



# Central Monitoring System

## Advanced User Guide

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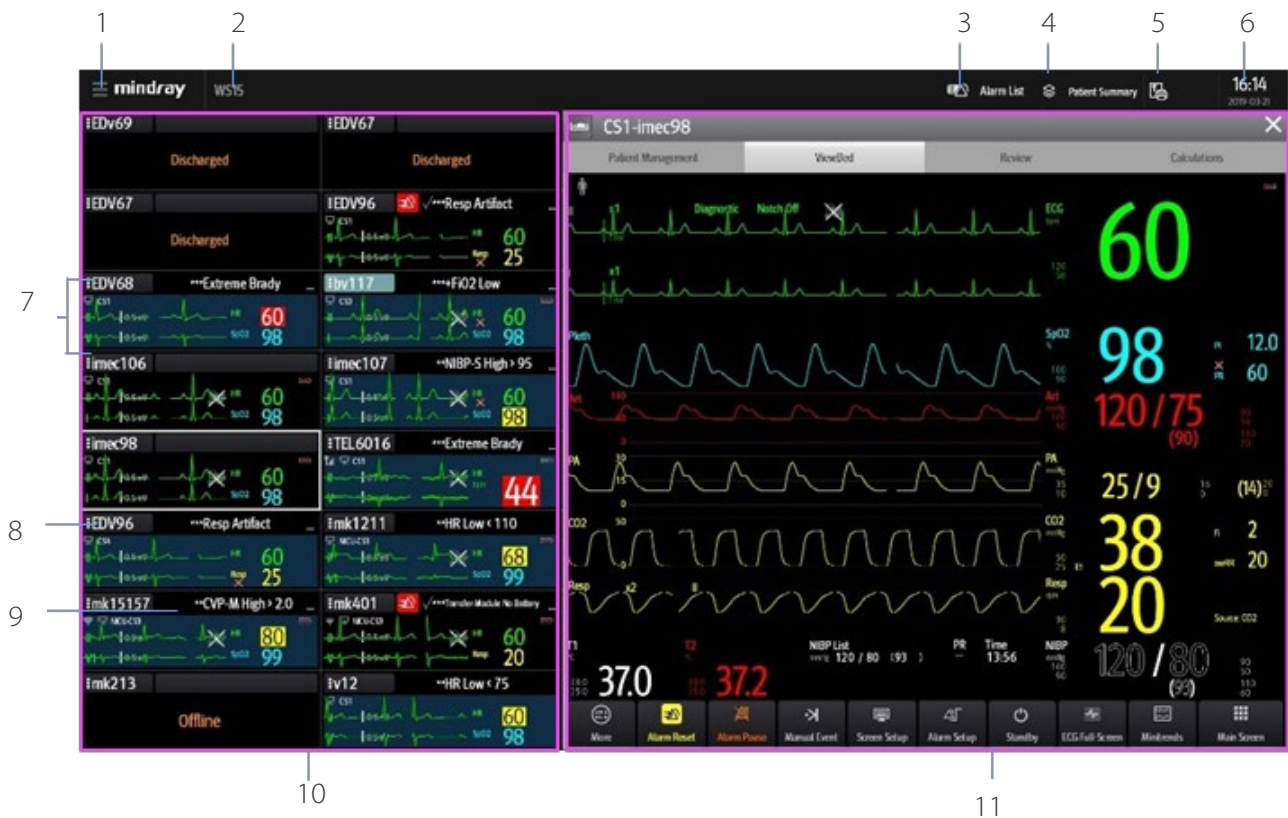
### Note:

- This Advanced User Guide is not intended as a replacement for the Operating Instructions. Prior to operating equipment, the user should also be familiar with the Operators Manual contents. This document is a guide only to be used as an aid to clinical training.
- The function with the "\*" symbol indicates configurable settings. The BeneVision Central Monitoring System (CMS) mainly consists of a Central Station and a Work Station.
- The Central Station can admit Mindray physiological monitoring devices via wired or wireless connection. It can display, store, print, and review the patient clinical data from up to 32 compatible monitoring devices.
- The Work Station can display and manage patients with monitoring devices assigned from the designated Central Station.

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The Illustrations may not necessarily reflect the setup or data displayed on your device.

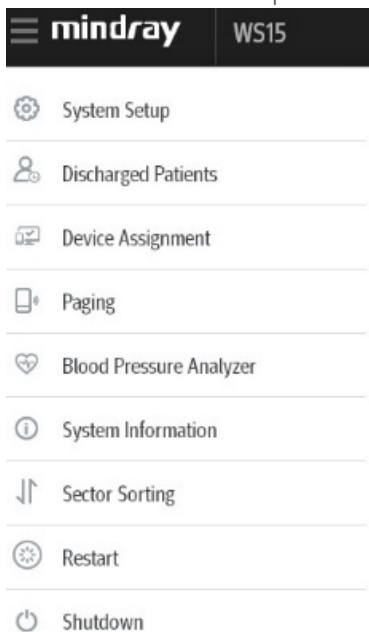
## Multibed (Main) Screen

The Central Station/Work Station displays the multibed (main) screen where multiple patients are monitored collectively. The multibed screen displays multiple patients across one or more displays on the Central Station/Work Station.



### 1. System menu

Select to access a drop-down menu for advanced operations.



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## 2. Hospital information and system alarm messages

Displays the hospital information and system alarm notifications.  
Select to review the list of all current system alarm messages.

## 3. Alarm list

Select to view of all physiological and technical alarms for all monitoring devices on the Central Station/Work Station.

## 4. Patient summary

Select to view patients who are filtered by Bed No, Patient Group, or Care Group.

## 5. Print button

Select to access the system wide printing and recording information including Print Summary, Print All Realtime Reports, Print Queue, Record All Realtime Reports, and Clear All Record Tasks functions.

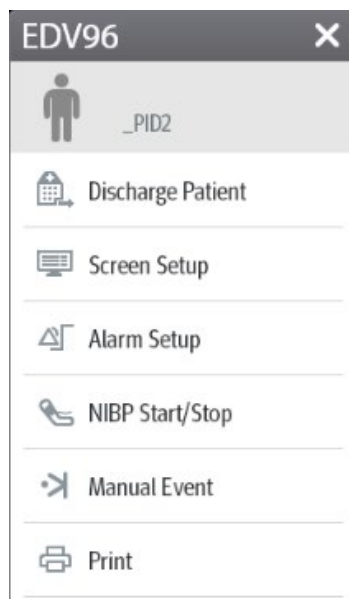
## 6. System time and date

## 7. Patient tile

Displays patient information, including patient demographics, patient alarms, real-time parameters and waveforms. Each patient tile displays the information from one monitoring device at a time.

## 8. Bed number

Select **EDV96** (for example) to access more operations for the patient.



## 9. Patient information

Select to enter and modify patient demographics.

## 10. Multibed (main) screen

## 11. Quick Keys

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## Configure Multibed (Main) Screen Layout

The **Screen Setup** menu on the multibed screen allows modification of the screen layout and display layout of parameters or waveforms in the patient tile.

To configure the Multibed screen layout:

1. Select **EDV96** (for example) in the desired patient tile
2. Select **Screen Setup** from the drop-down list
3. Select the **Choose Screen** tab and select the desired option:
  - **Normal Screen**: to display real time parameters and waveforms
  - **Big Numerics**: to display parameters in a large font size

To change the display layout of parameters and waveforms in the patient ViewBed tile:

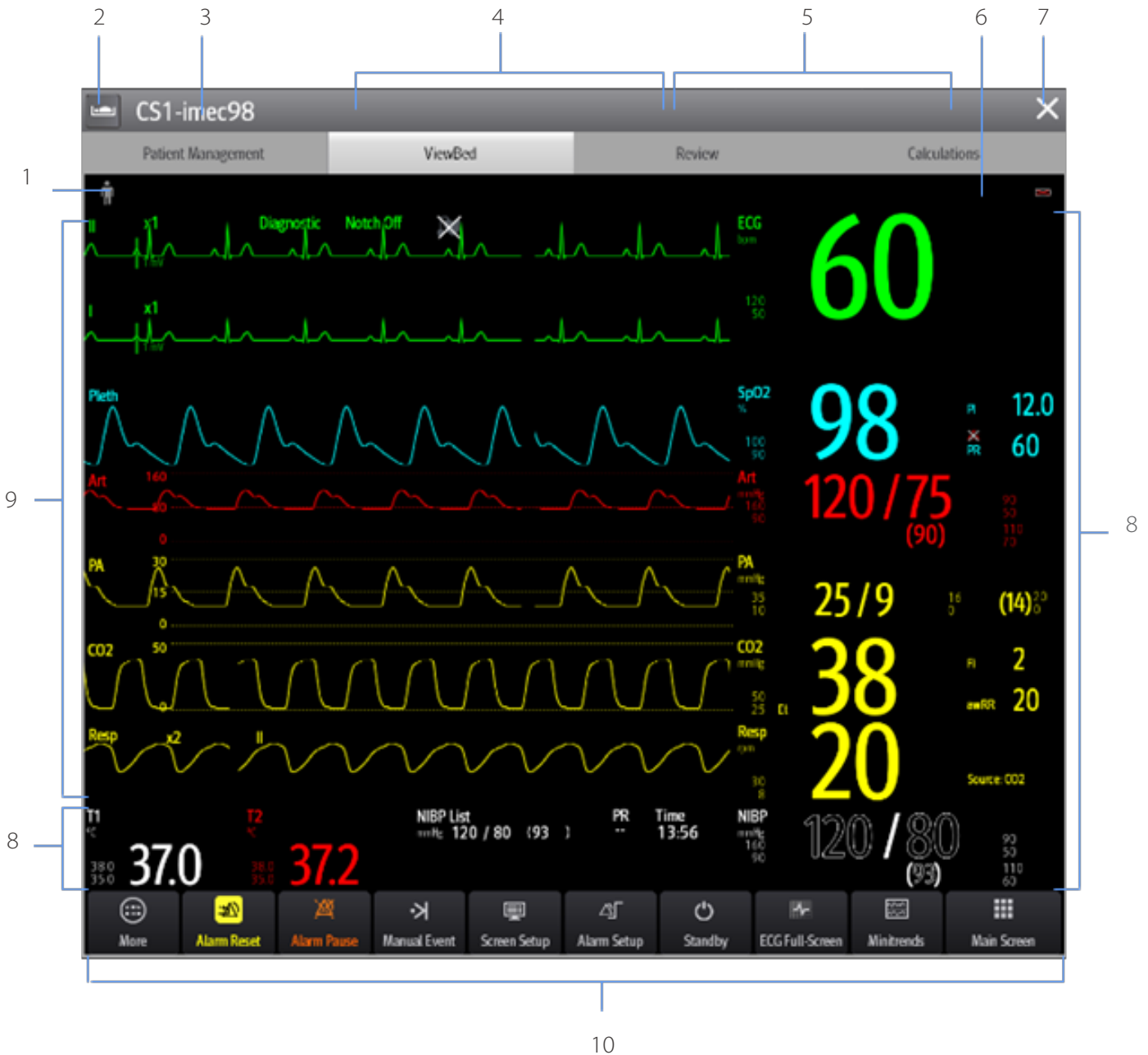
1. Select **EDV96** (for example) in the desired patient tile
2. Select **Screen Setup** from the drop-down list
3. Select the **Tile Layout** tab
  - Select the waveform area and select the desired waveform from the dropdown list
  - Select the parameter tile and select the desired parameter from the dropdown list

### Note:

The parameters and waveforms in the **Tile Layout** tab are set and not dependent on a specific monitoring device. If a parameter or waveform is not supported by the monitoring device, it cannot be displayed on the **Multibed** screen.

**ViewBed Screen**

The **ViewBed** screen provides a more detailed view of a single patient's information.



**1. Patient category symbol**

**2. Bed list icon**

Select to view a bed list for all local patients at the Central Station/Work Station or remotely monitored patients.

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### 3. Bed number

### 4. Technical alarm information area

### 5. Physiological alarm information area

### 6. Alarm status symbol

### 7. Close button

Select to return to the multibed (main) screen.

### 8. Parameter area

Displays parameter values, alarm limits, and alarm status.

Selecting a parameter opens the corresponding parameter's menu.

### 9. Waveform area

Displays the parameter's waveforms. Selecting a waveform opens the corresponding parameter's menu.

### 10. Quick key area

Select to access commonly used functions.

## Enter the ViewBed Screen

To enter the **ViewBed** screen:

- Select the desired patient tile from the multibed (main) screen


**Or**

- Select the parameter area or waveform area in the desired patient tile


## Adjust ViewBed Screen Layout

The **Screen Setup** menu on the ViewBed screen allows the user to modify the screen layout, and display layout of parameters or waveforms on the ViewBed screen.

To configure the ViewBed screen layout:

1. Select the desired patient tile
2. Select  (quick key)

**Or**


1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)
3. Select the **ViewBed Screen** tab
4. Select the **Choose Screen** tab and select the desired option
  - **Normal Screen:** to display real time parameters and waveforms
  - **Minitrends:** to provide a split screen with continuously displayed graphic minitrends on left side beside real time waveforms and numeric parameters on the main display
  - **ECG Full-Screen:** to display the ECG leads with numeric parameters on the main display

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To adjust patient's displayed parameters or waveforms on the ViewBed screen:

1. Select the desired patient tile
2. Select  (quick key)













Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)
3. Select the **ViewBed Screen** tab
4. Select the **Tile Layout** tab and select the desired option
5. Select a desired parameter from the drop-down list
6. Select a desired waveform from the drop-down list

**Note:**














- The parameters and waveforms in the **Tile Layout** tab are set and not dependent on a specific monitoring device. If a parameter or waveform is not supported by the monitoring device, it cannot be displayed on the **ViewBed** screen.
- Display layout changes made to the multibed screen and the **ViewBed** screen are independent.
- Changes to the screen settings are per patient. Once a patient is discharged, departmental default (preset) configurations are restored.

**Quick Keys**

Symbol	Function	Symbol	Function
 More	Shows more quick keys	 Screen Setup	Enters the <b>Screen Setup</b> menu
 Alarm Setup	Enters the <b>Alarm</b> menu	 Alarm Reset	Acknowledges ongoing alarms for the duration of the alarm
 Alarm Pause	Pauses the current alarms for a preconfigured time	 Main Screen	Return to the multibed screen
 NIBP Start/Stop	Starts or stops an NIBP measurement	 Standby	Enters the standby mode
 ECG Full-Screen	Views all ECG waveforms	 Freeze	Freezes waveforms
 Load Config	Enters the <b>Load Config</b> menu	 Minitrends	Displays the Minitrends screen

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Symbol	Function	Symbol	Function
 Parameters Setup	Enters the <b>Parameters Setup</b> menu	 Send Message	Sends a message to the TM80
 Print	Prints a real-time report	 Print Setup	Enters the <b>Print Setup</b> menu
 *Privacy Mode	Enables the privacy mode	 *Night Mode	Enables the night mode
 ECG 24h Sum	Views the 24-hour ECG summary	 Audio Pause	Pauses alarm tone issued by BeneVision N series patient monitors
 	Enters the <b>Record Setup</b> menu	 	Starts/stops a recording
 	Enter the <b>Discharge Patients</b> dialog box	 	Manually triggers and saves an event
 	Enters the EWS window		

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## Patient Setup

### Patient Management Screen

The **Patient Management** screen allows the user to enter and modify patient demographics. To enter the patient information on the Central Station/Work Station:

1. Select the **Patient Management** tab from the **ViewBed** screen

Or





1. Select EDV96 (for example) in the desired patient tile, select  (patient category icon)
2. Enter the patient information using the on-screen or external keyboard
3. Select **Save**

### Enter Patient Information Using Hospital Database (ADT Query)\*

When connected to a hospital database, patient information can be queried or imported into the Central Station/Work Station. To enter patient information using a hospital database:

1. Select the **Patient Management** tab from the **ViewBed** screen

Or

1. Select EDV96 (for example) in the desired patient tile, and select  (patient category icon)
2. Select the **Find Patient** button
3. Select the **ADT** tab
4. Input query criteria
5. Select 
6. Select  beside the desired patient to import patient information to the Central Station/Work Station

#### Note:




The **ADT** tab is available only when the ADT feature is enabled. Refer to **BeneVision Central Monitoring System Operator's Manual** for complete details.

## Import Discharged Patient Information

To readmit a previously discharged patient:

1. Select the **Patient Management** tab from the **ViewBed** screen

Or



1. Select **:EDV96** (for example) in the desired patient tile and select  (patient category icon)
2. Select **Find Patient**
3. Select the **Discharged Patients** tab
4. Input query criteria
5. Select 
6. Select  beside the desired patient
7. Select **History Data** to merge the patient demographic information and history data into current data for this patient
8. Select **OK** to confirm

## Assigning Care Groups

The care group function allows assigning a patient to a defined care group. Care groups may include departments, caregivers or other defined groups. To manually assign a care group:

1. Select the **Patient Management** tab from the **ViewBed** screen

Or

1. Select **:EDV96** (for example) in the desired patient tile and select  (patient category icon)
2. Select  beside Care Group
3. Scroll and select the desired care group/colour
4. Select OK to confirm

After assigning a care group to a bed, **:bv117** (for example) in the desired patient tile is filled with the assigned care group's colour.

### Note:

If the monitoring devices are fixed in the tile, the care group remains assigned upon patient discharge. If the monitoring devices are flexible in the tile, the care group is removed upon discharge.


## Transferring Patient Data

The Transfer function allows movement of patient information from one monitoring device to another monitoring device.

To transfer patient data from one monitoring device to another monitoring device on a same Central Station/Work Station:

1. Select the **Patient Management** tab from the **ViewBed** screen


**Or**

1. Select **EDV96** (for example) in the desired patient tile and select  (patient category icon)
2. Select **Transfer Patient** and select **Local** from the destination department
3. Scroll and select the desired bed/room number from the **Select the destination bed list**
4. Select **OK** to confirm

To transfer patient data from one Central Station/Work Station to a different Central Station:

1. Select the **Patient Management** tab from the **ViewBed** screen

**Or**

1. Select **EDV96** (for example) in the desired patient tile and select  (patient category icon)
2. Select **Transfer Patient** and select **Other** from the destination department
3. Scroll and select the desired bed/room number from the **Select the destination bed list**
4. Select **OK** to confirm

Data transfer time depends on the amount of data stored on the patient. Once the transfer is completed, the source patient tile displays Discharged. The Transferring Data... xx message is displayed in the alarm information area of the destination patient tile, indicating merging patient data from the source to the destination patient tile is in progress.

### Note:

- To ensure data preservation during transfer, the system date and time at the Central Station/Work Station should be consistent.
- To ensure patient safety, monitor the patient at the source and destination beds during transfer.


## Discharging a Patient\*

Discharging a patient clears all patient information, places the patient in the **Discharged Patients** list and restores default (preset) settings. Patients can be discharged from the Central Station/Work Station, bedside monitor or from a TD60/TM80 telemetry monitor. For complete details on discharging a patient from the monitoring bedside devices, refer to the corresponding operator's manual.

To discharge a patient from the Central Station/Work Station:

1. Select the **Patient Management** tab from the **ViewBed** screen, the **Review** screen or the **Calculation** screen

Or


1. Select **EDV96** (for example) in the desired patient tile and select  (patient category icon)
2. Select **Discharge Patient**
3. Select **Print End Case Report** if desired
4. Enable Standby if desired
5. Select **OK** to confirm

## Standby


### Enter Standby

The Standby function allows the user to suspend monitoring on a patient. While in standby, the patient is not monitored however all data and settings are preserved.



To place a patient into Standby at the Central Station/Work Station:

1. Select the desired patient tile
2. Select  (quick key)

Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

Or

1. Select  (for example) in the desired patient tile
2. Select  from the drop-down list
3. Select **Location** to define the patient location while in standby
4. Select **OK** to confirm

#### Note:

Standby can also be enabled from the bedside device.

### Change Patient Location in Standby

To change the patient's location while in standby mode, select the current location from the Standby screen, scroll and select the new location.

### Exit Standby

To resume monitoring and exit standby:

1. Select **Resume Monitor** in the patient tile

Or

1. Select  (for example) in the desired patient tile
2. Select  from the drop-down list

## Alarms

### Adjust Alarm Limits

The **Alarm** menu allows users to configure alarm limits of all parameters and the responses at the Central Station/Work Station when an alarm occurs. \*This is only possible if authorised in **Remote Settings**.


To adjust an alarm limit through the Alarm menu:

1. Select the desired patient tile
2. Select  (quick key)

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

**Or**

1. Select  (for example) in the desired patient tile
2. Select **Alarm Setup** from the drop-down list
3. Select the **Limits** tab
4. Select the desired parameter
5. Scroll and select a desired value for the high or low limit

To adjust an alarm limit through a parameter's setup menu:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select a numeric or waveform of the desired parameter
3. Select the **Alarm** tab
4. Scroll and select a desired value for the high or low limit

### Note:

Alarm limits changed on the Central Station will also be changed on the Work Station or the bedside monitor.

## Adjust Arrhythmia Alarms


To adjust a patient's arrhythmia alarm through the **Alarm** menu:

1. Select the desired patient tile
2. Select  (quick key)

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

**Or**

1. Select  (for example) in the desired patient tile
2. Select **Alarm Setup** from the drop-down list
3. Select the **Arrhythmia** tab
4. Scroll and select individual arrhythmia
5. Set alarm properties:
  - **On/Off:** to enable or disable arrhythmia alarm notification
  - **Priority:** to adjust the level of the alarm
  - **Alarm Outputs:** to enable or disable automatic functions when an alarm occurs. For details on each option, refer to **Adjust Alarm Responses** section for complete details.

To adjust a patient's arrhythmia alarm through the **ECG** menu:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select a numeric or waveform of ECG
3. Select the **Arrhythmia** tab
4. Scroll and select individual arrhythmia
5. Set alarm properties
  - **On/Off:** to enable or disable arrhythmia alarm notification
  - **Priority:** to adjust the level of the alarm

## Reset Alarms\*

To reset alarms (silence):

1. Select the desired patient tile
2. Select  (quick key)

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

**Or**

1. Select  (for example) in the desired patient tile
2. Select  from the drop-down list

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Or

1. Select  in the desired patient tile

Or


1. Select Alarm Reset (hard key or quick key) on the monitoring device

**Note:**


If a new alarm is triggered after an alarm is reset, the visual and audible alarm indications will be activated.

## Pause Alarms




To pause all alarms for a pre-configured period:

1. Select the desired patient tile
2. Select  (quick key)

Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

Or

1. Select  (for example) in the desired patient tile
2. Select  from the drop-down list  
Once the alarm pause time lapses, all alarms are automatically reactivated. Alarms can be reactivated before time lapses by selecting  (quick key) a second time.

## Acknowledge Latched Alarms

Lethal alarms can be latched and must be acknowledged even if the alarm condition is resolved.


Latched alarms can be acknowledged by selecting  (quick key). For details on resetting alarms, refer to **Reset Alarms** section for complete details.

**Note:**


An unacknowledged, latched alarm continues to alarm (audio and visual notifications) on the patient even after the alarm condition has been resolved.

## Printing Realtime Waveforms

To print a report of current waveform(s) on a patient at the Central Station/Work Station:

1. Select the desired patient tile
2. Select  (quick key)

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)


**Or**

1. Select  (for example) in the desired patient tile
2. Select **Print** from the drop-down list

To adjust the waveforms printed on the patient at the Central Station/Work Station:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)
3. Select the **Normal Report** tab
4. Select the **Realtime Report** tab
5. Select
  - **Current Waveforms**: to print the displayed waveforms
  - **Selected Waveforms**: to print the selected waveforms


**Note:**

Waveform print selection on the Central Station/Work Station is independent.


## NIBP Measurement

### Start an NIBP Measurement

To start an NIBP measurement on a patient:

1. Select the desired patient tile
2. Select  (quick key)

Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

Or

1. Select  (for example) in the desired patient tile
2. Select **NIBP Start/Stop** from the drop-down list

### Warning:

Before starting an NIBP measurement, make sure that the patient category on the monitoring device is correct and the NIBP cuff size is appropriate for this patient.

### Set an NIBP Measurement Interval

In addition to starting and stopping an NIBP measurement on a monitoring device, automatic NIBP measurements (intervals) can be set. The NIBP measurements will be automatically repeated at a pre-configured interval. To set an NIBP measurement interval on a patient:


1. Select the desired patient tile

Or


1. Select the parameter area or waveform area in the desired patient tile
2. Select the NIBP numeric
3. Select the **Setup** tab
4. Set **Interval** to the desired option

## Stop an NIBP Measurement

To stop the proceeding measurement:

1. Select the desired patient tile
2. Select  (quick key)

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

**Or**

1. Select  (for example) in the desired patient tile
2. Select **NIBP Start/Stop** from the drop-down list

## Alternative Operating Modes\*


This section only describes how to enable the following operating modes at the Central Station/Work Station only. For details on how to set remote control for these modes, refer to ***BeneVision Central Monitoring System Operator's Manual***.

### Night Mode



To enter night mode:

1. Select the desired patient tile
2. Select  (quick key)


Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)


Or

1. Select  (for example) in the desired patient tile
  2. Select **Night Mode** from the drop-down list
  3. Select the current bedside monitor or all the bedside monitors
  4. Select **OK** to confirm
- The  symbol is displayed in the desired patient tile in night mode.

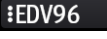
To exit night mode:

1. Select the desired patient tile
2. Select  (quick key)

Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

Or

1. Select  (for example) in the desired patient tile
2. Select **Night Mode** from the drop-down list
3. Select the current bedside monitor or all the bedside monitors
4. Select **OK** to confirm

### Note:


The night mode can be enabled on the bedside monitor connected to the Central Station/Work Station. If the bedside monitor in night mode is disconnected from the Central Station/Work Station, night mode will automatically be disabled.

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## Privacy Mode

Privacy mode does not display patient information and monitoring data at the bedside monitor. In privacy mode, the bedside monitor continues monitoring the patient, but patient data is only visible at the Central Station/Work Station.

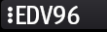
To enter privacy mode:

1. Select the desired patient tile
2. Select  (quick key)

Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

Or


1. Select  (for example) in the desired patient tile
2. Select **Privacy Mode** from the drop-down list
3. Select the current bedside monitor or all the bedside monitors
4. Select **OK** to confirm

The  symbol is displayed in the desired patient tile

## Warning:

In privacy mode, all audible alarms are suppressed, and the alarm light is deactivated at the bedside monitor. Alarms are presented only at the Central Station/Work Station.

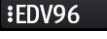
To exit privacy mode:

1. Select the desired patient tile
2. Select  (quick key)

Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select  (quick key)

Or

1. Select  (for example) in the desired patient tile
2. Select **Privacy Mode** from the drop-down list
3. Select the current bedside monitor or all the bedside monitors
4. Select **OK** to confirm

## Note:

The privacy mode can be enabled on the bedside monitor connected to the Central Station/Work Station. If the bedside monitor in privacy mode is disconnected from the Central Station/Work Station, privacy mode will automatically be disabled.

## History

Patient historical data is stored and able to be reviewed. The review screen provides several tabs to display patient numeric and waveform information.


To review a current patient's historical data:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen

To review a previously discharged patient's historical data:


1. Select  on the multibed (main) screen
2. Select **Discharged Patients** from the drop-down list
3. Select **Detail** for the desired patient
4. Select the **Review** tab

### View and Print Tabular Trends

To view and print tabular trends at the Central Station/Work Station:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Tabular Trends** from the drop-down list
5. Select 
6. Verify or adjust print setup options
7. Select **Print**

To adjust the amount and types of trends displayed on the tabular trends page:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Tabular Trends** from the drop-down list
5. Set **Trend Group** and select the desired option
6. Set **Interval** and select the desired option

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**Note:**


The parameters displayed for **Trend Group** are dependent on the parameters available on the monitoring device.

## View and Print Graphic Trends

To view and print graphic trends at the Central Station/Work Station:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Graphic Trends** from the drop-down list
5. Select 
6. Verify or adjust print setup options
7. Select **Print**

To adjust the number of trends displayed on the graphic trends page:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Graphic Trends** from the drop-down list
5. Set **Trend Group** and select the desired option
6. Select **Zoom** and select the desired length of trend data displayed on the current screen
  - **8 min:** displays eight minutes of trend data. Up to one hour of data can be viewed
  - **30 min, 1 hr, 2 hrs, 4 hrs:** displays the selected length of trend data. Up to four hours of data can be viewed
  - **8 hrs, 12 hrs, 24 hrs, 48 hrs:** displays the selected length of trend data. Up to 240 hours of data can be viewed
7. Select **Trends** to adjust the number of parameters trended on the screen at a time

**Note:**

Trend display selection on the Central Station/Work Station is independent.



## View and Print Events

The event review page stores physiological and technical events on a patient.

To view events at the Central Station/Work Station:

1. Select the desired patient tile


### Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Events** from the drop-down list

To print a list of all events:

1. Select the desired patient tile


### Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Events** from the drop-down list
5. Select 
6. Verify or adjust print setup options
7. Select **Print All Event List**
8. Select **Print**

To print a list of selected events:

1. Select the desired patient tile


### Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Events** from the drop-down list
5. Select the desired events
6. Select 
7. Verify or adjust print setup options
8. Select **Print List of Selected Events**
9. Select **Print**

To view and print details of the selected event:

1. Select the desired patient tile


**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Events** from the drop-down list
5. Select the desired events
6. Select 
7. Verify or adjust print setup options
8. Select **Print Detail of Selected Events**
9. Select **Print**

To view and print details of the currently displayed event:

1. Select the desired patient tile



**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Events** from the drop-down list
5. Double click a desired event **Or** select the desired event and select **Detail**
6. Select 
7. Verify or adjust print setup options
8. Select **Print Detail of Selected Events**
9. Select **Print**

To access options on a stored event in the events list:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Events** from the drop-down list
5. Select the desired event
6. Select 
7. Select the desired option
  - **Lock:** to lock the event manually.  beside an event indicates a locked event cannot be deleted
  - **Unlock:** to unlock the event
  - **Delete:** to delete the event
  - **Select All:** to select all events in the events list
  - **Cancel All:** to cancel selecting all events in the events list
  - **Rename:** to rename an event (if enabled)
  - **Note:** to allow a note to be saved and printed with the event

These guidelines do NOT replace the instructions for use and all users should refer to the appropriate Operator's Manual for detailed instructions.  
The Illustrations may not necessarily reflect the setup or data displayed on your device.

To access options on a stored event in the detail event window:


1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Events** from the drop-down list
5. Double click a desired event

**Or**

1. Select the desired event and select **Detail**
2. Select
3. Select the desired option

- **Lock:** to lock the currently displayed event manually.  beside an event indicates a locked event cannot be deleted
- **Unlock:** to unlock the currently displayed event
- **Delete:** to delete the event
- **Rename:** to rename an event (if enabled)
- **Note:** to allow a note to be saved and printed with the event
- **Export to EMR:** exports 20 seconds of waveform data. Refer to *BeneVision Central Monitoring System Operator's Manual* for further details
- **Perform caliper measurement.** Refer to **Caliper Measurement** section for complete details

## View and Print Full Disclosure

The full disclosure review page stores all waveforms and numeric information collected on a patient, for a configured period.

To view full disclosure data at the Central Station/Work Station:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Full Disclosure** from the drop-down list

To change the displayed and stored disclosure data:

1. Select the desired patient tile


**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Full Disclosure** from the drop-down list
5. Select **Setup**
6. Select the **Storage** tab
7. Select the desired waveforms
8. Select the **Display (Maximum: 3)** tab
9. Select the desired waveforms to be displayed

To print all compressed waveforms of full disclosure:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Full Disclosure** from the drop-down list
5. Select 
6. Verify or adjust print setup options
7. Select **Print Waveform Overview**
8. Select **Print**


To select the desired compressed waveform segments:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Full Disclosure** from the drop-down list
5. Select **Select**
6. Click the mouse, hold and drag it to select the desired waveform segment

**Or**


1. Touch the waveform and drag finger to select the desired waveform segment
2. If multiple waveform segments are desired, repeat step 6
3. Select  adjacent to the selected waveform to cancel the selection if needed
4. Choose **Select** to exit the selection function

These guidelines do NOT replace the instructions for use and all users should refer to the appropriate Operator's Manual for detailed instructions.  
The Illustrations may not necessarily reflect the setup or data displayed on your device.

To print the selected compressed waveform segments:

1. Select the desired patient tile


**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Full Disclosure** from the drop-down list
5. Select the desired compressed waveform segments
6. Select 
7. Verify or adjust print setup options
8. Select **Print Overview of Selected Waveforms**
9. Select **Print**

To view and print details of the selected waveform segments:

1. Select the desired patient tile


**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Full Disclosure** from the drop-down list
5. Select the desired waveform segments
6. Select 
7. Verify or adjust print setup options
8. Select **Print Detail of Selected Waveforms**
9. Select **Print**

To view and print details of a selected waveform segment:

1. Select the desired patient tile

**Or**

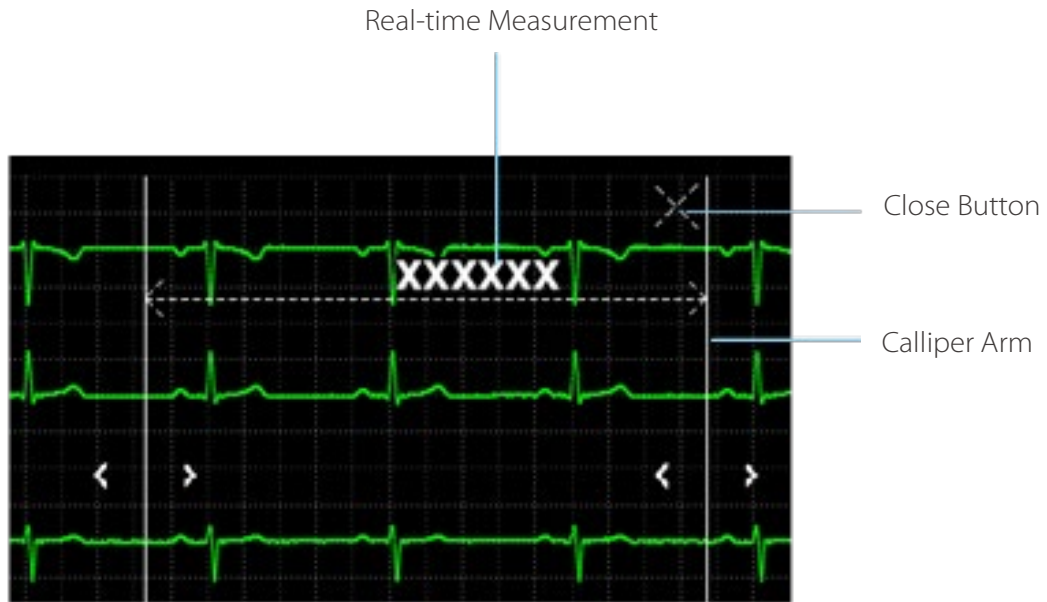
1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Full Disclosure** from the drop-down list
5. Select the desired waveform segment
6. Select **Detail** or double click the desired compressed waveform
7. Select 
8. Verify or adjust print setup options
9. Select **Print Displayed Waveform Detail**
10. Select **Print**

These guidelines do NOT replace the instructions for use and all users should refer to the appropriate Operator's Manual for detailed instructions.  
The Illustrations may not necessarily reflect the setup or data displayed on your device.

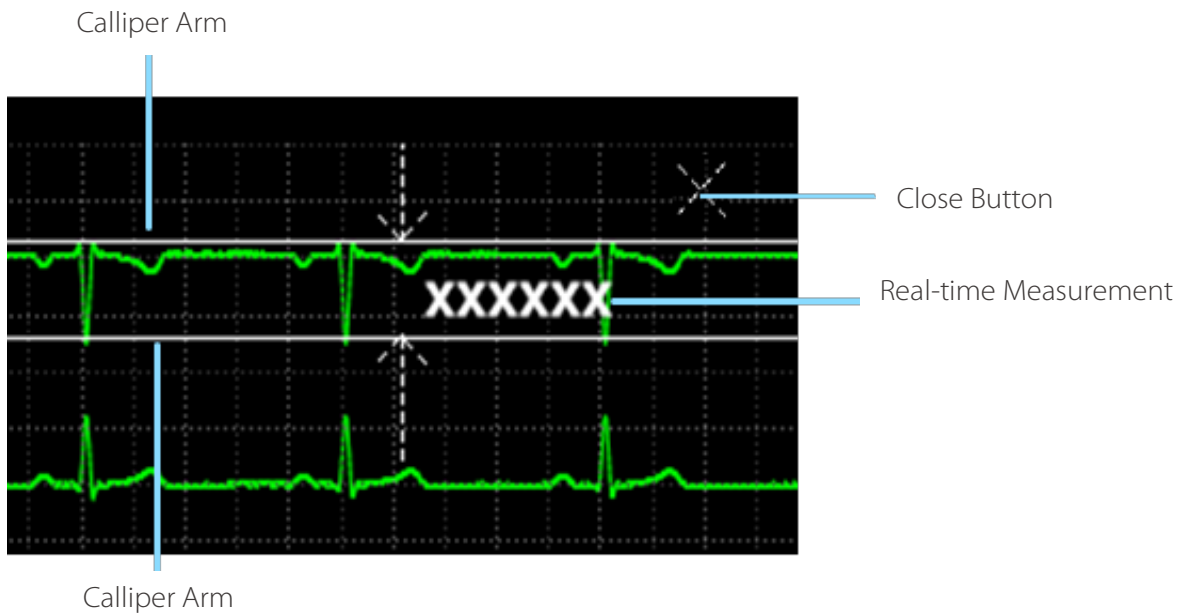
### Caliper Measurement

Caliper allows the ability to electronically measure ECG segment such as PR and QRS intervals. The caliper is available in event detail and full disclosure detail waveform at the Central Station/Work Station.

### PR, QRS, QT and R-R interval Measurement



### ST Measurement




These guidelines do NOT replace the instructions for use and all users should refer to the appropriate Operator's Manual for detailed instructions. The Illustrations may not necessarily reflect the setup or data displayed on your device.

To measure PR, QRS, QT and R-R interval:

1. Enter the event detail view or the full disclosure detail view
2. Select **Caliper**
3. Click the mouse at a place in the desired waveform area, hold and drag the mouse horizontally to the desired location


**Or**

1. Touch at a place in the desired waveform area and drag the finger horizontally to the desired location
2. Select **PR, QRS, RR** or **QT** from the Caliper menu to obtain the measured values. The QTc value is calculated after RR and QT value have been acquired
3. Select
  - a) **Save**: to save the caliper measurement values as a manual event in the event review page. Enter the name and comments as desired and select **OK** to confirm. Up to 32 characters can be entered. The measured values are displayed in the first ECG waveform and printed in the detail reports.
  - b) **Reset**: to clear the measured values
4. Select  to exit the caliper window




To measure ST:

1. Enter the event detail view or the full disclosure detail view
2. Select **Caliper**
3. Select **ST**
4. Click the mouse at a place in the desired waveform area, hold and drag the mouse horizontally to the desired location

**Or**







1. Touch at a place in the desired waveform area and drag the finger horizontally to the desired location
2. Select
  - a) **Save**: to save the caliper measurement values as a manual event in the event review page. Enter the name and comments as desired and select **OK** to confirm. Up to 32 characters can be entered. The measured values are displayed in the first ECG waveform and printed in the detail reports.
  - b) **Reset**: to clear the measured values
3. Select  to exit the window

To move the caliper:

- When displaying the caliper arms, point inside the caliper, select  to move the entire caliper
- When measuring PR, QRS, QT and R-R interval, select  to move the caliper horizontally
- When measuring ST, select  to move the caliper

These guidelines do NOT replace the instructions for use and all users should refer to the appropriate Operator's Manual for detailed instructions.  
The Illustrations may not necessarily reflect the setup or data displayed on your device.

To adjust the caliper arms:

- When displaying a caliper, adjust the caliper arms to change the time difference between two points
- When the caliper displays  select  or  to move the caliper arm horizontally
- When the caliper displays  select  or  to move the caliper arm vertically


## View and Print 12-Lead ECG Analysis Reports

The 12-lead ECG review page allows the clinician to view and print a 12-lead ECG analysis report.

To view a 12-lead ECG analysis report:

1. Select the desired patient tile



**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select  on the **Review** screen
4. Select **12-Lead ECG** from the drop-down list
5. Select **Speed** to adjust the waveform speed
6. Select **Gain** to adjust the waveform size
7. Select **Layout** to adjust the waveform layout
  - **12x1**: to display 12-lead ECG waveforms on one page in one column
  - **6x2**: to display 12-lead ECG waveforms on one page in two columns, with 6 lines in each column
  - **6x2+1**: to display 12-lead ECG waveforms on one page in two columns, with 6 lines in each column, and one rhythm lead waveform at the bottom
  - **3x4+1**: to display 12-lead ECG waveforms on one page in 4 columns, with 3 lines in each column, and one rhythm lead waveform at the bottom
  - **3x4+3**: to display 12-lead ECG waveforms on one page in 4 columns, with 3 lines in each column, and three rhythm lead waveforms at the bottom

To print a 12-lead ECG analysis report:

1. Select the desired patient tile

**Or**

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select  on the **Review** screen
4. Select **12-Lead ECG** from the drop-down list
5. Select 
6. Verify or adjust print setup options
7. Select **Print**




## View and Print Arrhythmia Statistic Reports

The arrhythmia statistics page allows the user to view and print the statistics about the HR value and the number of each arrhythmia within a specific time period.

To adjust time, view and print an arrhythmia statistic report:

1. Select the desired patient tile

### Or

1. Select the parameter area or waveform area in the desired patient tile
2. Select the **Review** tab from the **ViewBed** screen
3. Select ▼ on the **Review** screen
4. Select **Arrh Statistics** from the drop-down list
5. Select **Zoom** to adjust length of time
6. Select 
7. Verify or adjust print setup options
8. Select **Print**




## Connecting a Monitor with a Telemetry Device

If both a patient monitor and a telemetry device are available for the same bed and you need to choose the device according to the patient's condition, you can connect the patient monitor with the telemetry device at the Central Station or Work Station. After these devices are connected successfully, when the patient's condition improves, and they can perform out-of-bed activities, you can choose the telemetry device to view patient monitoring data. Should the patient's condition worsen, you can choose the patient monitor to view patient monitoring data.




To connect a patient monitor with a telemetry device:

1. Select an empty (unoccupied) patient tile with  on the multibed (main) screen to access the **Device Assignment** screen

Or

1. Select  on the multi (main) screen. Then select **Device Assignment** from the drop-down list
2. Select  on the left side of the screen
3. Select the desired device. If you wish to view more details about this device, select 



After a patient monitor is successfully connected with a telemetry device, the following indications are given:

- On the multi (main) screen, after selecting the bed number and room number area  in the upper left corner of the patient sector where the patient monitor is displayed, the **Use Telemetry** option is shown. Selecting this option changes, it to **Use Host Monitor**.
- On the device assignment screen  changes to 

To disconnect a patient monitor from a telemetry device:

1. Select an empty (unoccupied) patient tile with  on the **Multibed** (main) screen to access the **Device Assignment** screen

Or

1. Select  on the multi (main) screen. Then select **Device Assignment** from the drop-down list
2. Select  on the left side of the screen
3. Select **OK** to confirm