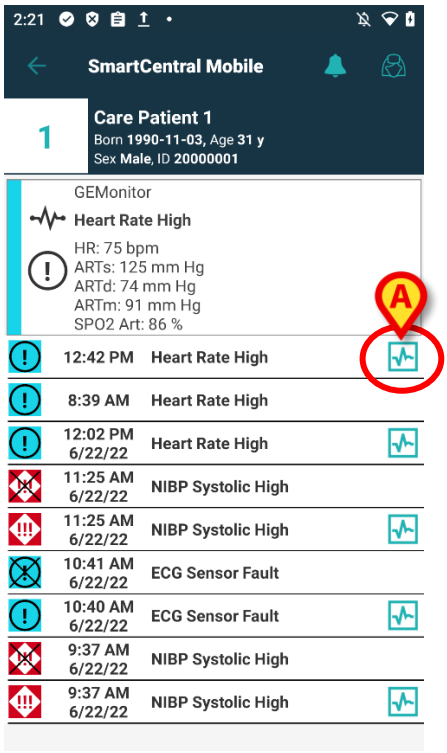


Fig 14

The following window opens (Fig 15):

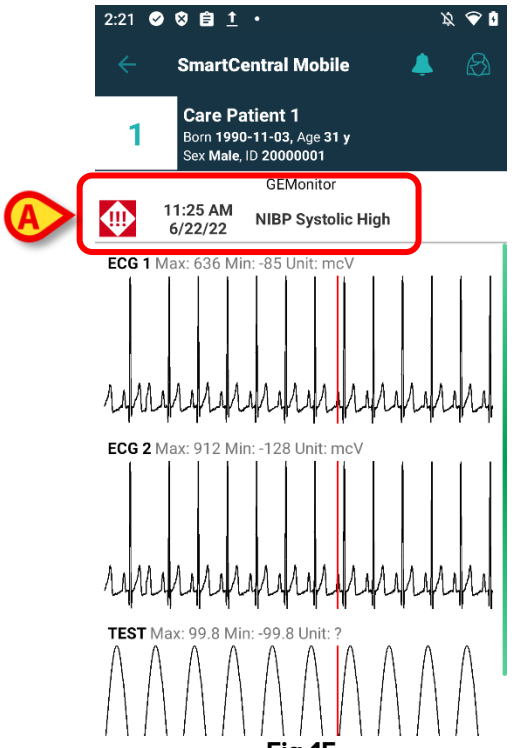


Fig 15

The event corresponding to the Waveform Snapshot is displayed in Fig 15 **A**.
Go to paragraph 7 for more information about Waveforms.

6. Smart Central Video

This functionality is not available on iOS.

The Smart Central application 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 for a selected patient, the webcam option is available on the menu button shown in Fig 16.

Fig 16

- Tap the “Webcam” button (Fig 16 **A**) on the menu to access the webcam video stream.

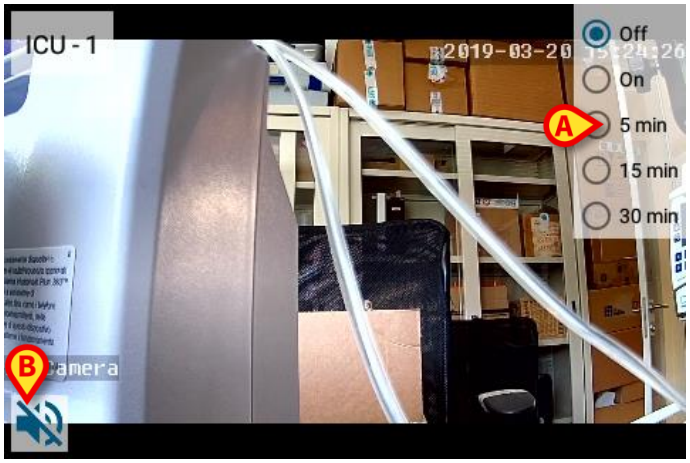
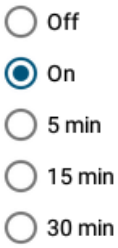


Fig 17

- Tap the **back** phone button to exit the stream return to the previous screen.

The “Privacy Blind” feature allows to turn off the webcam for a patient, either permanently or for a specified time interval. During the Privacy Blind mode no video stream can be viewed. The Privacy Blind mode is disabled by default.

The Privacy Blind button bar (Fig 17 **A**) is represented below:



- Touch the **On** radio button to enable the Privacy Blind mode.

When the Privacy Blind mode is selected, the webcam video stream is blinded as shown in Fig 17:

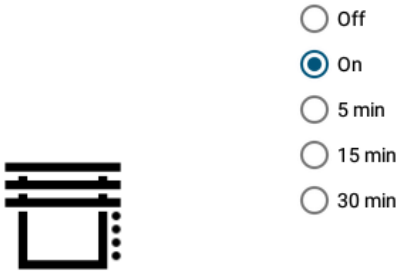


Fig 18

- Select the **Off** button to disable the Privacy Blind mode again.

To activate the Privacy Blind mode 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 radio button in the button bar is highlighted.
After the selected time interval, the Privacy Mode automatically turns off.
If the webcam supports audio streaming, it is possible to activate it touching the button (Fig 17 **B**).
A configuration option makes it possible to activate the camera for a bed only if, on that bed, there is an alarm with a given priority. For example: the camera activates on a bed only when there is an alarm with high priority. The cameras on beds that are not alarmed remain turned off. Refer to the system administrators for the available options.

7. Waveforms

Smart Central Mobile can display near real time waveforms collected from medical devices. To enable this functionality it is necessary to enable at least one waveform parameter in the configuration section of the driver capabilities.
If the functionality is enabled, the “Waveforms” option is available on the menu button (Fig 19).

Fig 19

To display the Waveforms for a bed:

- Tap the relevant bed card.
- Tap the menu button (Fig 19 **A**).
- Tap the “Waveforms” option (Fig 19 **B**) on the menu.

A screen showing the trends of the acquired parameters is displayed (Fig 20).

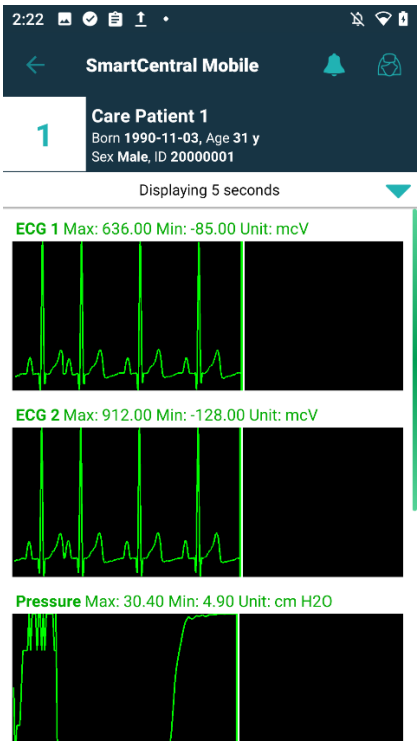


Fig 20

It is possible to configure the Waveform view to display the parameters currently acquired from medical devices (Fig 21 **A**):

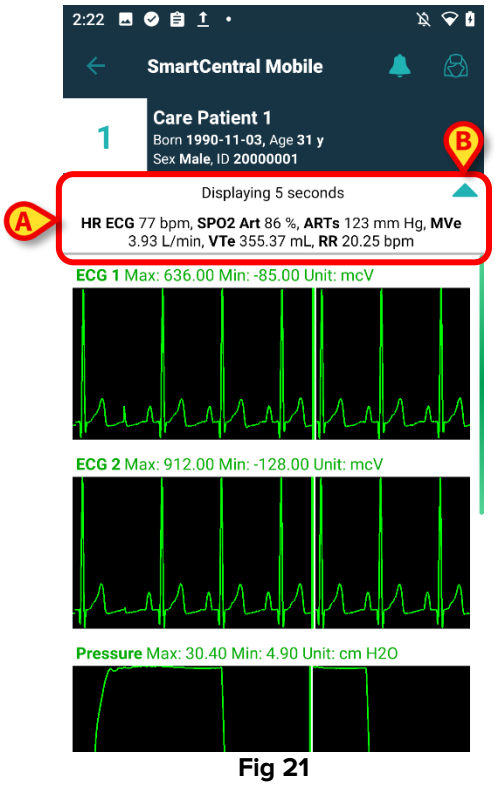


Fig 21

Touch the light blue arrow icon (Fig 21 **B**) to collapse the section that shows the parameters currently acquired (Fig 21 **A).**

This can be done by properly configuring the **WaveformFormatString** System Option: see the documentation related to the Digistat Suite System Options for more information (Document *DSO ENG System Options*).

It is possible to sort the waveforms collected from medical devices by properly setting the **WaveformsSortingList** System Option: see the documentation related to the *Digistat Suite System Options* for more information.

The waveforms are added to the view as data is received from devices. That means that, regardless of the sorting settings, a waveform is not displayed until the corresponding data is received. Then, according to the sorting settings, the waveform is displayed in the correct position. If no sorting is present, the waveform views are added at the bottom as the waveform data arrives.

It is also possible to configure a theme for **all** or **specific** waveforms displayed in Smart Central Mobile, customizing the XML contained in the value field of the **WaveformsTheme** System Option, with color format: see the documentation related to the *Digistat Suite System Options* for more information.

8. Share Function

It is possible to enable the **Share** function which allows the sharing of data such as texts relating to the beds, link to the beds and screenshots of Smart Central Mobile bed detail cards, between Smart Central Mobile and third-party applications or between Smart Central Mobile and Unite Collaborate App.

First, enable the Share function going to Configurator Web > General > System Options and select the ShareMode system options of DIGISTATMOBILE module.
The allowed values that can be entered in the available text box are:

- **0** to disable the option;
- **1** to enable the sharing with third-party apps;
- **2** to enable the sharing with Unite Collaborate.

➢ Click on **Edit** button and then enter the value 1 or 2 in the available textbox.
➢ Click on **Save** button to save the configuration.

Go to Smart Central Mobile and choose a bed containing an admitted patient. Click on the **FAB** button provided at the bottom right of the card view: a menu is given and a new entry, the Share button (see Fig 22) is displayed, and it is selectable.

Fig 22

Clicking the Share button, a "Sharing data" dialog appears with a warning message and three buttons (Fig 23) which, from left to right, allow the sharing of:

- **text data** of the current bed;
- **links** to the current bed page;
- **Screenshot** of the current bed view.

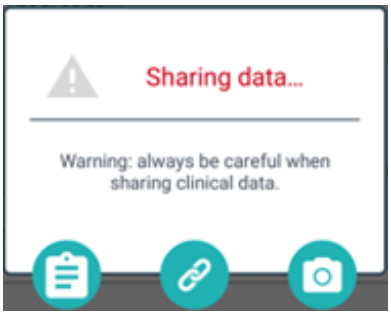


Fig 23

The same options are available on iOS, but they are selectable on a menu (Fig 24).

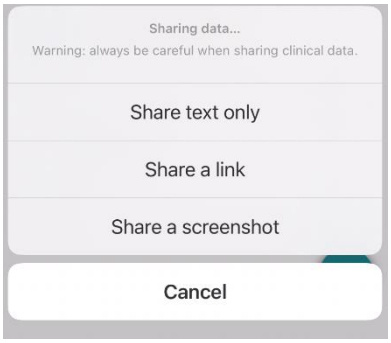


Fig 24

If mode 1 is chosen and entered in the value field of ShareMode system option, the **Share** function can be performed without the user login. If the login is not performed, choosing the **Text** button, the patient name won't be shared. Otherwise:

- selecting the **Text** button, the bed name, the patient name, the list of devices associated to the bed and the list of alarms and vitals parameters are shared;
- selecting the **Link** button, a link to the bed view is shared;
- selecting the **Screenshot** button, a screenshot of the bed detail view of Smart Central Mobile is shared.

If mode 2 is set instead, the **Share** function can only be enabled and performed after the user login via the **Ascom Login App** (Unite SSO). Perform the login using the Ascom Login App entering the credentials of an Unite user, then select a bed and the **FAB** button to display the **Share** button.

➢ Click on **Share** button and from the "Sharing data" window, select:

- the **Text** button to share information on bed and patients, alarms and vital signs and, unlike mode 1, also the link to the bed view;
- the **Link** button to share only the link to the bed;
- the **Screenshot** button to share the screenshot of the bed detail view together with the link to the bed view.

9. Alarm Statistics

This functionality is not available on iOS.

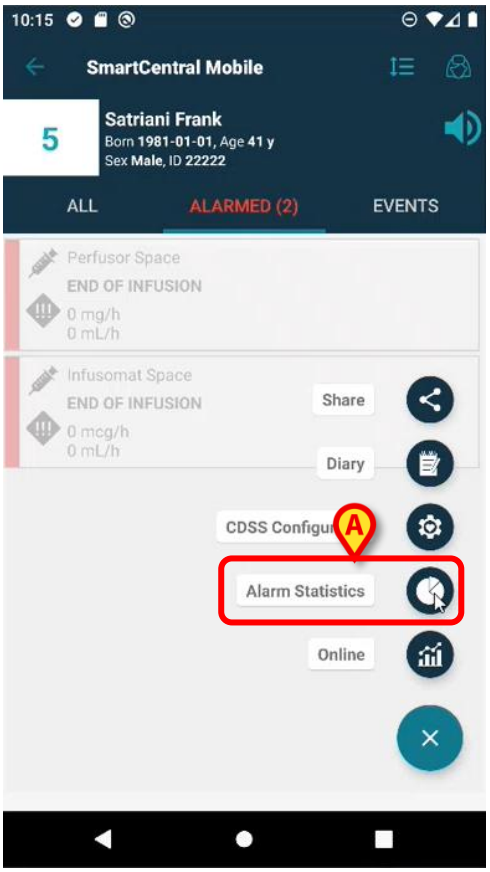


Fig 25

The Alarm Statistics module displays alarm events in ways of bar and pie charts, summary and details reports for a selected patient.
From Smart Central Mobile, choose a bed containing an admitted patient, then:

- click on the **FAB** button provided at the bottom right of the card view and then on the **Alarms Statistics icon** (Fig 25 **A**).

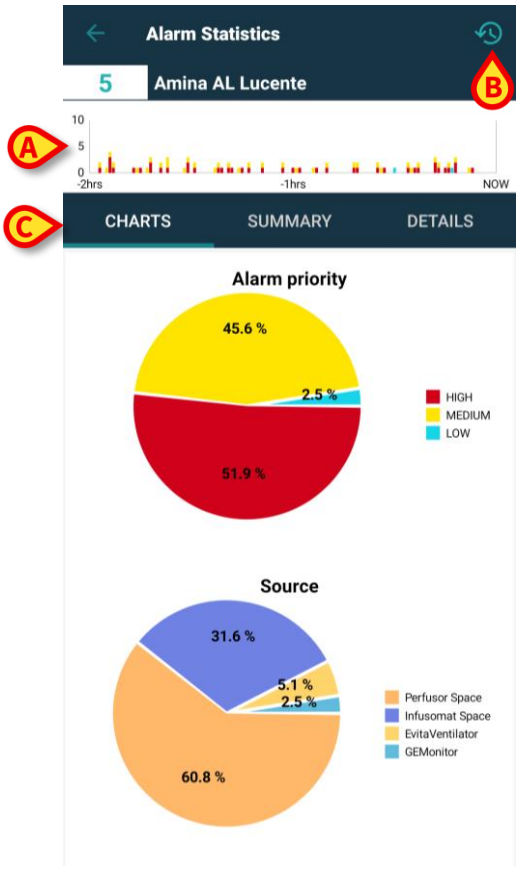


Fig 26

A new page is shown, and, in the upper part - below the patient name and bed number - it displays a **bar chart** (Fig 26 **A**). On the x-axis the time is represented while on the y-axis the number of alarms is recorded and displayed as bars of different heights and colored with standard priority colors according to the different types of alarms (High, Medium and Low priority). The chart shows the alarms from the oldest to the most recent ones, from left to right. If no alarm is recorded in reference time range - here 2 hours are given – the chart is not shown.

At the top right of the action bar, a **time range icon** (Fig 26 **B**) is given.

In the central part **three tabs** (Fig 26 **C**) are provided and the first one is selected by default:

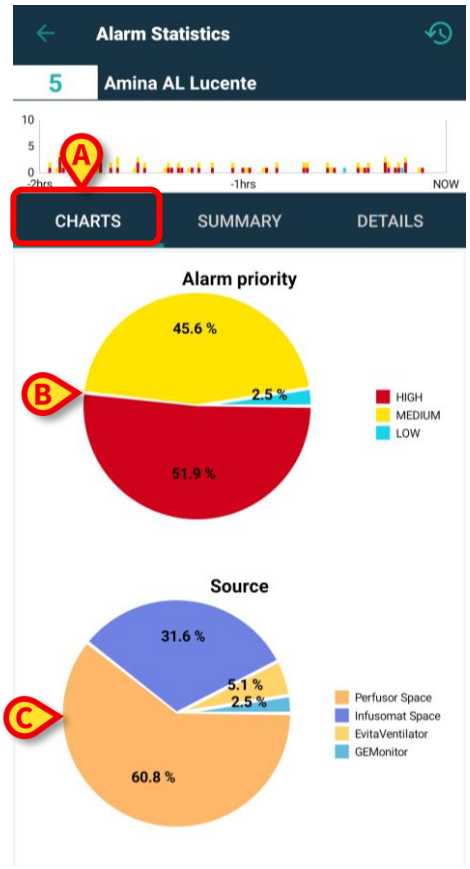


Fig 27

- **Charts** (Fig 27 **A**) – two pie charts are displayed:
  - the "**Alarm Priority**" (Fig 27 **B**), that represents the percentages of **high**, **medium**, **low** priority alarms for the selected time range. A legend is provided on the right of the pie chart, and labels and priority colors are clearly indicated.
  - The "**Source**" (Fig 27 **C**), that represents the percentages of the **top 5 sources** that generate the alarms. If more than 5 sources are given, the fifth one represented is labelled as "Other" to include all the remaining less alarmed sources. A legend is provided on the right of the pie chart, and labels and configured colors are clearly indicated.

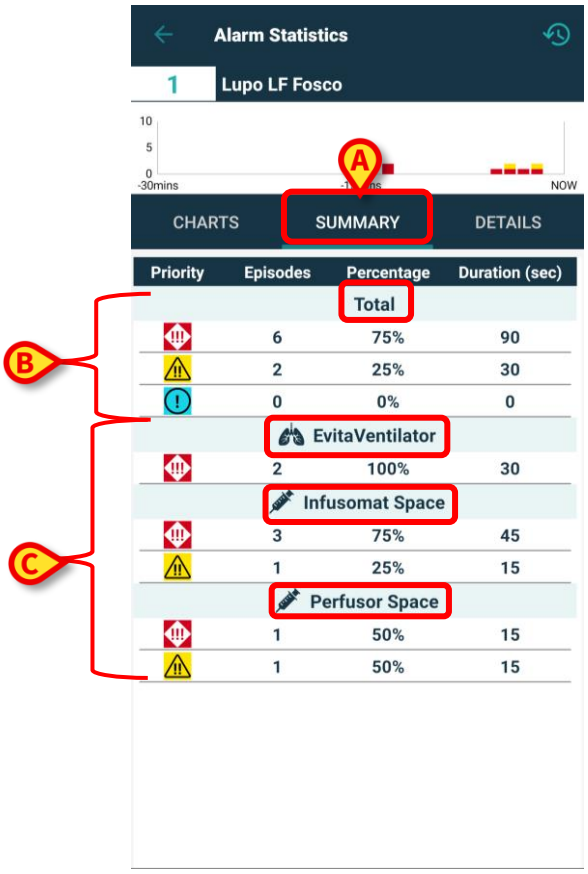


Fig 28

- **Summary** (Fig 28 **A**) – a table is provided where all data of the alarms are registered. In the upper part of the table, the **total number of alarms** (Fig 28 **B**) with their priorities, number of episodes, percentages, and durations are displayed, and they are divided according to their severity/priority. Each alarm priority is represented with the proper icon. In the following groups, the alarms are divided by priority and **grouped by device** (Fig 28 **C**), alphabetically sorted. Names and icons for each device are clearly displayed.

In the example provided, from the Joe Patient's bed in the last 2 hours: 24 High Priority Alarms have been registered, that represent the 53.33% of the total alarms for 360 seconds of duration, 18 Medium Priority Alarms, that represent the 40% of the total alarms for 270 seconds of duration, 3 Low Priority Alarms, that represent the 6.67% of the total alarms for 45 seconds of duration. These alarms are then divided according to the device they come from.

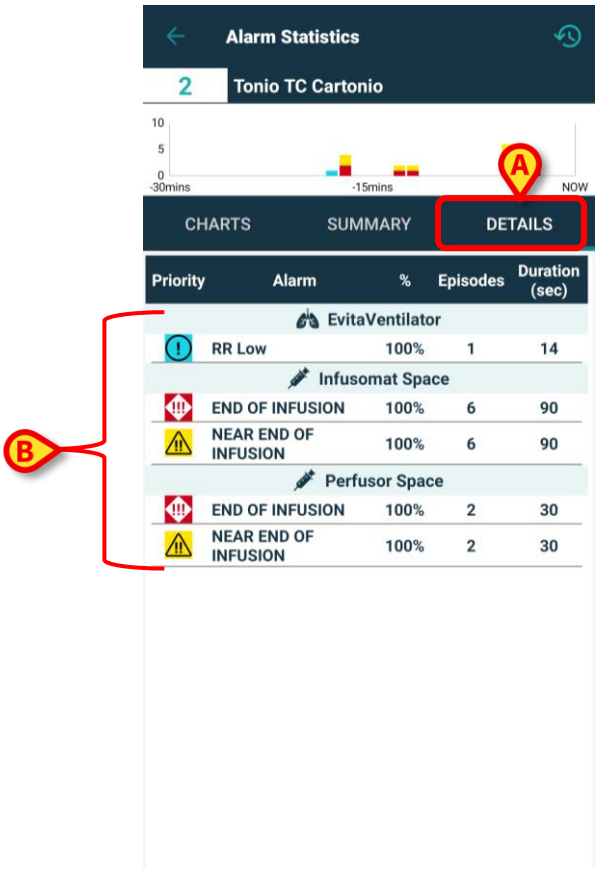


Fig 29

- **Details** (Fig 29 **A**) – the page shows the **total number of alarm messages** with their priorities, percentages, number of episodes and durations, **grouped by device** into different blocks (Fig 29 **B**), **alphabetically sorted**. Each block contains all the relative alarm messages, grouped by priority, and sorted by priority, frequency, and alarm text. The devices' tables are displayed one above the other and the devices' icons are shown next to their names. The messages of the alarms are listed under the "**Alarm**" column.

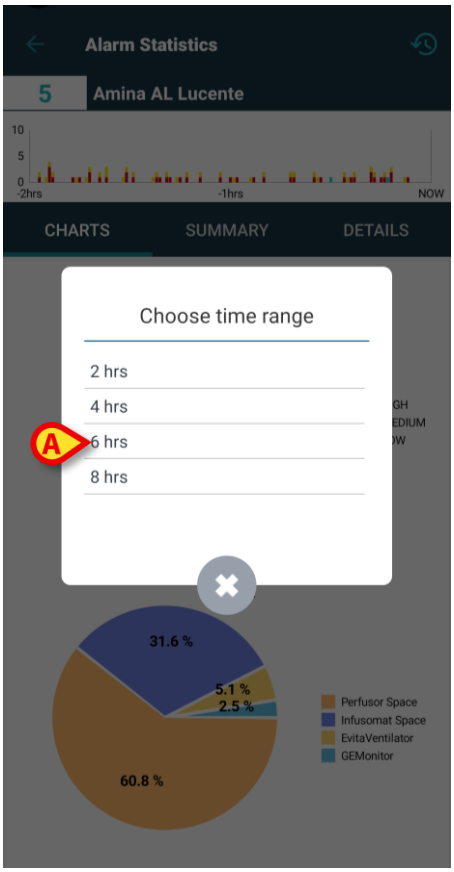


Fig 30

It is possible to change the time range to display the charts, tables and statistics referring to that interval. Just click the **time range icon** at the top right of the page (Fig 26 **B**) and the **time range window** is opened with a preconfigured **menu of four options** to choose from. The first option is the default time defined in **AlarmsHistoryChartConfigMobile** system option, <MinutesDisplayed>xxx</MinutesDisplayed> tag (where “xxx” is the minutes entered). The other three options are calculated taking the default time as a reference, rounding it up if it is not a round hour, and adding respectively 2 hours, 4 hours, and 6 hours. In the example, the default time is set to 2 hours. The available options are: 2 hours, 4 hours, 6 hours, and 8 hours.

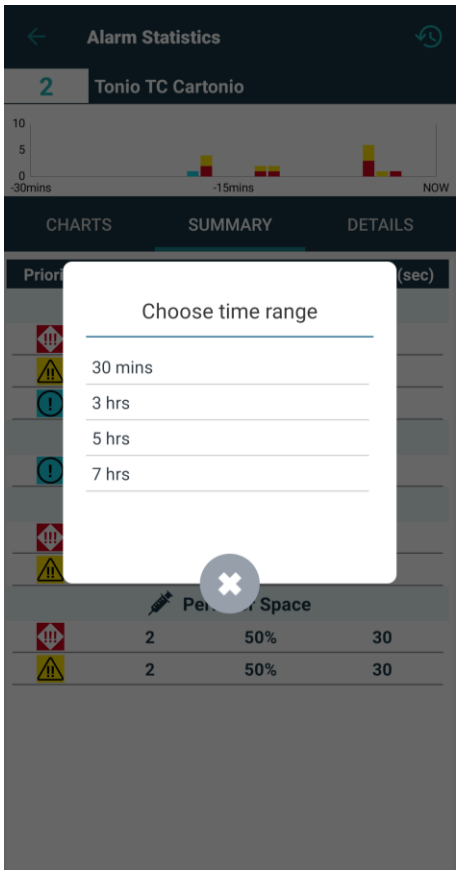


Fig 31

Instead, setting the AlarmsHistoryChartConfigMobile system option, <MinutesDisplayed>xxx</MinutesDisplayed> tag to 30 minutes, the available options would be: 30 minutes, 3 hours, 5 hours, and 7 hours as the default 30 minutes are rounded up to 1 hour.

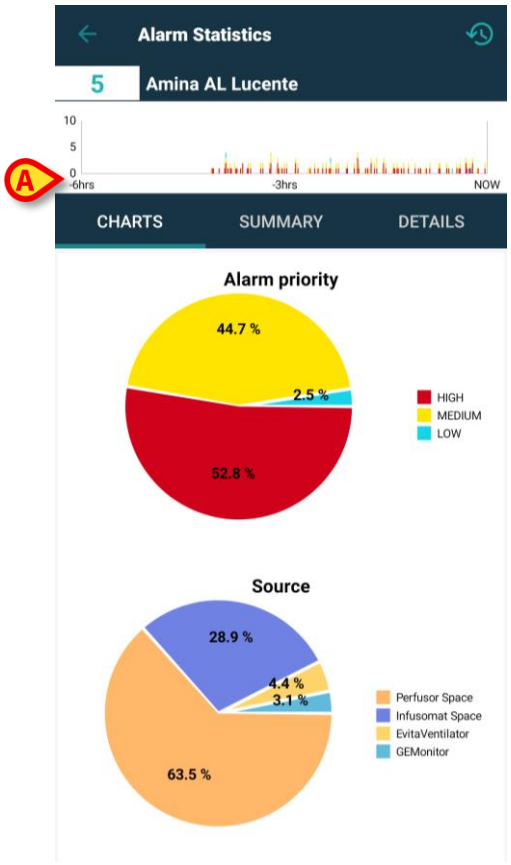


Fig 32

By clicking on the “6 hrs” option (Fig 30 **A**), the chart x-axis is modified, and the origin point corresponds to 6 hours from “Now”, while the end point corresponds to the “Now” moment. In the different tabs, Charts, Summary and Details, the alarms statistics are reorganized considering the new time range chosen. The modification of the time range is applied only to the selected patient and not to all the others present in the domain.

9.1 Alarm Statistics System Options

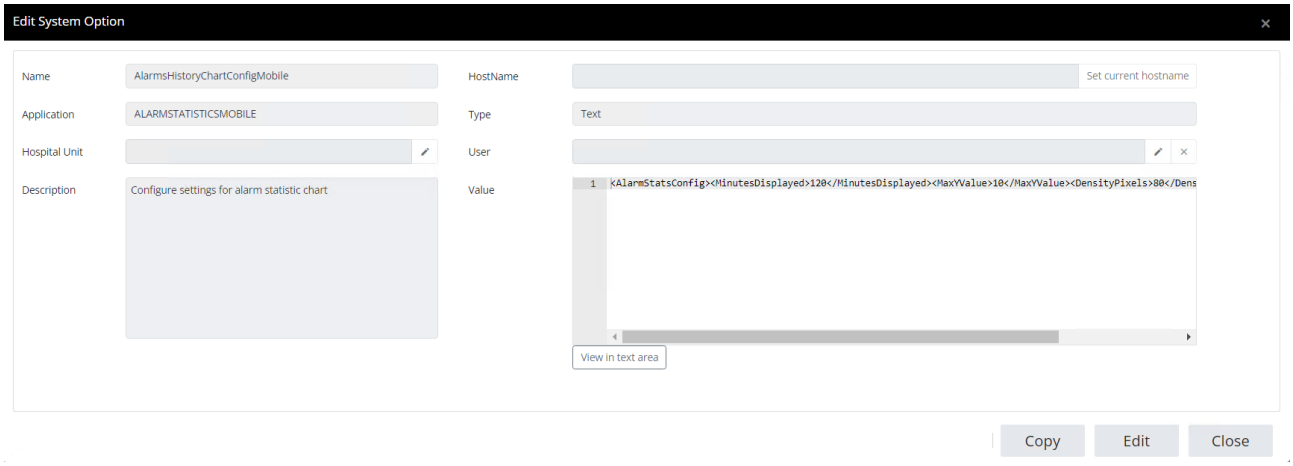


Fig 33

- **AlarmsHistoryChartConfigMobile** – an xml to be customized is provided in the value field and it is possible to set or modify:

- the default minutes to be displayed in the charts (If the number set is >= 60 the UM is "hrs"; If the number set is < 60 the UM is "mins"),
- the pixels density of each bar chart (both general and details pages),
- the maximum number of alarms displayed on the y-axis of each bar chart.

The default xml is the following one:

<AlarmStatsConfig><MinutesDisplayed>120</MinutesDisplayed><MaxYValue>10</MaxYValue><DensityPixels>80</DensityPixels></AlarmStatsConfig>

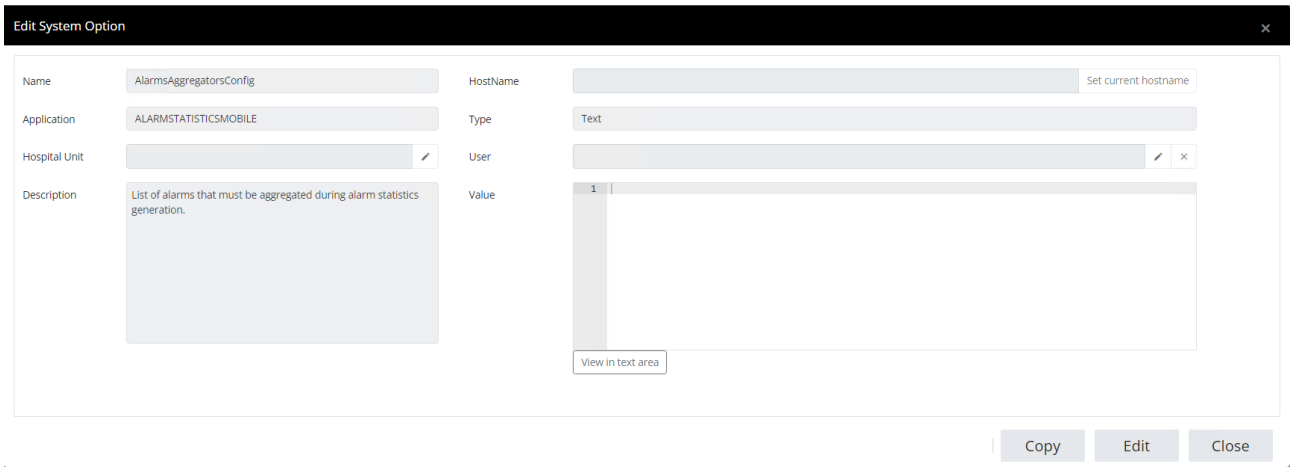


Fig 34

- **AlarmsAggregatorsConfig**: an xml file can be customized to configure a list of alarms to be aggregated during alarm statistics generation to avoid duplicates in the detailed view.

  An example is provided:

```
<?xml version="1.0" encoding="utf-16"?>
<AlarmAggregators xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
  <Aggregators>
    <AlarmAggregator>
          <MatchingRegex>xxx</MatchingRegex>
          <ResultString>TEST</ResultString>
    </AlarmAggregator>
  </Aggregators>
</AlarmAggregators>
```

  where “xxx” is a string.

10. Indications Module

This functionality is not available on iOS.

If an indication or more indications with a priority level higher than info are notified on a patient/bed, an icon corresponding to the **highest severity/priority alert icon** is displayed next to the patient's name in the patient card on the patient details view of Smart Central Mobile module. If the indication has priority of "info" type, no icon is displayed.

The following pictures show patients with indications of different priority levels (high priority indication in Fig 35 **A**, medium priority indication in Fig 35 **B**, low priority indication in Fig 35 **C**).

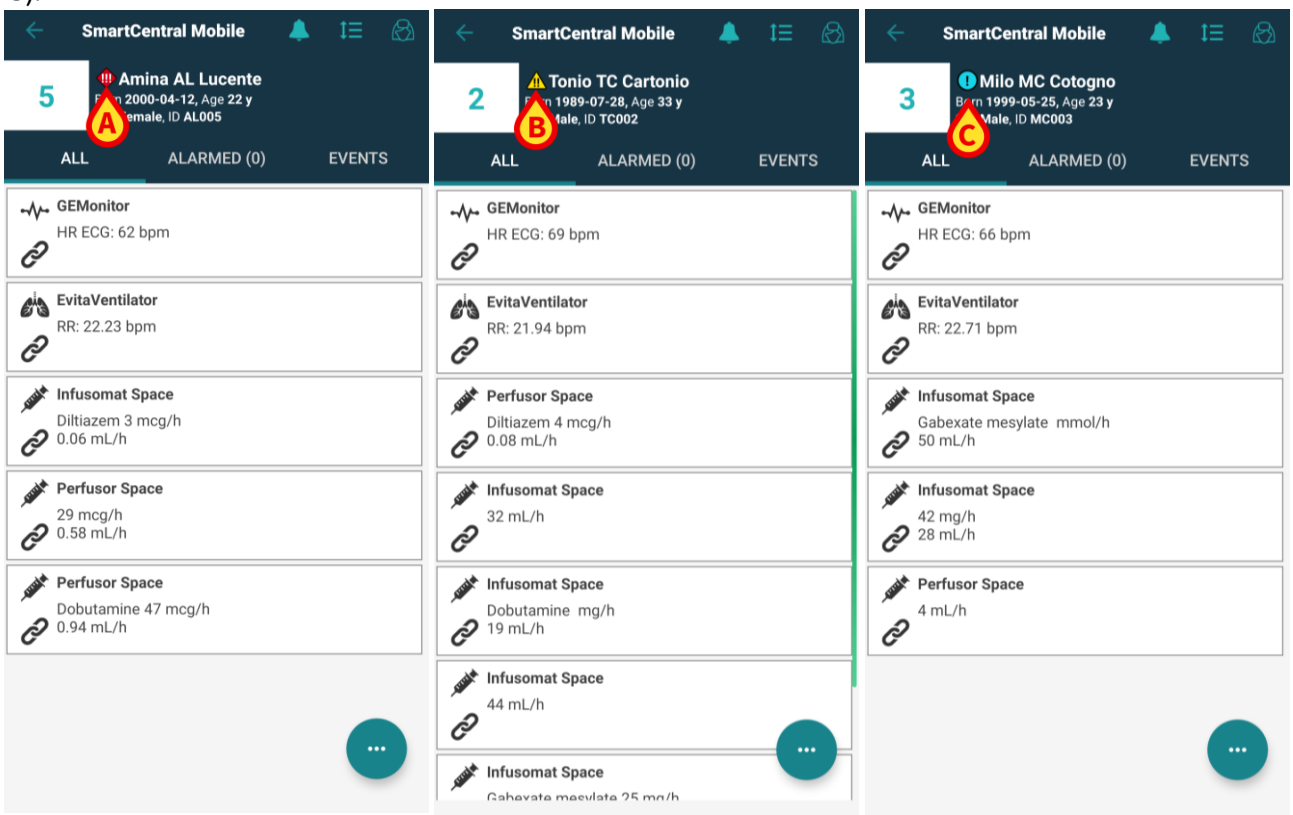


Fig 35

To access the **Indication** module:

- select a patient from the patient list and
- click on the **Indication icon** displayed in the patient card.

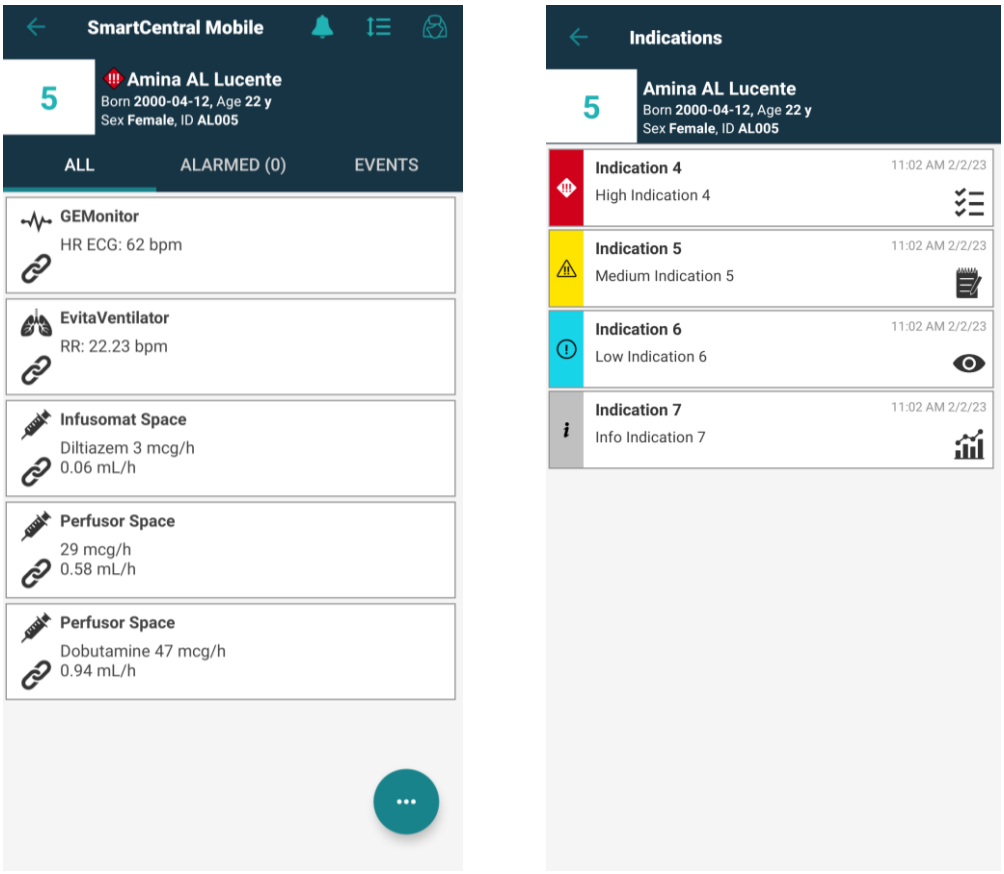


Fig 36

The module page is shown, and the content of the active notification can be read in full or, eventually, if more than one active indication is registered, the list of all the indications available for that patient is retrieved.

For information on the functionality and use of the **Indications** module, refer to the *Mobile Launcher* user manual (*USR ENG Mobile Launcher*).

11. Notification Mute on Smart Central Mobile

The notifications can be muted in the Smart Central Mobile instances for a specified amount of time and for a specific bed. The “Mute” feature affects only the Smart Central Mobile application while Smart Central desktop continues to provide audio notifications and cannot be muted.
To enable this feature it is necessary to enable the global system options named ManageMobilityAlarms and SilenceMobilityAlarmsIntervals on the Digistat Configurator Web. See the *Digistat Suite Configuration Manual* for more information.

The mute procedure can be performed both on desktop and on mobile workstations, but only mobiles are affected.

This feature is not relevant on iOS.

11.1 On desktop workstations.

If both the parameters are enabled, a new icon is displayed in the bed card header (Fig 37 **A**).

Fig 37

The two-mobile-phones icon indicates that notifications are enabled on Smart Central Mobile, for the selected bed.

- Click the icon to open a new popup window where it is possible to configure and specify the enabling and disabling of the notifications among multiple choices (Fig 38). Those are:
  - Notifications Enabled;
  - Notifications are disabled for, followed by configured X,Y,Z minutes options.

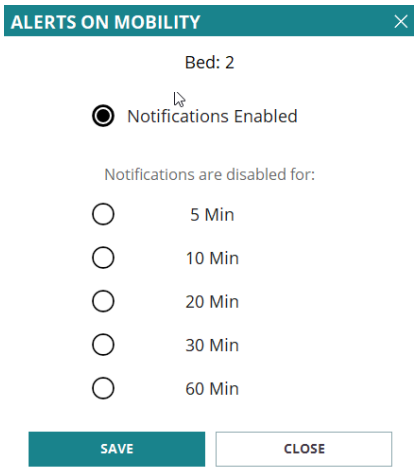


Fig 38

The X,Y,Z values are those specified in the configuration of the abovementioned SilenceMobilityAlarmsIntervals system option.

- Click **SAVE** or **CLOSE** to close the view.

If the notifications are disabled, the icon on the bed card header turns red, and a countdown number (the configured and chosen minutes) is displayed next to it (Fig 39 **A**).

Fig 39

When the countdown is over, the icon turns black, the countdown is removed and the notifications are restored. In the picture above, for example, the notifications on Smart Central Mobile are disabled for bed 2 for 30 minutes.

- Click the red icon to turn on the audio again or restart the muting countdown.

When the mobile notifications are disabled for a bed:

- On Smart Central Desktop there are no differences in the notifications communication.
- On Smart Central Mobile the notifications related to the muted bed are displayed but the audio and vibration are disabled for the specified amount of time.

11.2 On mobile workstations

To enable/disable the notifications on the mobile workstations:

- Click on a bed card to navigate to the bed details screen.

If the ManageMobilityAlarms and SilenceMobilityAlarmsIntervals parameters are enabled, a new icon is displayed on top of this screen, alongside the patient data (Fig 40 **A**):

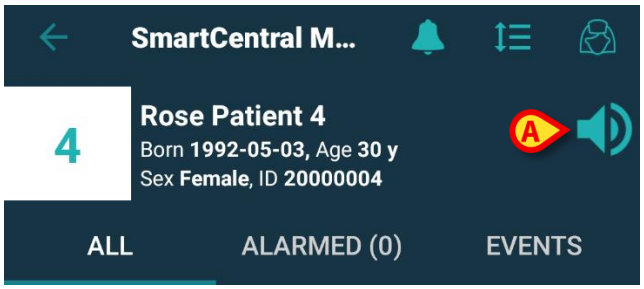


Fig 40 ca

- Click the speaker icon to open a new popup window where it is possible to configure and specify the enabling and disabling of the notifications among multiple choices (Fig 41). Those are:
  - Enable notifications;
  - Disable for, followed by configured X,Y,Z minutes options.

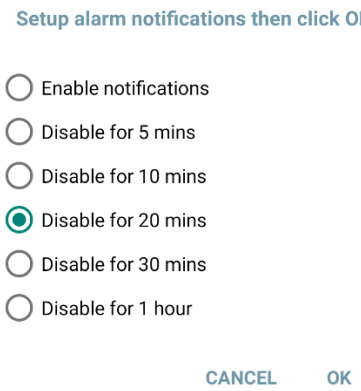


Fig 41

The X,Y,Z values are those specified in the value field of the SilenceMobilityAlarmsIntervals system option.

- Click **OK** or **CANCEL** to close the view.

If the notifications are disabled, the speaker icon on the bed card turns red, and a countdown number (the configured and chosen minutes) is displayed below it (Fig 42 **A**) indicating the "mute time" chosen.

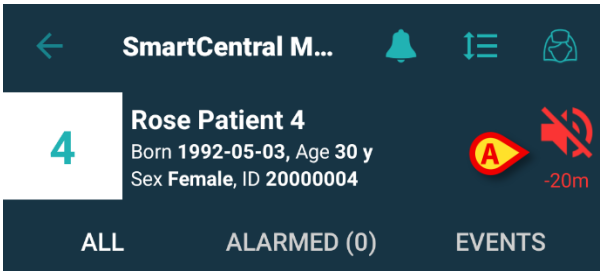


Fig 42

In Fig 42, for example, the notifications are disabled for 20 minutes on bed 4. When the countdown reaches zero minutes, the icon turns light blue again and the notifications are restored.
If notifications are disabled for a specific bed, also the corresponding bed card displays a mute icon (Fig 43 a/b shows the icon when on bed cards - left - and tiles - right):

Fig 43 a/b

The possibility to mute notifications on mobile devices is disabled by default. If this possibility is enabled, the healthcare organization requires a strong risk assessment to be sure to mitigate all possible risks. During a temporary muting of notifications it is required that Smart Central Desktop is always monitored by a user.

Unite integration
When Digistat is integrated with Unite and notifications are generated by the Axess application (or the equivalent app on Myco 2 devices), the muting of notifications on Smart Central will affect the Unite integration as well.

11.3 Nurse Presence

This functionality is not available on iOS.

When the system is configured to work with automatic nurse presence, using infrared, the silencing mechanism is automatically managed.

When nurse enters a patient room, alerts are automatically muted (same behavior as manual silencing) for that specific bed. When nurse goes out of a patient room, alerts are enabled

again. If there are many nurses inside the patient room, alerts are silenced as long as a nurse is inside the patient room.

The nurse presence mechanism is enabled thanks to the infrared functionality (present in the Myco 2 or Myco 3 devices). User must be aware that the smartphone must be always in a position where infrared beacons are visible to the smartphone itself. User must avoid to place the smartphone inside a bag or a closed pocket.
If the smartphone is detected inside a patient room and, after a configured amount of time, is not detected anymore, silencing is automatically disabled. This mitigation reduces the risk for nurses to leave the patient room forgetting the smartphone inside.

When nurse is inside a patient room, a "nurse" icon is displayed next to the bed name in the patient card (Fig 44).

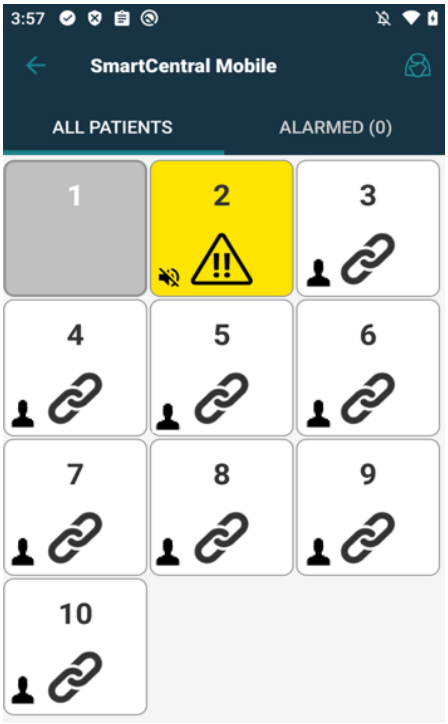


Fig 44

11.4 NFC alarm filtering

The Myco 3 device (or any Android device with NFC sensor) supports the NFC alarm filtering i.e. the possibility to mute the Smart Central Mobile notifications for a certain time by detecting a NFC tag properly configured and placed near the patient / bed.

Notifications are muted for a configured time, to be specified in the NFC tag together with the bed number. Once such a time is elapsed, the notifications are automatically restored.

To mute the notifications on the Smart Central Mobile coming from the considered patient / bed:

- Unlock the mobile device and put it close to the NFC tag.

The following window will be shown:

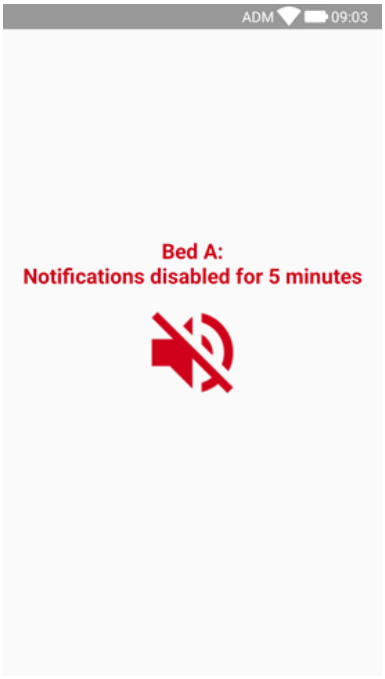


Fig 45

It is possible to configure a single NFC tag to mute multiple beds. When this is the case the bed numbers/names are listed on the screen shown in Fig 45.

When notifications are disabled the icon shown in Fig 46 **A** is displayed. Below the icon a countdown number indicates the “mute time” remaining:

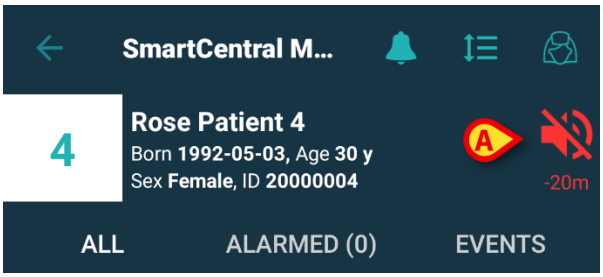


Fig 46

In Fig 46 for example, the notifications are disabled for 20 minutes on bed 4. When the countdown reaches zero the icon turns light blue again and the notifications are restored.

Every time the mobile device is put close to the NFC tag, the remaining mute time is extended by the value configured in the tag itself.

To restore the notifications on the Smart Central Mobile coming from the considered patient/bed (before the mute time elapses),

- Tap the icon showing the mute time (Fig 46 **A**).

Alternatively:

- Unlock the mobile device and put it close to *a different* NFC tag, in which the mute time is set to “0”.

In both cases the following window will be shown:

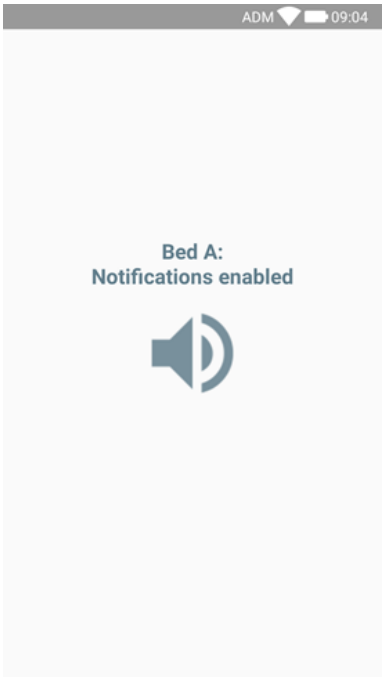


Fig 47

	The possibility to mute notifications on mobile devices is disabled by default. If this possibility is enabled, the healthcare organization requires a strong risk assessment to be sure to mitigate all possible risks. During a temporary muting of notifications it is required that Smart Central Desktop is always monitored by a user.

12. Widgets

This functionality is not available on iOS.

The Product implements a set of widgets i.e. graphic controls intended to facilitate some specific actions from the user. See the Mobile Launcher user manual for a general description of the widgets (*USR ENG Mobile Launcher*).

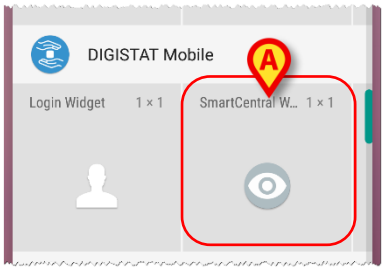


Fig 48

The present paragraph describes the Smart Central Mobile application widgets.

12.1 Smart Central Widget

The Smart Central Widget allows the user to access the Smart Central Mobile application. To use this feature:

- Push the icon shown in Fig 48 **A** and release it on the device screen.

The Smart Central Widget as default will be placed on the device screen with size 1 x 1 (Fig 49)

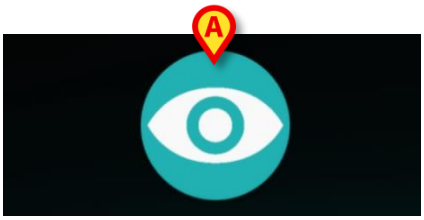


Fig 49

- Push the icon shown in Fig 49 **A** to access the Smart Central Mobile screen (Fig 50).

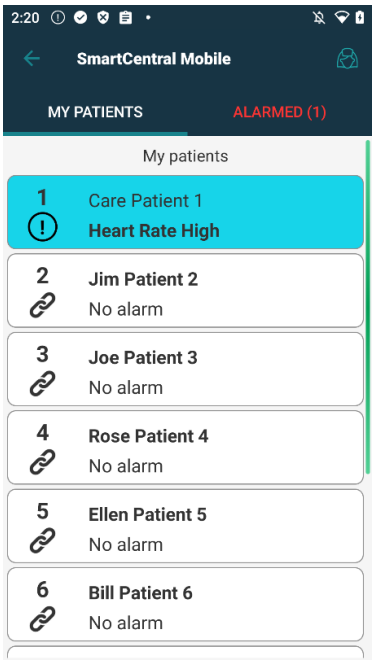


Fig 50

If the size is 1 x 1, the number of alarmed beds displayed in the Smart Central widget is represented as small number (Fig 51):

Fig 51

- In this case, touch the Smart Central widget to access the screen relating to the alarmed beds, if more than one bed is alarmed (Fig 52 a), or to the single alarmed bed, if only one bed is alarmed (Fig 52 b).

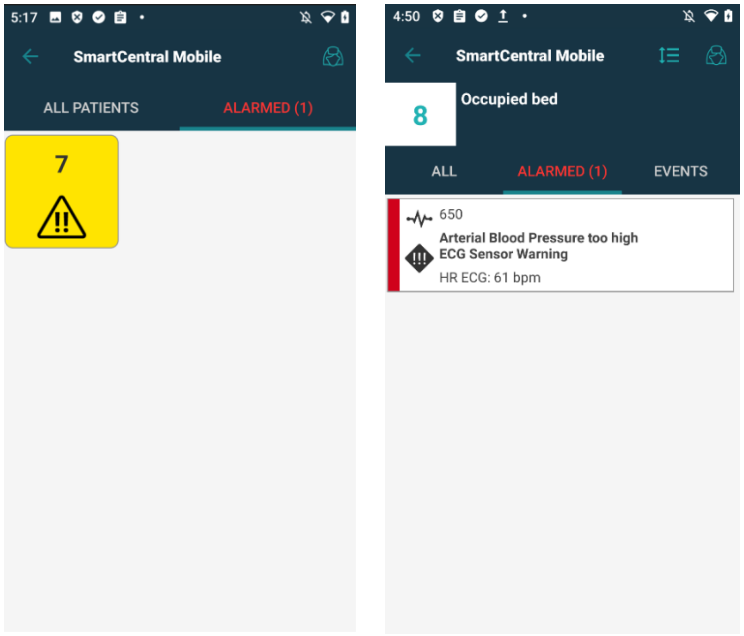


Fig 52

- Long press the widget icon and then release it to display grab points for widget resize (Fig 53):

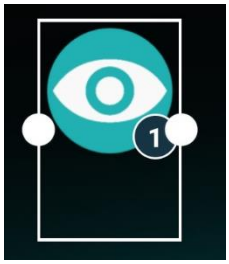


Fig 53

- Touch and move one of the two grab points and then push the desktop background to resize the widget to the size 2 x 1.

In this case a short description of the alarm cause can be displayed on the Smart Central Widget, as shown below:

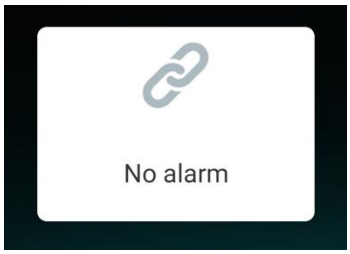


Fig 54
No alarmed beds

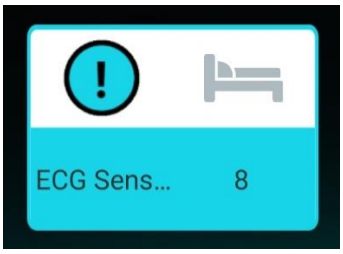


Fig 55
One alarmed bed

Fig 56
More than one alarmed beds

To better display the alarm descriptions the widget can be further enlarged to 3 x 1, and 4 x 1 sizes:

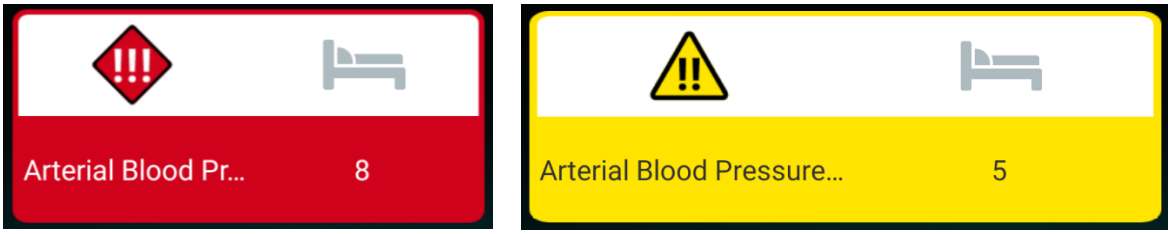


Fig 57 a/b

13. Annex – Examples of user workflows

The figures in this section are taken on an Android device.

13.1 Application main features

To select the **Smart Central** application, after login:

- Tap the corresponding row on the Mobile Launcher screen (Figure 1**A**).

The Central screen opens. The Central screen displays a schematic summary of the status of the medical devices connected to the beds configured in the specific handheld device.

The Central screen represents the beds as a set of tiles (Figure 3).
It is possible to opt for a visualization of the beds/patients as a set of squares (Fig 3) if all the patients are assigned to the User and if the system option **ShowBedCards** of SMARTCENTRALMOBILE application is flagged to true (Figure 2). The “bed cards” view is not available on iOS.

The number or letter displayed inside the square/tile indicates the bed number or letter. On each square or tile, the status of the connected medical devices is indicated in graphic form by the background color and the related icon:

1	All the medical devices connected to the bed are on hold or there are no medical devices associated to the bed.
6	There is at least one connected medical device running.
1	At least one of the connected medical devices is sending a low priority alarm.
7	At least one of the connected medical devices is sending a medium priority alarm.
8	At least one of the connected medical devices is sending a high priority alarm.

- Tap one of the squares on the Central screen to display the list of medical devices connected to the bed (Figure 4).

- Tap one of the Device - tiles to access the list of all the alarms provided by the medical device (Figure 5).

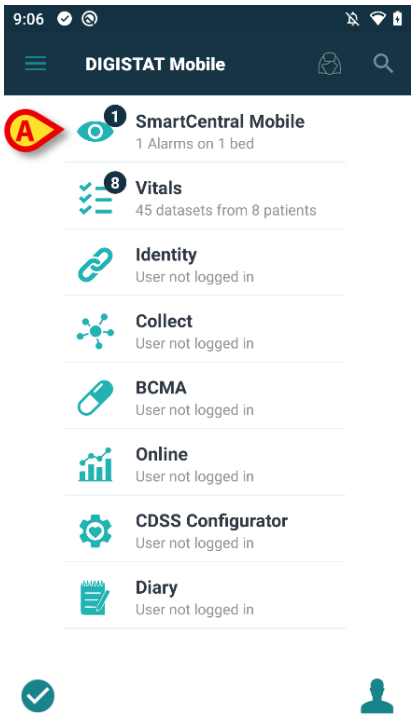


Figure 1

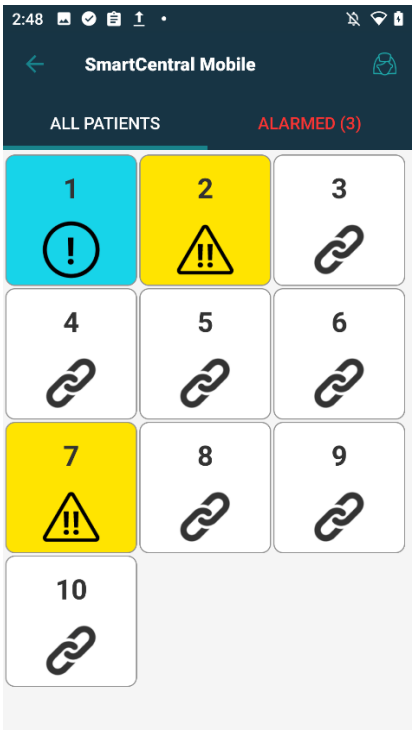


Figure 2

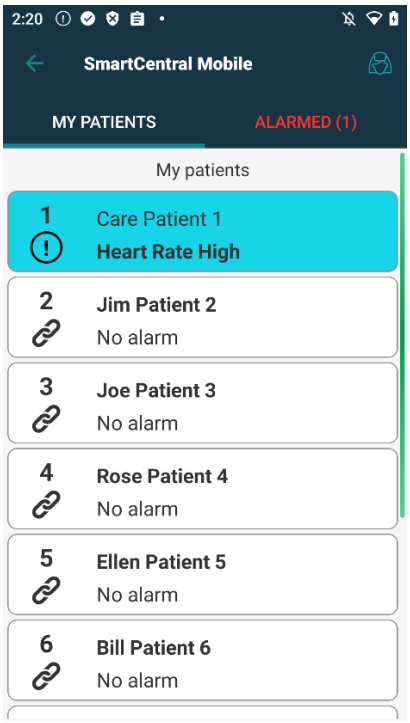


Figure 3

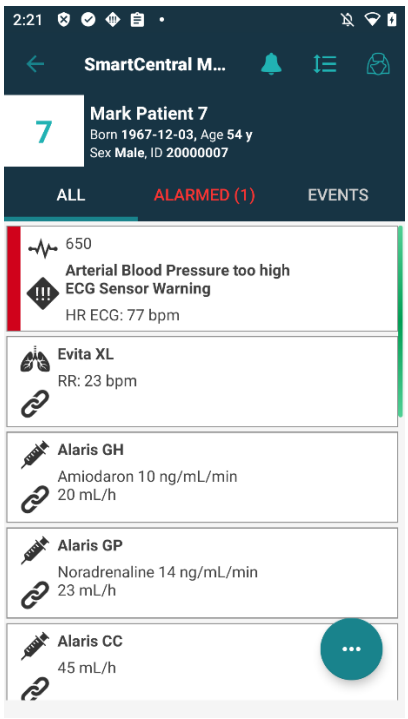


Figure 4

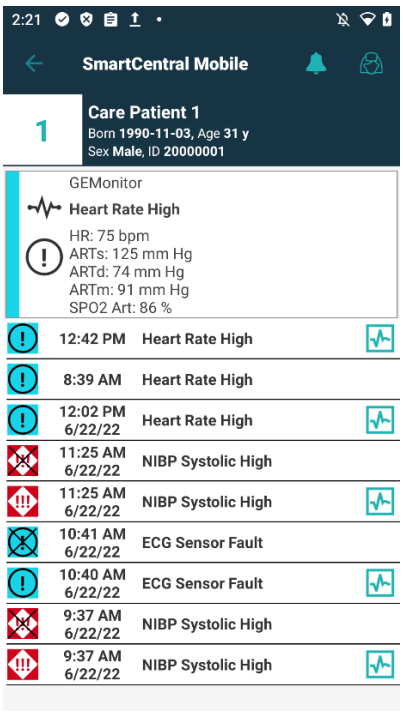


Figure 5

13.2 Video streaming functionality

This functionality is not available on iOS.
The Smart Central application 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 for a selected patient, the webcam option is available on the menu button shown in Figure 6.

- Tap the “Webcam” option on the menu to view the webcam video stream (Figure 6 **A**).

13.3 Waveforms

Smart Central Mobile can display near real time waveforms collected from medical devices. To enable this functionality, it is necessary to enable at least one waveform parameter in the configuration section of the driver capabilities. If the Waveforms feature is enabled for a selected patient, the corresponding option is available on the menu button shown in Figure 6.
To access this functionality

- Tap the “Waveforms” option on the menu (Figure 6 **B**).

A screen showing the trends of the acquired parameters is displayed.

13.4 Notification Mute

This functionality is not relevant for iOS.
The notifications can be muted in the Smart Central Mobile instances for a specified amount of time and for a specific bed. This possibility is enabled during configuration. To enable/disable the notifications on the mobile workstations:

- Click on a bed-tile to access the bed details screen.

If the “Notification Mute” possibility is enabled, an icon is displayed on top of this screen, alongside the patient data (Figure 7 **A**):

- Tap the icon to open a new view in which it is possible to select the notification mute duration.

- Select the duration and tap **Save.**

When notifications are disabled the icon indicated in Figure 8 **B** is displayed. Below the icon a countdown number indicates the “mute time” remaining.

In the figure, for example, the notifications are disabled for 20 minutes on bed 4. When the countdown reaches zero the icon turns black again and the notifications are restored.

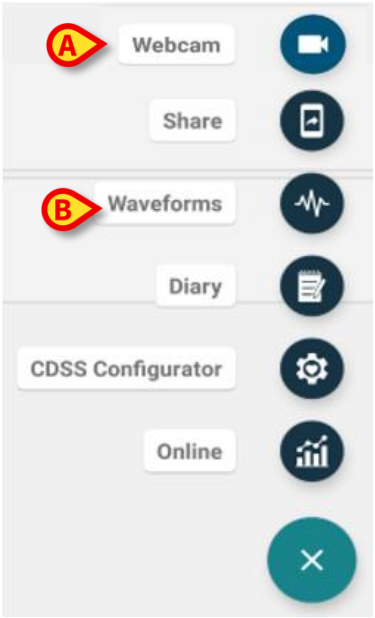


Figure 6

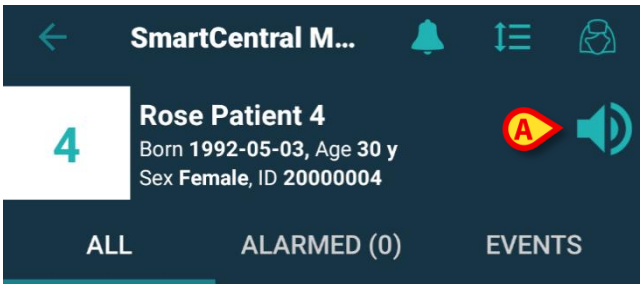


Figure 7

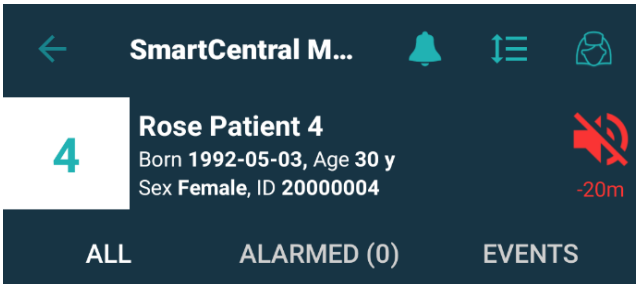


Figure 8