Other ADT messages

The Surveillance Station supports multiple ADT messages. Patients are tracked by a unique identifier given to each patient in the Surveillance Station. The following ADT messages/requests are supported by the system.

Update Information	The specified patient's information will be updated in the Surveillance Station database if the patient information has been changed. Depending on your configuration, if a patient is not admitted, they will be automatically admitted.
Swap Patients	This request selects two distinct patients to swap
Register Patient	Not supported
Pre-Admit	Not supported
Outpatient to Inpatient	This request admits the Outpatient, and the patient's information is updated in the Surveillance Station database.
Inpatient to Outpatient	Not supported
Cancel Admit	This request discharges the patient, if they exist.
Cancel Transfer	This request causes a reverse transfer, returning the patient to the original state.
Cancel Discharge	This request re-admits a patient into the system.
Patient ID Merge	This request updates Surveillance Station records with new PatientIDs.
Patient Account Number Merge	This request updates Surveillance Station records with new Patient Account Numbers.

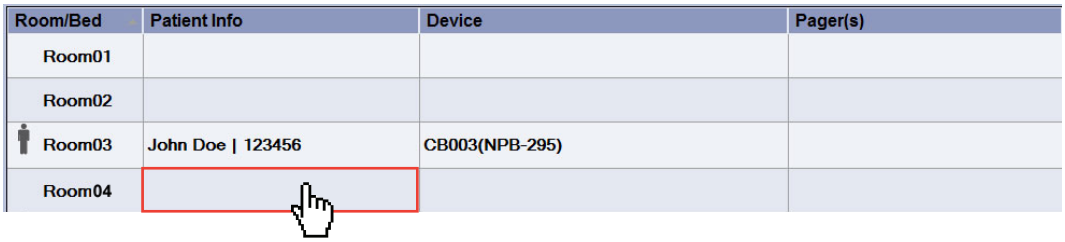
Manually admitting, discharging, and transferring patients

In the event that the ADT feed utilized by the Surveillance Station is unavailable, or a hospital facility does not utilize an ADT system, the Surveillance Station provides the ability to manually add patient information, transfer patients into alternate rooms and discharge patients from rooms.

NOTE Assignments made through a third party ADT (Admit, Discharge, Transfer) system changes may override room and patient assignments, and may complicate patient to device assignments.

Manually admitting patients

When an empty Patient/Room Tile is clicked, a Patient Information screen is displayed allowing a new patient to be added. Alternatively, patients can be added (and edited) from the ***Admin*** summary view. Click a ***Patient cell*** beside a room number you wish to admit the patient into. Users may only admit a new patient to an unassigned room.



NOTE Since this is a new patient, the Transfer and Discharge buttons are inactive.

The Patient Information screen contains the following fields for data to be entered:

- ***First Name*** (limit 19 characters)
- ***Last Name*** (limit 19 characters)
- ***Medical Record Number*** (limit 20 characters)
- ***Comment*** (limit 255 characters)
- ***Gender***
- ***Age***
- ***Date of Birth*** (month, date, year)

Enter patient information

Enter patient information, including patient name, MRN, comment, gender and date of birth. The Date of Birth field allows the user to input a specific date. If the user inputs a valid date, the Age field automatically calculates the patient's age and displays it in the text box.

Click ***Save.*** A confirmation box will be displayed asking the user to save changes. Click ***OK,*** and the patient is admitted to the system immediately, or ***Cancel*** to abort the admit process.

For detailed information on admitting a patient, see Chapter 3, Getting started.

NOTE ADT systems will retrieve information from an HL7-ADT source. The Surveillance Station will display read-only versions of the patient's information. Transfer and discharge functions occur in the ADT system.

Manually transferring patients

Step 1

From the Admin Summary view, click the ***Patient name*** to bring up the Patient Information screen. Click the ***Transfer*** button.

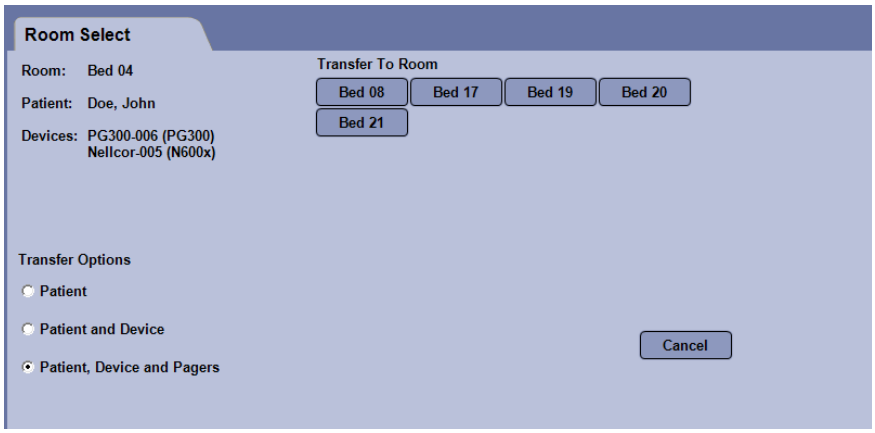
Step 2

Select a Transfer option. Transfer options include:

- ***Patient*** - Only the patient will be transferred to the new room.
- ***Patient and Device*** - The patient and device will be transferred to the new room.
- ***Patient, Device and Pagers*** - The patient, device and pager(s) will be transferred to the new room.

Unassigned rooms available for transfer are displayed, while rooms displayed as inactive have an assigned patient. Patients cannot be transferred to rooms that are already in use (no trampling). Select an available Room/Bed to initiate the transfer. ***Cancel*** exits the Patient Transfer screen without saving.

CAUTION ADT-based changes may override room and patient assignments, and may complicate patient to device assignments.



Once a new room is selected for transfer, a Confirmation dialog box will be displayed requiring the user to acknowledge the change and continue. Click ***OK*** and the transfer is done immediately, or ***Cancel*** to stop the transfer.

Manually discharging patients

For detailed information on discharging a patient, see Chapter 8, Ending Monitoring.

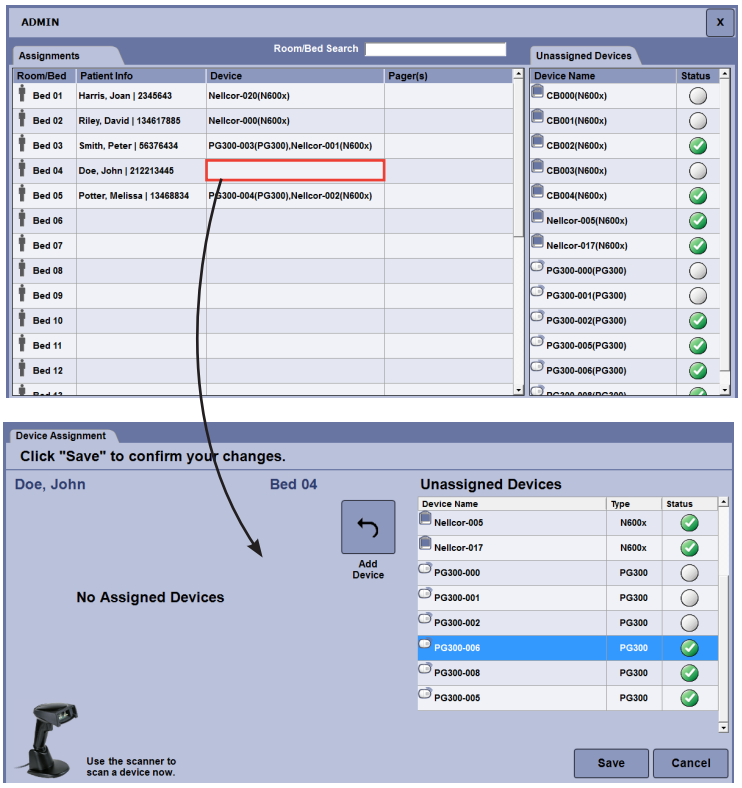
NOTE Patient data is retained by the Surveillance Station for a period of 72 hours, for reporting purposes.

Device assignment

Assign a device to a patient

After successfully admitting a patient, a device has to be assigned to the patient.

From the Assignments view, click the ***Device*** cell next to the patient name to bring up the Device Assignment screen. The Device Assignment screen displays a list of unassigned device(s) on the right side of the screen, to assign to your selected patient.

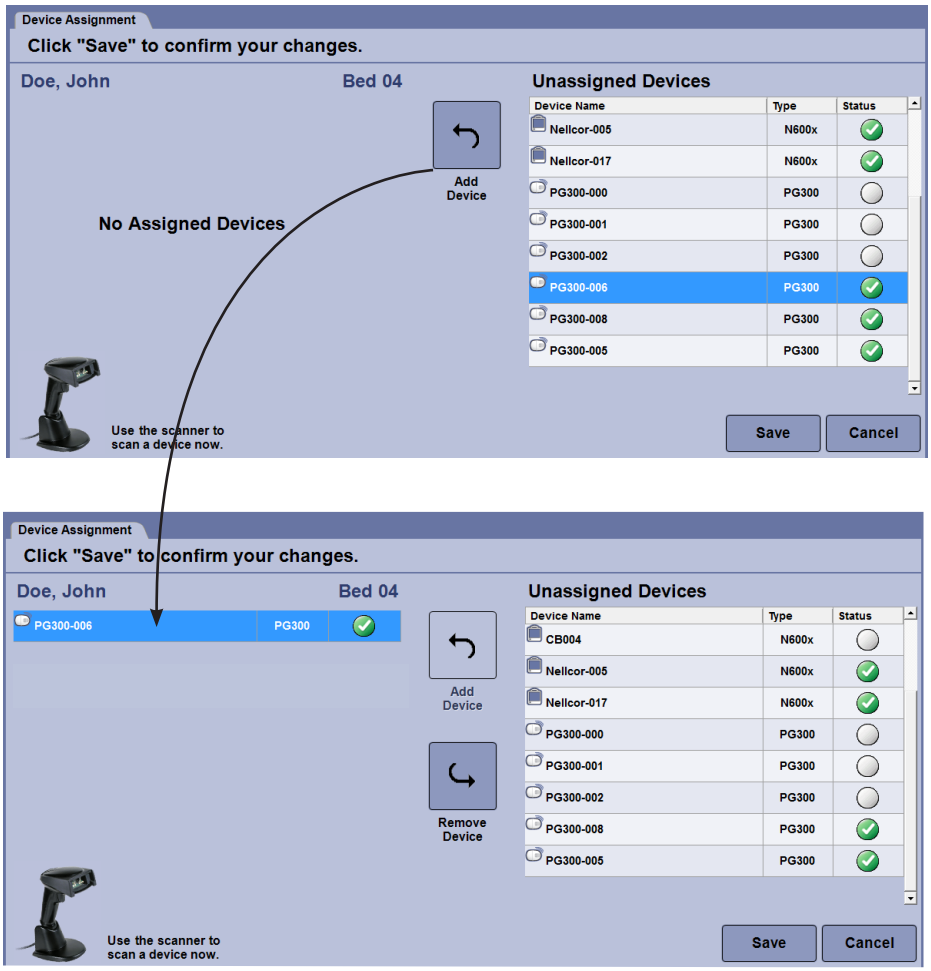


To add a device, click the ***Device name*** in the Unassigned Devices list. If using a barcode scanner, scan the barcode label on the back of the PG300 device. Once a valid device is found, it is highlighted in the list. Click the ***Add Device*** button to assign it to the selected patient/room.

NOTE Only one device type is allowed to be assigned to a patient.

NOTE If a device is not currently assigned to any other patient or room, the device is displayed here as it is still communicating with the system and available for assignment.

NOTE A scroll bar is displayed, if the number of Unassigned Devices exceeds the display area.



Once any changes have been made, the **Save** button will activate. Make sure you click **Save** button to successfully assign devices.

To swap a similar device type, click the device name from the Unassigned Devices list and click the **Add Device** button, overriding the current device assignment. The Save button confirms your assignments.

To remove a device assignment, click the Device name under the Patient/Room on the left side of the screen, and click the **Remove Device** button.

Once a patient is associated with a device, it will immediately be displayed on the Administration Summary view, and on the Tile View for monitoring.

Assign two devices to a patient

Patients may be monitored with a wireless PG300 device and/or SpO_2 monitor. To assign an additional device to a patient, follow the steps as outlined previously in assigning a device to a patient.

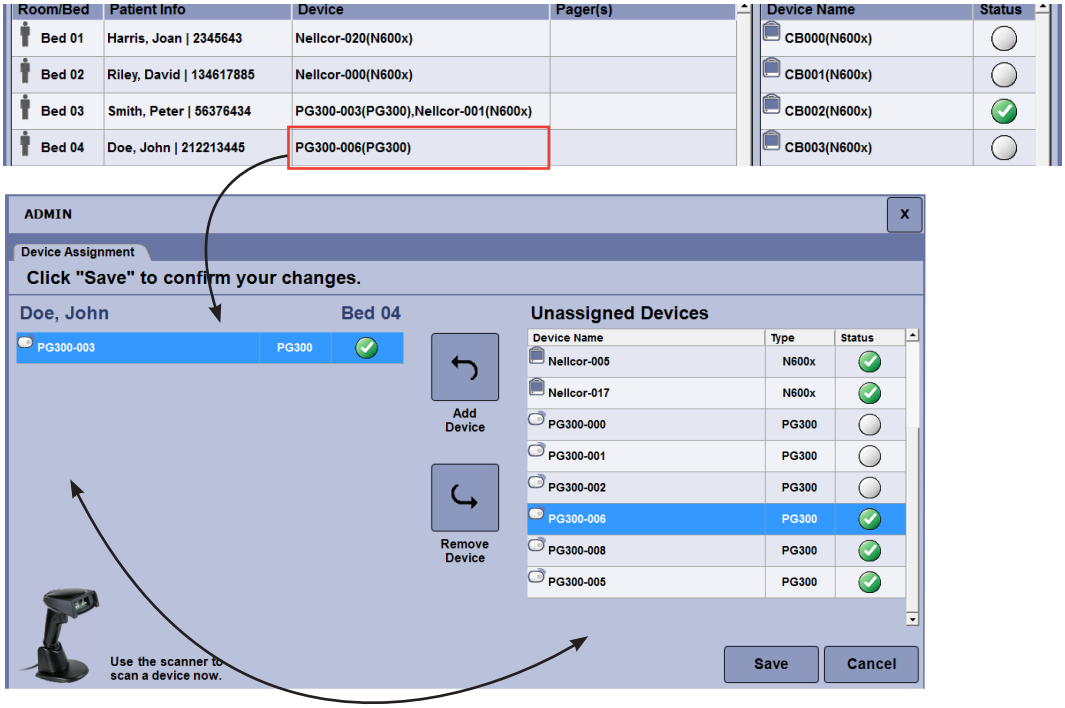
NOTE There is only one PG300 device assignment allowed, as well as only one SpO_2 monitor assignment allowed. Patients can have a total of two devices assigned, but these must be different device types.

Swapping devices

Once patients and devices are assigned, users can swap devices using the Administration interface.

Step 1
From the Admin Summary view, click the ***Device*** assigned to a patient.

Step 2
On the Device Assignment screen, click a new device from the list to associate to the patient/room and click ***Add Device***. This will automatically remove the currently assigned device of the same type (SpO_2 or PG300 device) and replace it with the new device.



CAUTION ADT changes may override room and patient assignments, and may complicate patient to device assignments.

NOTE A user may want to terminate the association of the device to the patient. To remove a device assignment, click the device on the left side of the screen (under the Patient/Room), and click the ***Remove Device*** button. Remember to ***Save*** your changes.

NOTE Pager(s) associated to the current assigned device are transferred to the newly assigned device.

7

Viewing patient data

Data synchronization

NOTE Data is sent every minute (configurable up to 60 minutes) from the wearable PG300 device to the Surveillance Station. Alarms are sent immediately to the Surveillance Station , and data is sent every minute thereafter, until the alarm condition is cleared. If the Surveillance Station does not receive data in a timely fashion, a system-generated alarm will display “No Current PG300 Data” message and the stale measurement data will be removed shortly thereafter.

Patients experiencing an alarm condition

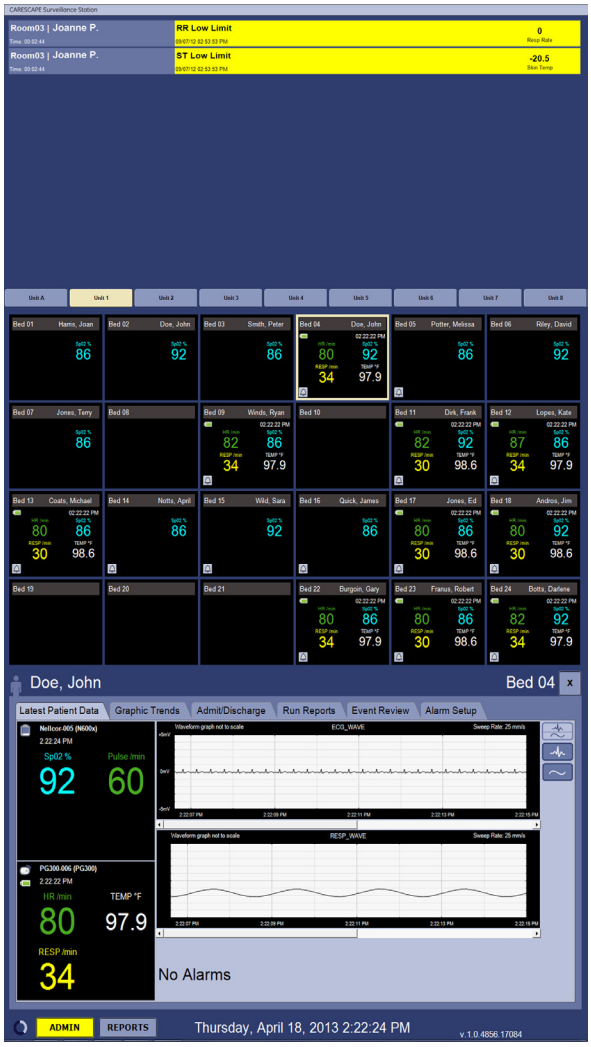
WARNING High and Medium priority alarms need to be addressed by a clinician in order of priority. Low priority alarms will clear automatically once the alarm condition is no longer met.

The Alarm Summary is the primary area that indicates when a patient is experiencing an alarm condition. When a patient alarm occurs, an Alarm Bar is displayed containing a description of the alarm, the elapsed time of the alarm, and the measurement of the parameter in alarm. When an Alarm Bar is displayed, the color of the Alarm Bar indicates its priority level (High, Medium or Low). A different audible tone will be associated for each priority level.

NOTE Clinicians should understand the nature of each alarm and provide treatment accordingly. If a patient is experiencing more than one alarm condition, care should be given accordingly.

In addition to the Alarm Summary, patient alarms will visually alert in their associated Tile View, as well as their corresponding Single Patient View if selected. The following screenshot indicates 1 patient experiencing 2 alarms, and their corresponding alarm indications in each area:

- Skin Temperature Low Limit
- Respiration Rate Low Limit



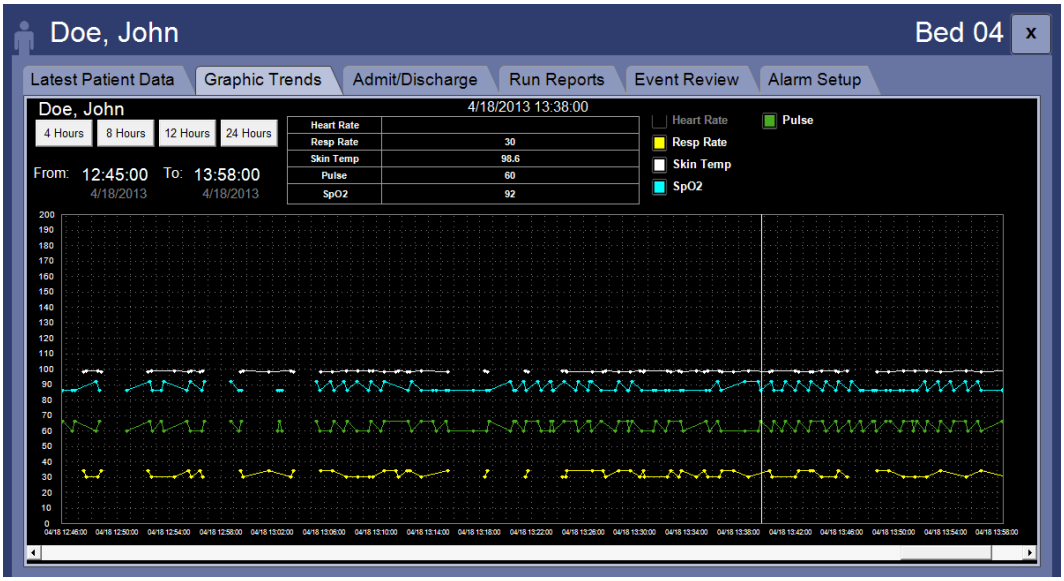
When an alarm condition exists, hospital procedures will dictate the appropriate course of action. Clinicians may want to view additional data to understand the patient's condition in more depth.

Graphic Trend

Clinicians can view Graphic Trends for clinical parameters over time by selecting the Graphic Trend Tab on the Single Patient View. The default view is a 12 hour time display, with the current time as the latest. Time range options include ***4 hour, 8 hour, 12 hour and 24 hour*** (if data is available). Users can zoom in on specific times using the time buttons or by selecting the mouse on the graph itself. Users can also turn parameters ON and OFF interactively, for trending on the graph.

The trend control is capable of displaying up to 20 individual measurement parameters at a time. The Trend Tab is divided up into five sections:

- Time Range Display
- Timeframe Buttons
- Current Data View
- The Legend
- Trend Graph



Time Range display

The Time Range display shows the time of the earliest viewable data, and the latest viewable data for a selected Time Range.

The time range selected is displayed on the screen. Times update as the user scrolls left to right, zooms, or selects a new timeframe. The date format is MM/DD/YYYY and the time is displayed in 24-hour format.

Current View	
From: MM/DD/YYYY 12:12:00	To: MM/DD/YYYY 10:10:00

Time Display buttons

The Time Display buttons instantly change the view to the period of time selected. Time Display options include:

- 4 Hours
- 8 Hours
- 12 Hours (Default selected)
- 24 Hours

Selecting a button alters its appearance to signify the change. The visible window of points will change to the amount of time designated by the button. When changing time display, the right-most side of the graph acts as the anchor point (the current time). This keeps the latest time constant when changing time ranges.

NOTE The only exception is when there is no earlier data available to display than what is shown. In this case, the right-most side (latest) will change as needed.

Current Data View

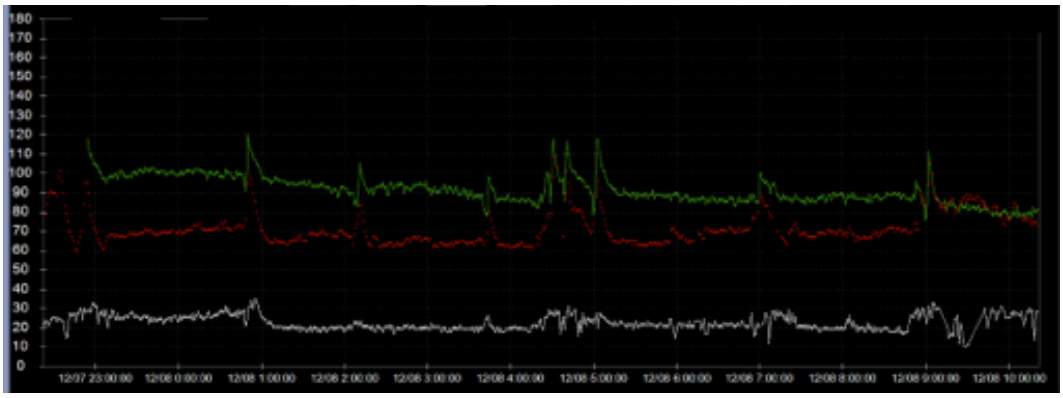
The Current Data View displays all of the parameter measurements on screen at a specific point in time using the cursor (mouse-over effect). The chart is filled with all available points for that given time. When the cursor is moved away from the graph, the Data View Chart will display blank cells. A white vertical line is displayed from the top of the graph to the bottom that indicates where the cursor is currently selecting data points to fill the graph from.

Legend

The Legend may display up to 20 parameters. The parameters selected for the Legend are chosen based on the availability of data for the patient during the currently viewed time range and the priority defined for each measurement channel.

Selecting on a legend item toggles ON or OFF the data points it represents on the graph. Toggled on, the legend item text is white, toggled OFF; the legend item text is gray.

Trend Graph



The Trend Graph is the main display for all plotted data points. It displays trend lines for data collected by the system on a single graph. Each trend parameter displays as set of plotted points (with a specific symbol/color) connected by a line. The data points along the trend line are represented by dot symbols.

The X-axis on the trend graph indicates time (the right side is more recent while the left side is further back in time). The Y-axis indicates the trend parameter value. It is a fixed range from 0 to 180.

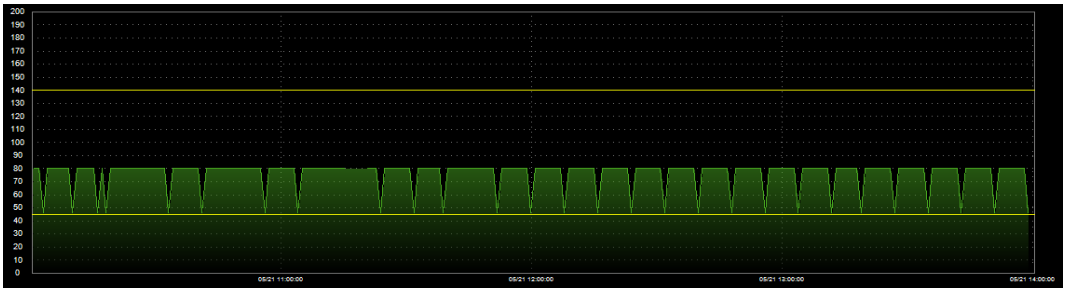
Trend point/lines may be toggled ON or OFF by selecting the representative item in the graph legend.

The graph includes a horizontal scroll bar at the bottom of the screen which allows the user to move the display range forward and backward in time. Initially, the control displays the default view of time and all the points that range contains. As the scroll bar is moved, the time range is changed, requesting and deleting points as necessary. The scroll is limited to the amount of trendable data available for a given patient. The Y-Axis defaults 0-200. Should a point fall outside of this range, the Y-Axis is adjusted to display the point.

A maximum of twenty parameters are available on the graph at one time. The graph may be zoomed to a custom timeframe by dragging a box (using the mouse) over an area of the graph or by selecting one of the time display buttons.

Lines connect channels at normal intervals. Breaks in the line indicate points in time where data for the trend is unavailable. Breaks in the trend lines are inserted if the interval between points is greater than a configurable amount of time. The default configurable amount of time for all measurements is two minutes.

The trend graph displays the current alarm limits (High/Low) only when no other parameters are displayed. A gradient display effect and smart alarm limits are available when all but a single trend are selected. The gradient fills the lower portion of the trend line with the same color as the line plus an opacity fade. Smart Alarm limit lines (High and Low) are added to the chart display area with horizontal lines that are yellow in color. The limit lines are the current limit settings.



Configuring the trend window

Each measurement line color is configurable per parameter. The background color is configurable by application setting but defaults to black. The default time is an application wide configuration setting.

Configurable icons are associated with each Legend Item indicating how a data point is represented on the graph.

The symbols on the Trend Graph are image files that are stored locally on the host computer and are configurable. The default view is 12 hours, however this is configurable also.

Patient reports

Reports overview

Clinicians can select the Run Reports Tab from a Single Patient View to access detailed system reports for a specific patient. Authorized users can also access reports by selecting the Reports button on the bottom of the screen to run reports for any patient in the system.

Reports offer another way to review detailed patient information, device measurements, clinical and Technical alarms, settings and setting changes and alarm notifications.

Report types

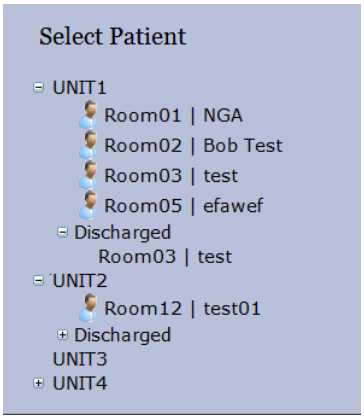
The following reports are available:

Type of Report	Details
Snapshots	A snapshot is a recording of all device settings, patient values and alarms at a pre-determined or reoccurring point in time.
Flowsheets	A Flowsheet is a custom report in tabular format that displays commonly used parameters over time.
Log of Events	This report includes snapshots, and system-related events related to a patient, such setting changes, smart alarm changes, or ADT events.
Log of Pager Messages	All notification messages (Pagers) sent by the system are recorded.

Navigation Bar

Two buttons at the top of each report page allow the user to quickly navigate through the reports. The Begin button takes the user to the report selection page. The Back button takes the user to the previous page.

Select Patient

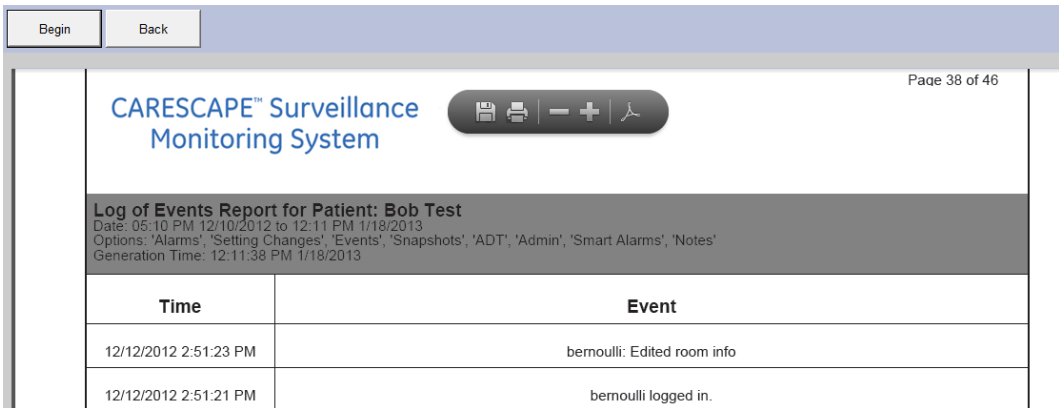


User may select active and discharged patients from an interactive Tree view, that displays patient's by Unit. Selecting the Unit plus and minus marks will expand and collapse the tree view to display the patients in each Unit, sorted by room (for active patients) or discharged patients (last known location). Selecting a patient will display the Selected Patient Name, and other report selection criteria such as Timeframe for the report.

Report buttons

Once a report is generated, a PDF is generated and button bar will be displayed at the top of the report page.

Report header



Located at the top of each report page is a header bar that lists all relevant details about the generated report. It displays the report title, the patient's name, the selected date and time, options included in the report, and when the report was generated. The page number is displayed at the top-right of the report.

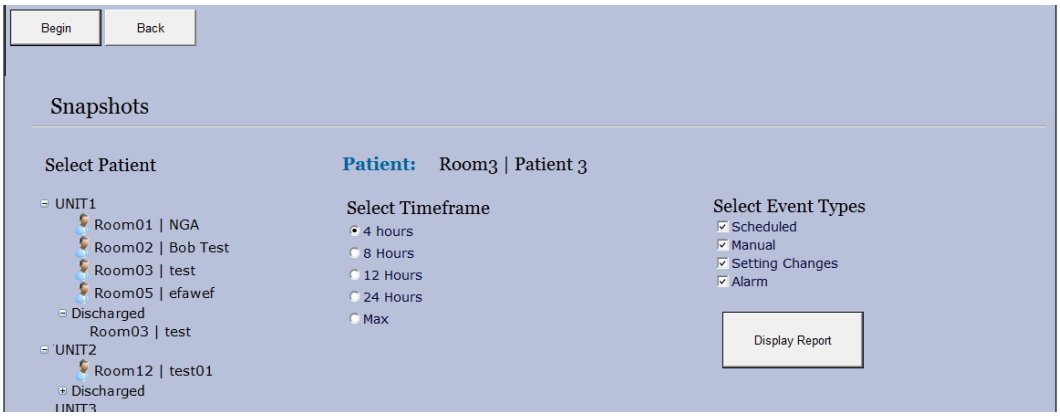
Snapshots report

The Snapshots Report provides a list of available snapshots to select from, for a time range specified by the user. The report displays all of the patients' settings, measurement values and alarms that are present at the time of each snapshot.

Step 1

To run a Snapshot Report, select the ***Snapshot*** from the Report Selection screen.

Step 2

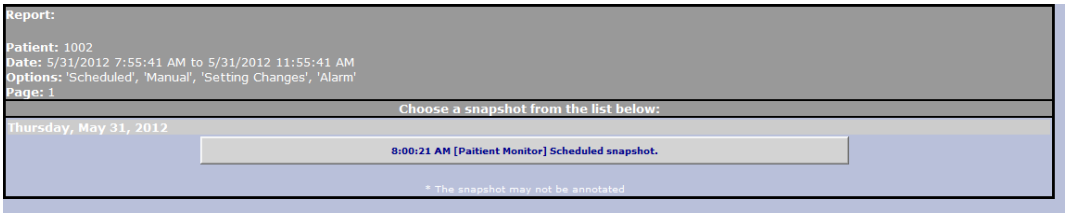


Select a patient from the list. Specify a report timeframe using the predetermined options available (4, 8, 12, 24 hours or max time). Specify the event types to be displayed by enabling or disabling these report option filters:

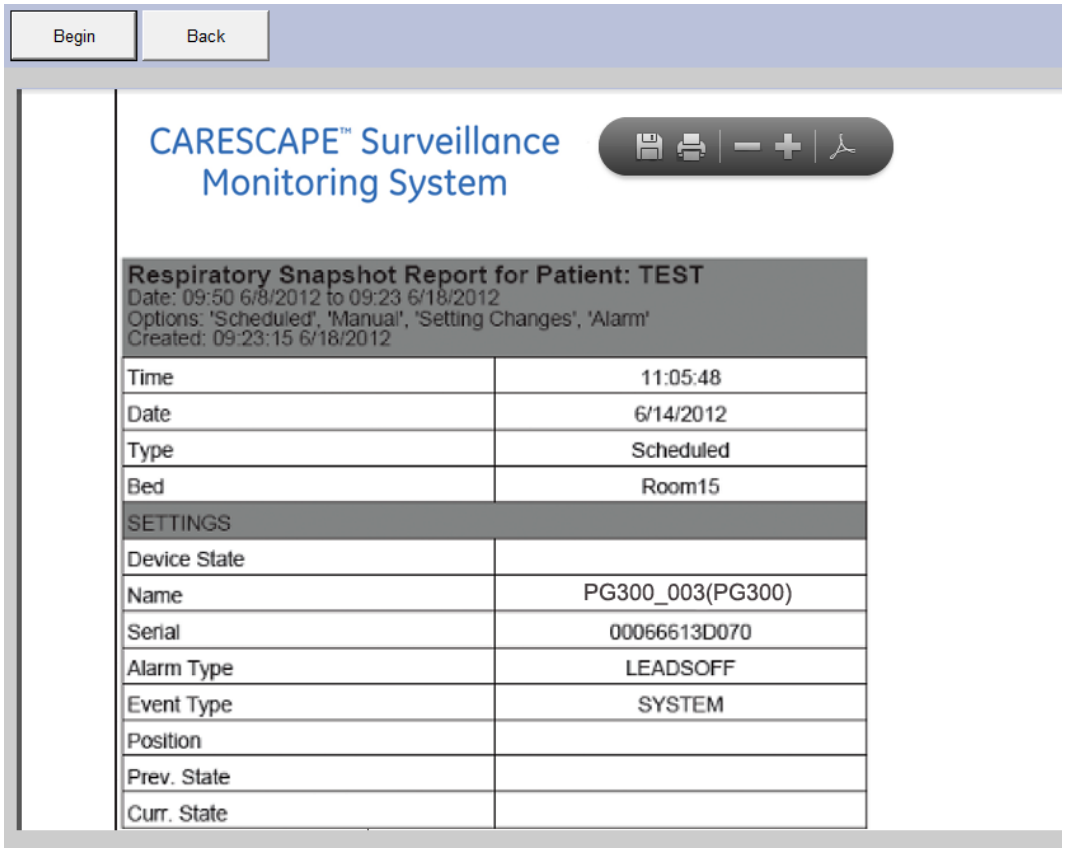
- ***Scheduled***
- ***Manual***
- ***Settings Changes***
- ***Alarm***

Step 3

Hit the ***Display Report*** button. A list of snapshots is generated based on the time frame chosen. The options and filters, along with patient name, date, and time frame are included. Select the applicable snapshot to review.



A Snapshot report is generated. Users can print this report or download. Alarm items appear in red.



Snapshots report data

Report data lists applicable device settings (High/Low alarm limits), as well as the current measurements for all active parameters. The table displays alarm limits that either occurred during or caused the snapshot. Finally, the table lists any alarms, secondary values and non-standard settings from the device. All snapshot timestamps are accurate to the second of occurrence.

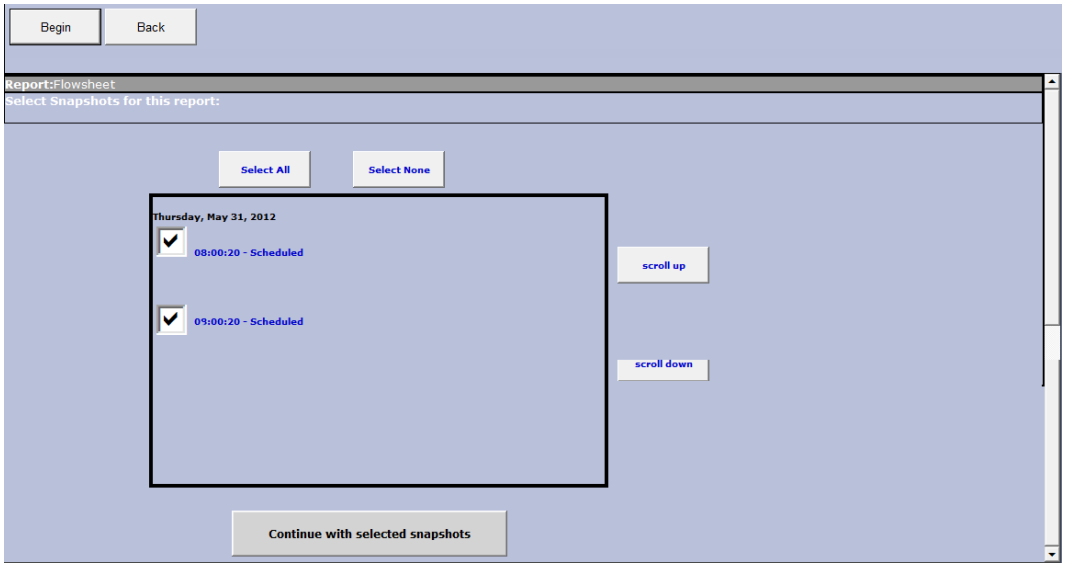
Flowsheets report

The Flowsheet report displays (in tabular format), the medical device's parameter readings and changes over time, including alarms. If a setting change was made, the value associated to the setting shall be indicated (bold text) in the report.

Step 1

To run a Flowsheet Report, select the ***Flowsheet*** from the Report Selection screen.

Step 2

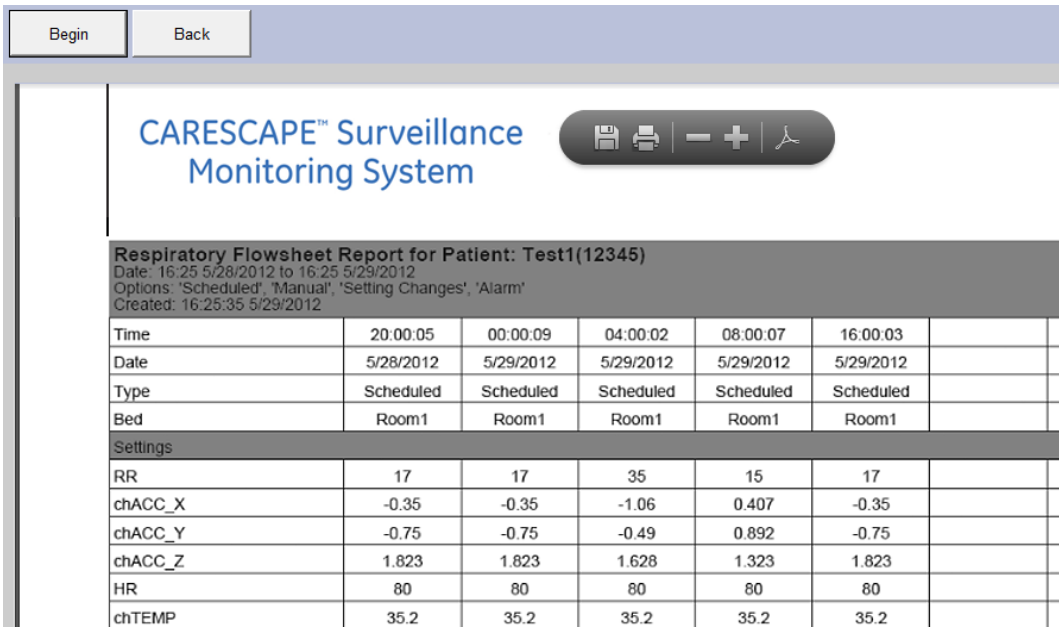


Select a scheduled snapshot from the list. Hit ***Continue***.

Step 3

A Flowsheet report is generated as a PDF. Users can review the document in the viewing area, or print or download. If the pagination option is selected, pagination buttons are displayed when a report exceeds the maximum display layout.

If the scrolling option is selected, scroll bars are displayed when a report exceeds the maximum display layout, A header with the selected options for the report are displayed, including the number of page(s) and the order (Ascending/Descending) to display the events.



Respiratory Flowsheet Report for Patient: Test1(12345)
Date: 16:25 5/28/2012 to 16:25 5/29/2012
Options: 'Scheduled', 'Manual', 'Setting Changes', 'Alarm'
Created: 16:25:35 5/29/2012

Time	20:00:05	00:00:09	04:00:02	08:00:07	16:00:03	
Date	5/28/2012	5/29/2012	5/29/2012	5/29/2012	5/29/2012	
Type	Scheduled	Scheduled	Scheduled	Scheduled	Scheduled	
Bed	Room1	Room1	Room1	Room1	Room1	
Settings						
RR	17	17	35	15	17	
chACC_X	-0.35	-0.35	-1.06	0.407	-0.35	
chACC_Y	-0.75	-0.75	-0.49	0.892	-0.75	
chACC_Z	1.823	1.823	1.628	1.323	1.823	
HR	80	80	80	80	80	
chTEMP	35.2	35.2	35.2	35.2	35.2	

Flowsheets report data

Data is ordered from earliest to latest in each column. Each periodic snapshot lists all of its non-specific details, including patient name & MRN, snapshot time, selected options, and the current date. All device measurements and settings are displayed below. The page number is displayed at the top-right of the report. The scroll bar on the right side of the page allows the user to view more of the report if needed. All snapshot timestamps are accurate to the second of occurrence.

Log of Pager Messages report

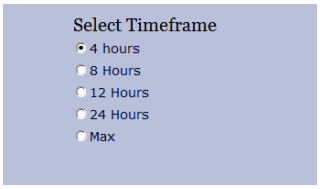
This system-wide report includes a list of all remote notification messages sent by the system for the time range specified by the user. Each remote notification message shall include:

- Unique ID
- Time
- Destination (To) or Result ID of message transmitted.
- Description of message transmitted

Step 1

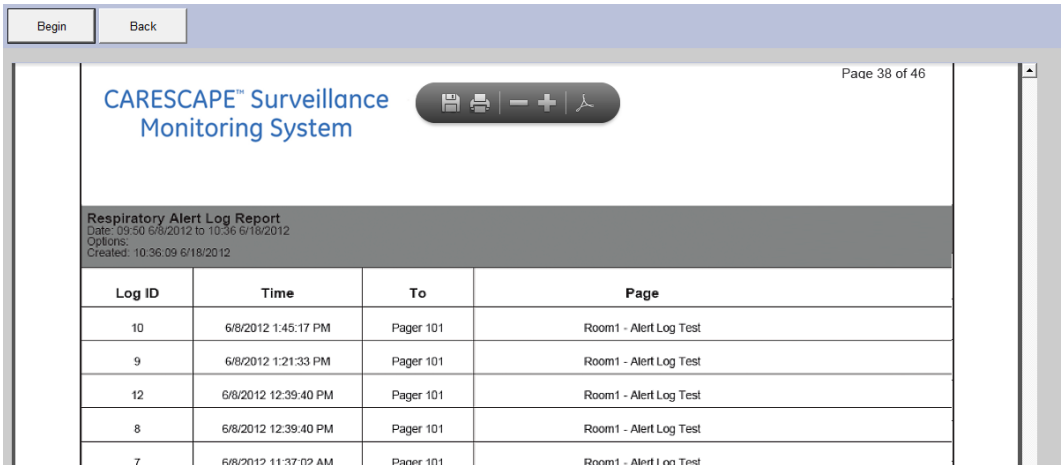
To run a Pager Messages Report, select ***Reports*** from the bottom Navigation bar, and select the ***Log of Pager Messages*** from the Report Selection screen.

Step 2



Select a Timeframe for the report. Hit ***Continue***.

Step 3



Pager Messages report data

All paging messages that fall within the selected time frame are displayed. Each page is displayed in its own row. Rows are split into 4 columns: ID, Time, To/Result, and Page Description. Page timestamps are accurate to the second of occurrence.

Log of Events report

This report utilizes every event recorded by the system (settings changes, alarms, snapshots) and uses categories and timestamps (system date and time precision of at least one second) to itemize each event.

Report options include:

- Successful and failed user login attempts
- Alarm Reset events
- Alarm Pause events, period of time and the initiated user
- Alarm OFF (suspend) events and initiated user for suspending communication lost with device alarms.
- Alarm Pause events, period of time and initiated user.
- Selected user interactions with the device.
- When a user enables or disables logging of user interaction types.

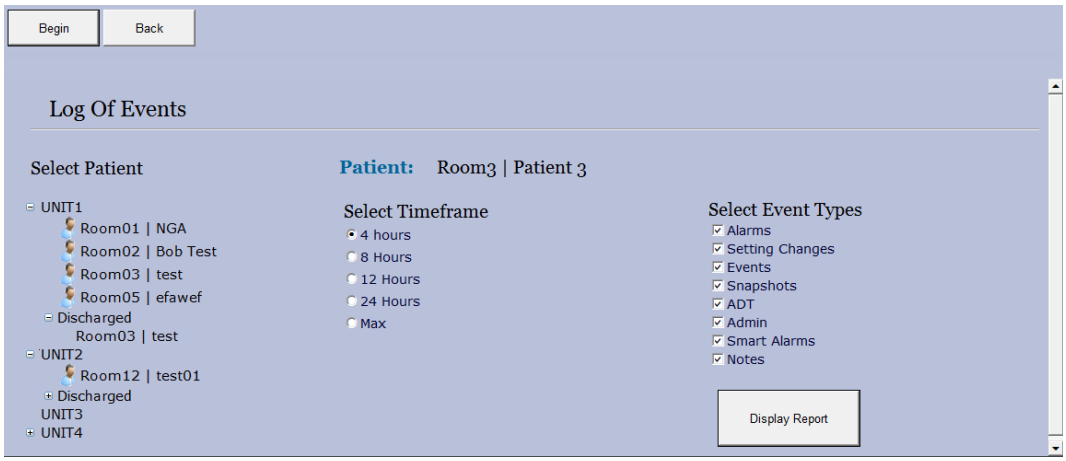
NOTE With the Snapshots option checked, the user is able to view scheduled and manual snapshots that have been taken within the selected time range. Snapshots taken automatically from device/Event View are also displayed.

NOTE Passwords used in a failed login attempt are NOT recorded.

Step 1

To run a Log of Events Report, select the ***Log of Events*** from the Report Selection screen.

Step 2

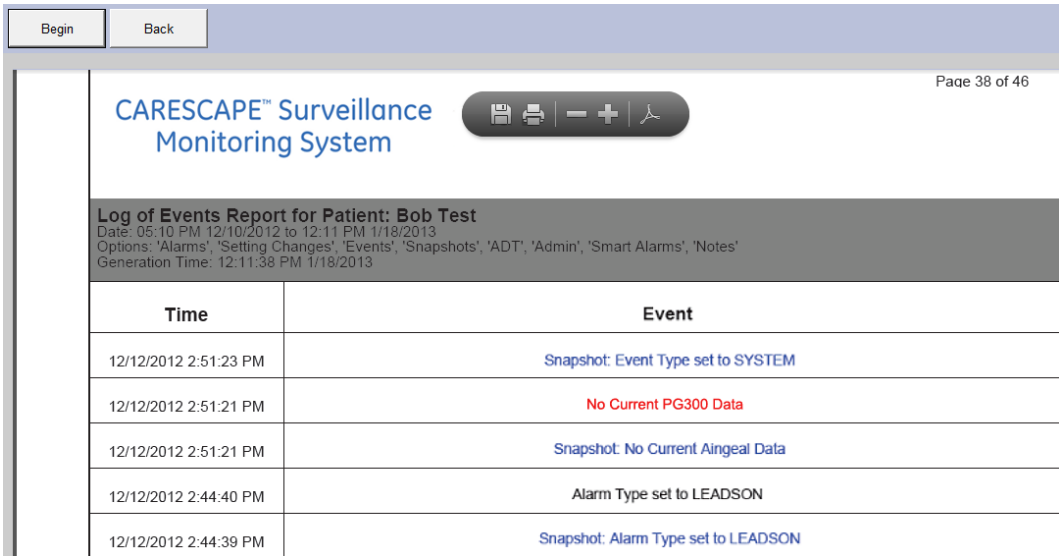


Select a patient from the list. Specify a report time frame using the predetermined options available (4, 8, 12, 24 hours or max time). Specify the event types to be displayed by enabling or disabling the following report option filters:

- ***Alarms***
- ***Setting Changes***
- ***Events***
- ***Snapshots***
- ***ADT***
- ***Admin***
- ***Smart Alarms***
- ***Notes***

Step 3

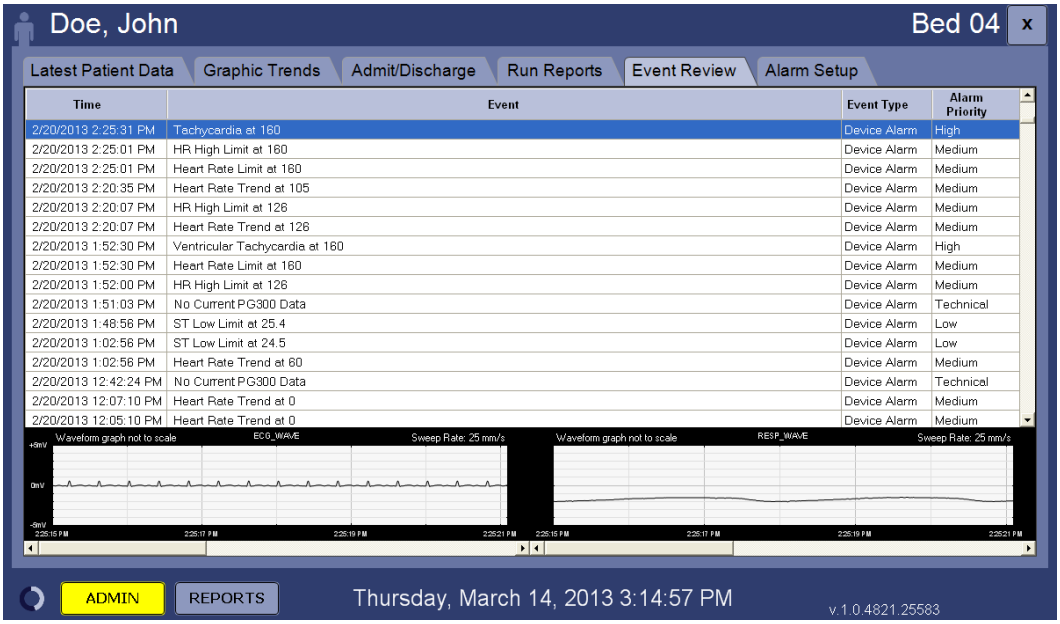
Hit the ***Display Report*** button, and a Log of Events report is generated. The options and filters, along with patient name, date, and time frame are included in the report. Users can print this report or download it to a USB drive.



Event Review Tab view

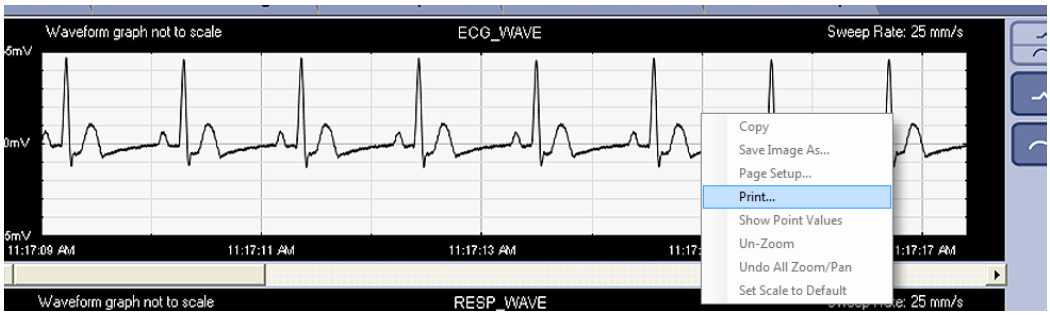
This most recent events listed first, and events are grouped by date. Each event is contained in a single row. Timestamps for events are accurate to the second of occurrence. Events that display an alarm appear in red text. Events that display a snapshot are displayed in blue text. All other events appear in black text.

Alternatively, clinicians may wish to generate a quick report using the ***Event Review*** Tab located in the Single Patient View. This report would look like this:



Printing ECG waveforms

Waveforms received by the system are printable by right-selecting the waveform graphic as shown in the screen below.



Stored patient data

In the event of the CARESCAPE Surveillance Monitoring System being powered down (gracefully) or due to total power loss (for example, a hard shutdown), patient data is retained on the hard drive.

Patient data, including settings and reports are recorded to the system database, which resides on the systems' hard drive. When power is restored to the system (one second or later), patient settings and report data stored on the system prior to the shutdown event, is available to the user.

8

Ending Monitoring

Turn PG300 device OFF

Turn OFF the PG300 device by holding down the ON/OFF button for 10 seconds. Three beeps will sound during the 10 seconds. Clean device and battery according to Appendix C.

Device status	Leads LED status	Connection LED status	Visual indication	Sound indication	User action required
PG300 device shutdown	OFF	OFF		Three beeps during shutdown	Hold button for 10 seconds

Device and PG300 electrode array removal

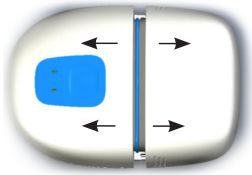
Disconnect the PG300 device from the PG300 electrode array while pressing down firmly on the PG300 electrode array beside each stud. Remove the PG300 electrode array slowly and gently taking care not to damage the patient's skin.

Dispose of the PG300 electrode array after use according to site guidelines. It is recommended that a trained healthcare professional clean the application site appropriately.

NOTE Some reddening of the skin is to be expected in the area of electrode array placement.

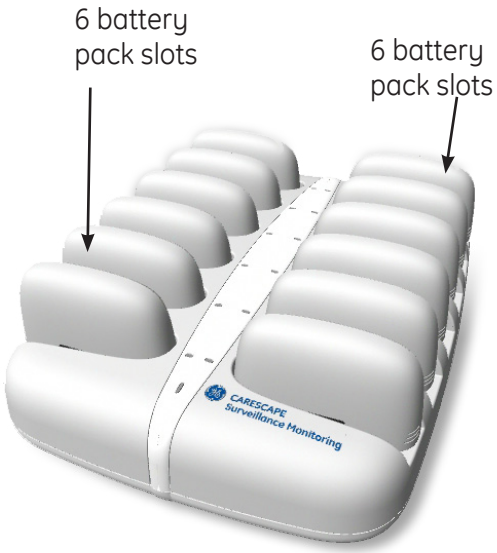
Removing the PG300 battery pack

To remove the battery from the PG300 device, hold the sides of the battery as shown below. Pull PG300 battery pack away from device.



Charging the PG300 battery pack

PG300 battery pack



12 bay PG300 battery charger

WARNING Place the battery charger in a suitable location, where it will be protected from damage, liquid ingress, moisture or extreme temperature.

Plug the power cord into the transformer. Plug the cable into the mains socket and connect the other end into the back of the PG300 battery charger. The oval green LED on the PG300 battery charger will illuminate to indicate that the charger is receiving power.

Place the PG300 battery pack into one of the 12 slots in the PG300 battery charger provided. The battery status LED on the PG300 battery charger will illuminate in orange to indicate that the battery is charging. Continue charging until the battery status LED on the PG300 battery charger illuminates green, to indicate that charging is complete (approximately four hours for full charging).

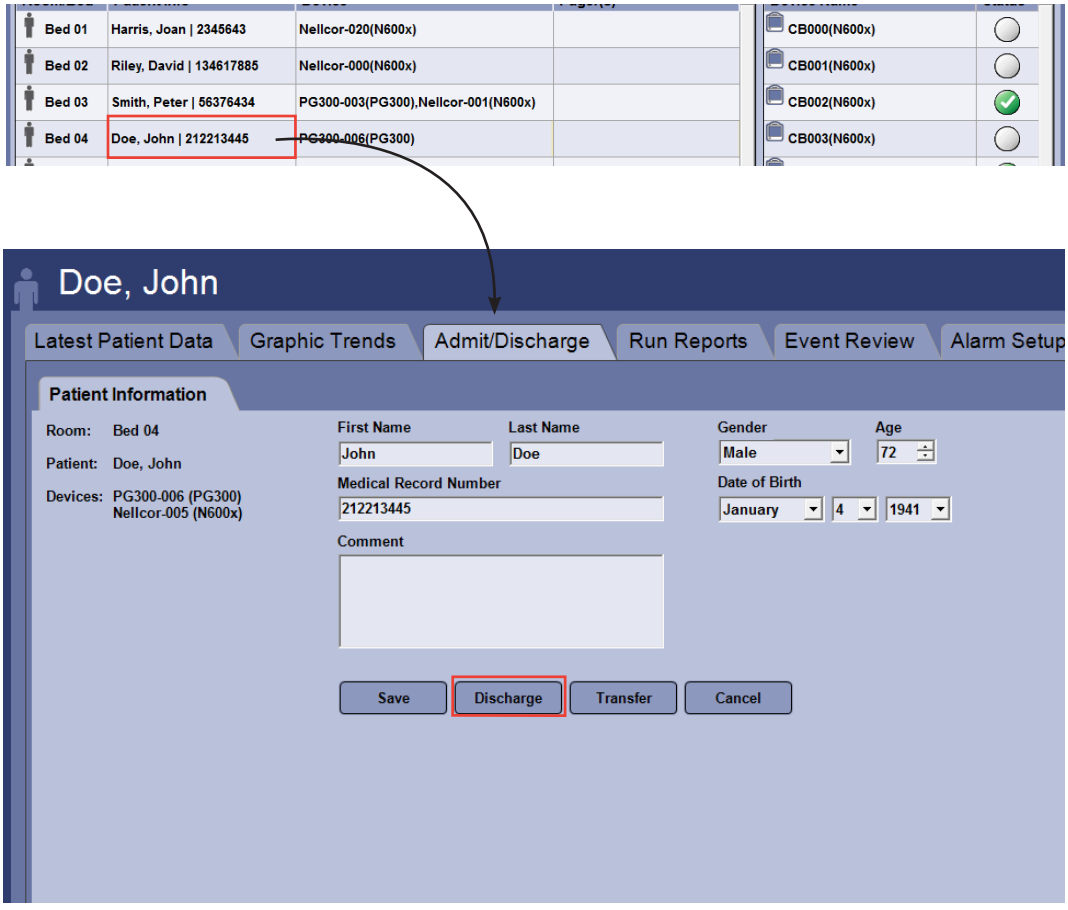
WARNING Do not use medical devices, parts, accessories, or options that are not for use with the CARESCAPE Surveillance Monitoring System as described in this manual. Only recommended computer and network components shall be used.

NOTE A maximum of twelve PG300 battery packs can be charged at any one time using the PG300 battery charger.

NOTE Orange/Green LED on the PG300 battery charger indicates charging status.

Patient discharge

From the Admin Summary view, select the Patient name to bring up the Patient Information screen. Select the ***Discharge*** button.



NOTE Discharging a patient completely disassociates all medical devices and pagers from the patient.

Once the Discharge button is selected, a Confirm dialog box will be displayed requiring the user to acknowledge the discharge, and continue. ***Select OK*** and the discharge is done immediately.

NOTE Once a patient is discharged, reports are available for the patient for a period up to 72 hours.

NOTE If a patient is accidently discharged, the patient will have to be readmitted to the system.

A

Abbreviations and symbols

Abbreviation	Description
ADT	Admit, Discharge, Transfer
ECG	Electrocardio Graph
EMR	Electronic Medical Record
FCC	Federal Communications Commission
LAN	Local Area Network
LED	Light Emitting Diode
OEM	Original Equipment Manufacturer
RF	Radio Frequency
SAR	Specific Absorption Rate
WEEE	Waste Electrical & Electronic Equipment
MRI	Magnetic Resonance Imaging
CT	Computer Tomography
ICD	Implantable Cardioverter-Defibrillator
x-ray	Energetic High-Frequency Electromagnetic Radiation
SPO2	Pulse Oximeter Oxygen Saturation
GE	General Electric
IT	Information Technology
WLAN	Wireless Local Access Network
SN	Serial Number
CE	European Conformity
Rx	Prescription Only
UL	Underwriters Laboratories Inc.
FCC	Federal Communications Commission
IPX	Ingress Protection rating
REF	Reference
C	Celsius
F	Fahrenheit
s	seconds
ETL SEMKO	Edison Testing Laboratory for Product safety and performance testing
IEC	International Electrotechnical Commission
EN	Euro Norme - designation for European standards

AC/DC	Alternating Current / Direct Current
n/a	Not applicable
s	Seconds
Ltd	Limited
UK	United Kingdom
US	United States
USA	United States of America
RF	Radio Frequency
W	Weight
kg	kilograms
SAR	Specific Absorption Rate
MHz	Mega hertz
GHz	Giga hertz
KHz	Kilo hertz
v	Volts
MRN	Medical Record Number
CB	Client Bridge
TAP	Telocator Alphanumeric Protocol
HL7	Health Level Seven
e.g.	Example
b/g	Wireless security protocols
ID	Identification
IP	Internet protocol
RESP	Respiration
BPM	Beats per minute
RR	Respiration Rate
min	minutes
%	Percent
mV	millivolts
max	Maximum
min	Minimum
HR	Heart Rate
<	Less than
>	Greater than
HRMax	Maximum Heart Rate
HRMin	Minimum Heart Rate
RRMax	Maximum Respiration Rate
RRMin	Minimum Respiration Rate
TempMax	Maximum Skin Temperature
STMin	Minimum Skin Temperature

B

Customized defaults

PG300 device alarm and alert defaults

The system will be shipped with the following default system alarm levels and parameter limit settings for adult patients. Cardiac events will always be set to a High priority level. This can be further customized during installation.

Alarm Type	Priority Level	Alarm Sum-mary	Alarm Reset	Alarm Pause (2, 5, 15, 60)	Audio Pause	Audio OFF
Bradycardia	High	Yes	No	No	Yes	Yes
V Tach	High	Yes	No	No	Yes	Yes
V Fib	High	Yes	No	No	Yes	Yes
Asystole	High	Yes	No	No	Yes	Yes
HR Limit	Medium	Yes	Yes	Yes	Yes	Yes
Resp Rate Limit	Medium	Yes	Yes	Yes	Yes	Yes
Skin Temp Limit	Medium	Yes	Yes	Yes	Yes	Yes
Low Battery (30 min)	Low	Yes	Yes	Yes	Yes	Yes
Low Battery (120 min)	Low	Yes	Yes	Yes	Yes	Yes
Critical Battery	High	Yes	No	No	Yes	Yes
Leads OFF	Low	Yes	No	No	Yes	Yes
No Current PG300 Data	Low	Yes	No	No	Yes	Yes

Parameter Defaults					
Description	Abbreviation	Low Limit Range	Default Low Limit	High Limit Range	Default High Limit
Heart Rate	HR	1-253	50	4-254	150
Respiration Rate	RR	4-39	5	5-40	30
Skin Temperature	ST	31°-41°	36.1° C	32°-42°	42.0° C

C

Maintenance

Biocompatibility

When used as intended, the parts of the product described in this operator manual, including accessories that come in contact with the patient during the intended use, fulfill the biocompatibility requirements of the applicable standards. To open a service call or obtain product support call 800.558.7044 (US & Canada). Outside the US, contact your local GE representative or distributor. For other product information please contact one of the offices listed on the back cover of the manual.

Supplies

To ensure patient safety, use only supplies manufactured or recommended by GE. Order accessories (leadwires, electrodes, recording papers, etc.) or service parts (manuals, circuit boards, cables, software, etc.) from GE service and product support. Have the following information available before calling:

- part number of the defective part, or
- model and serial number of the equipment,
- part number/name of the assembly where the item is used, and
- item name

NOTE See Chapter 1, Service Calls and Product Support.

Inspection

An effective maintenance schedule should be established for your monitoring equipment and reusable supplies. This should include inspection as well as general cleaning on a regular basis. The maintenance schedule must comply with the policies of your hospital's infection control Unit and/or biomedical department.

CAUTION Failure on the part of the responsible hospital or institution employing the use of this monitoring equipment to implement a satisfactory maintenance schedule may cause undue equipment failure and possible health hazards.

Check with your biomedical department to be sure preventive maintenance and calibration is complete. Qualified service personnel should repair or replace damaged equipment or reusable supplies. See the appropriate service manuals for detailed maintenance and repair information.

Use the following guidelines when inspecting the equipment:

- Inspect the equipment for obvious physical damage.
- Inspect all cords for fraying or other damage.
- Inspect all plugs and connectors for corrosion, contaminants, bent prongs or pins.
- Inspect all cable insulation for cracks, tears, or other damage.

To open a service call or obtain product support call 800.558.7044 (US & Canada). Outside the US, contact your local GE representative or distributor.

NOTE See the *CARESCAPE Surveillance Monitoring Service Manual* for more comprehensive checkout procedures.

Disposal

PACKAGING DISPOSAL – Dispose of all packaging material, observing all applicable waste control regulations and keeping out of children's reach.

WARNING DISPOSAL – At the end of its service life, the products described in this manual, as well as any accessories must be disposed of in compliance with all regulatory requirements pertinent to the disposal of each product. If you have any questions concerning disposal of a product, please open a service call or obtain product support by calling 800.558.7044 (US & Canada). Outside the US, contact your local GE representative or distributor.

Cleaning

All equipment should be cleaned on a regular basis. Comply with the policies of your hospital's infection control Unit and or biomed department. The decision to disinfect or sterilise must be made per your hospital's requirements with an awareness of the effect on the integrity of the PG300 and its accessories.

WARNING SHOCK HAZARD – Disconnect AC-powered devices from the power line before cleaning or disinfecting its surface them. Turn OFF the power to the battery-powered devices before cleaning or disinfecting them.

WARNING IMPROPER PG300 DEVICE APPLICATION – Applying a PG300 device that is not thoroughly dry to a patient can result in an electrically conductive path being established and a Leads OFF alarm not being provided if the PG300 device detaches from the PG300 electrode array.

WARNING The PG300 device, pager, PG300 battery pack or any other system component must be removed from service if they ever become submerged in liquid. Immersion in liquid may cause inaccurate performance or device failure.

CAUTION Do not spray, pour, or spill any liquids on any of the CARESCAPE Monitoring system components, its accessories, connectors, switches, or openings in the chassis, since this may damage the system.

CAUTION Never use conductive solutions that contain chlorides, wax, or wax compounds to clean devices.

CAUTION Never use solutions or products that contain the following:

- Any type of Ammonium Chloride such as, but not limited to:
  - Dimethyl Benzyl Ammonium Chloride
  - Quaternary Ammonium Chloride solution
- Abrasive cleaners or solvents of any kind
- Acetone
- Ketone
- Betadine
- Sodium salts

CAUTION DEVICE DAMAGE – Never autoclave or steam clean devices, cables, or leadwires.

Results of improper cleaning

- Appearance of waveform when the device is not connected to a patient causing false alarms instead of a Leads OFF alarm and may not provide a visual and or audible Leads OFF alarm.
- Brittle and breaking device case
- Overall system performance degradation
- Melting, dulling, or distorting the case
- Total medical device failure requiring replacement
- Unit malfunction
- Void warranty

Cleaning products to avoid

Cleaning products known to cause the types of problems listed above include, but are not limited to:

- Sani-Cloth Wipes (non-bleach)
- Ascepti Wipes
- HB Quat
- Clorox Wipes (they do not contain bleach)
- Over-the-counter detergents (e.g. Fantastic, Tilex, etc.)

Products that contain active ingredients and solutions similar to these products should also be avoided.

PG300 device cleaning/disinfecting

WARNING The PG300 device must not be cleaned without a PG300 battery pack correctly fitted.

CAUTION Do not spray, pour, or spill any liquids on any of the CARESCAPE Monitoring system components, its accessories, connectors, switches, or openings in the chassis, since this may damage the system.

NOTE Before commencing ensure that the PG300 device and PG300 battery pack are connected together correctly.

For surface-cleaning and disinfecting the PG300 device and PG300 battery pack, follow your hospital's procedures, or the following instructions:

- Surface-clean using a soft cloth dampened with either a commercial nonabrasive cleaner or a solution of 70% alcohol in water, and lightly wipe the surfaces of the device.
- Wipe the exterior of the device with a soft lint-free cloth, using the following solution as recommended in the APIC Guidelines for Selection and Use of Disinfectants (1996): Sodium hypochlorite (5.25% household bleach) minimum 1:500 dilution and maximum 1:10 dilution. Any sodium hypochlorite wipe product that meets the above guideline.
- Wipe off cleaning solution with a clean, lightly moistened cloth.
- Dry thoroughly with a dry lint-free cloth
- Do not use excessive drying techniques, such as oven, forced heat or sun drying

PG300 device storage

After cleaning/disinfecting store devices in a suitable area to prevent damage or contamination following your hospitals procedures.
The PG300 devices must be stored between the following temperatures:
1 year @ -20 to 20 °C (-4 to 68 °F)
3 months @ - 20 to 45 °C (-4 to 113 °F)
1 month @ -20 to 60 °C (-4 to 140 °F)

The devices must be protected from water and other liquid ingress at all times.

Surveillance Station maintenance

Cleaning safety precautions

WARNING SHOCK HAZARD – Disconnect AC-powered devices from the power line before cleaning or disinfecting its surface them. Turn OFF the power to the battery-powered devices before cleaning or disinfecting them.

WARNING The PG300 device, pager, battery pack or any other system component must be removed from service if they ever become submerged in liquid. Immersion in liquid may cause inaccurate performance or device failure.

CAUTION Do not spray, pour, or spill any liquids on any of the CARESCAPE Monitoring system components, its accessories, connectors, switches, or openings in the chassis, since this may damage the system.

CAUTION Never use conductive solutions that contain chlorides, wax, or wax compounds to clean devices.

CAUTION During cleaning of the CARESCAPE Surveillance Monitoring System, never use solutions or products that contain the following:

- Any type of Ammonium Chloride such as, but not limited to:
  - o Dimethyl Benzyl Ammonium Chloride
  - o Quaternary Ammonium Chloride solution
- Abrasive cleaners or solvents of any kind
- Acetone
- Ketone
- Betadine
- Sodium salts

CAUTION DEVICE DAMAGE – Never autoclave or steam clean devices, cables, or leadwires.

Permitted cleaning agents

The following are permitted cleaning agents:

- Water
- Mild soap (diluted)
- Clorox bleach (active ingredient: 5.25% sodium hypochlorite) mixed 10:1 with water
- Any sodium hypochlorite wipe product that meets these above guidelines
- Sagrotan (dilution 3:100, containing 75 mg tantaric acid per 100 mL solution).

Results of improper cleaning

Use of cleaning agents other than those listed above is considered improper cleaning and could lead to the following:

- Discoloration
- Metal part corrosion
- Reduced cable life
- Brittle wires/ cables
- Melting, dulling, or distorting device case
- Overall system performance degradation
- Device malfunction
- Total medical device failure requiring replacement
- Void warranty

The following cleaning agents have been demonstrated to cause one or more of the above effects:

- Formula 409
- Isopropyl alcohol
- Ethanol
- Virex 256
- Cavicide surface cleaner/ disinfectant
- Lysol Coverage spray disinfectant
- Kleenaseptic
- Sufanios
- Cidex Plus
- Cidex OPA
- Sporicidin
- Vesphene
- Lysol Basin Tub and Tile Cleaner
- Sani-Cloth HB

Cleaning external surfaces

Use the following procedure to clean the external surfaces of the processing unit and other devices.

1. Turn OFF the power to the device.
2. Disconnect the equipment from the power supply.
3. Remove all cables.
4. Dampen a clean, soft, lint-free cloth with one of the permitted cleaning agents.
5. Wring excess fluid from the cloth.
6. Wipe the exterior with a soft, lint-free cloth, lightly moistened with the permitted cleaning agent. Do not allow fluids to pool around connections. If this should happen, blot the area dry with a cotton swab or soft cloth.
7. Wipe off the cleaning agents with a cleaned, lightly moistened cloth.
8. Dry thoroughly with a dry, lint-free cloth and let air dry for at least 30 minutes. Drying times may vary based upon the environmental conditions.
9. Reconnect the device to the power supply.
10. Turn on the power to the device.

Cleaning displays and touchscreens

Use the following procedure to clean the displays, including touchscreen displays.

1. Turn OFF the power to the device.
2. Disconnect the equipment from the power supply.
3. Remove all cables.
4. Dampen a clean, soft, lint-free cloth with one of the household glass cleaner.
5. Wring excess fluid from the cloth.
6. Wipe the exterior with a soft, lint-free cloth, lightly moistened with household glass cleaner. Do not allow fluids to pool around connections. If this should happen, blot the area dry with a cotton swab or soft cloth.
7. Wipe off the household glass cleaner with a clean, lightly moistened cloth.
8. Dry thoroughly with a dry, lint free cloth and let air dry for at least 30 minutes. Drying times may vary based on the environmental conditions.
9. Reconnect the device to the power supply.
10. Turn on the power to the device.

Disinfecting external surfaces

The decision to disinfect or sterilize must be made per the hospital's requirements with an awareness of the effect on the integrity of the device. Do not use excessive drying techniques (e.g. oven, forced heat, sun drying).

1. Turn OFF the power to the device.
2. Disconnect the equipment from the power supply.
3. Remove all cables.
4. Wipe the exterior of the device with a soft lint-free cloth, using the following solution as recommended in the APIC Guidelines for Selection and Use of Disinfectants (1996): Sodium hypochlorite (5.25% household bleach) minimum 1:500 dilution and maximum 1:10 dilution. Any sodium hypochlorite wipe product that meets the above guideline.
5. Wring excess fluid from the cloth.
6. Allow disinfecting solution to remain on device for a minimum of one minute or per hospital guidelines. Do not let fluid pool around connections. If this happens, blot with a cotton swab or soft cloth.
7. Wipe off disinfecting solution with a clean, lightly moistened cloth.
8. Dry thoroughly with a dry lint-free cloth and let air dry for at least 30 minutes. Drying times may vary based upon the environmental conditions.
9. Reconnect the device to the power supply.
10. Turn on the power to the device.

D

Troubleshooting

PG300 device

Turning the PG300 device ON and OFF

If This Happens	Try This
Device will not turn ON	Replace PG300 battery pack with a fully charged battery pack
	Ensure that the ON/OFF button is pressed momentarily to facilitate device switch ON
	Ensure PG300 battery pack is correctly inserted
Device will not turn OFF	Remove the PG300 battery pack Press and hold the ON/OFF button for 10 seconds

PG300 device/PG300 electrode array issues

If This Happens	Try This
The PG300 device fails to connect to the WLAN network when turned on	If the device fails to configure, where the LED stays illuminated orange, the device needs to move into WLAN range to connect to the Surveillance Station. The device is only connected to the Surveillance Station when the LED is illuminated green.

None or poor quality ECG signal or respiration waveform	Ensure skin is cleaned thoroughly by suitable means and dried before PG300 electrode array placement. Ensure PG300 electrode array is applied to the patient as outlined in Section 3. It is important that the PG300 electrode arrays are applied to the correct location to ensure correct respiration measurement. Ensure there is good adhesion between the PG300 electrode array and skin. Replace the electrode array if adhesion is no longer effective. (The complete perimeter of the electrode array must adhere to the skin.) If PG300 electrode array adhesion appears to be acceptable and bio signals remain poor quality then replace the PG300 electrode array. Ensure the studs on both the PG300 electrode array and PG300 device are clean and free from any debris. Ensure the PG300 device is securely connected to all the magnetic studs on the PG300 electrode array.
Blue LED illuminated	Leads OFF indication. Re-connect PG300 device to PG300 electrode array as required.

Wireless communication issues

If This Happens	Try This
Out of range (Orange LED illuminated and buzzer sounding on device)	Out of Range Alarm – Go back into range. If device is in range, ensure there is adequate signal quality to facilitate a reliable connection.
Out of range indication on device, but within WLAN reception range.	Turn the device OFF and then on again to reconfigure. Clinician should check to verify data from other devices is still being received, and displayed at the Surveillance Station. Check to see if there are any specific system messages that require remedial action. Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support) to verify the wireless network is functioning properly. Replace Device if problem persists.

Wireless Client Bridge

Turning ON & OFF

If This Happens	Try This
CB XXX (No Data) message	1. Verify cable between the medical device and Client Bridge is NOT disconnected 2. Verify the medical device is NOT powered OFF 3. Verify the cable between Client Bridge and the medical device is NOT damaged

Surveillance Station issues

System issues

If This Happens	Try This
No Current PG300 Data Message	Verify battery has not been accidently removed or dislodged.
	Verify battery level and determine if battery needs to be replaced.
	Verify patient is not out of range of WLAN
	Verify the PG300 device is turned on
Low Battery Message	Replace battery
Authorized user is unable to login	Re-type username and password
Clinician is unable to assign a device to a patient	Verify device is registered on the system. Verify the device is not already assigned to a patient.
Clinician selects the incorrect device to assign to a patient	Remove the device and add the correct device.
Clinician is unable to assign or assigns the incorrect primary or secondary pager	Select on pagers from Administration summary view. Remove incorrect pagers and add correct pagers.
Barcode scanner does not properly function	Verify the barcode scanner is properly connected to the workstation USB port. Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support) to replace barcode scanner.
Clinician admits patient to incorrect room	Select the patient name and select the Transfer option to select a different room.
Alarm settings are misconfigured by the user	Restore Alarm defaults by logging into Alarm settings and selecting the Restore Defaults button on the main screen.

Audio is not working	Select F8 function key and test volume. If audio is lost completely, contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).
Clinician clears an alarm from the Alarm Bar inadvertently	Select a Patient Tile and view Event View. Review alarms carefully to ensure proper care is given.
Clinician transfers patient to the wrong room	Transfer patient to correct room.
Clinician transfers the wrong patient	Transfer patient back into correct room ,and try again.
Clinician discharges the incorrect patient	Add patient back in and assign devices as necessary.
Clinician accidently discharges patient	Add patient back in and assign devices as necessary.
Clinician cannot print a report	Verify the printer is registered with the system. Verify the printer is turned on and paper is loaded. Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).
Communication Lost to the Local Authority message	Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).
Communication Lost to the Central Authority message	Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).
Communication Lost to the Configuration Service message	Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).
Surveillance Station software is unresponsive (frozen)	Contact hospital Biomedical or IT department and/or GE Service and Product Support.

Network issues

If This Happens	Try This
Loss of Network Communication	Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).
Loss of Database Communication	Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).
Network interruption. Data and alarms will be delayed.	Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).

Pager issues

If This Happens	Try This
Pagers not being received.	Verify pager assignment in Administration section.
	Verify pager and paging system operation.
	Contact your Hospital Biomedical or IT department, or GE Healthcare Field Service (See Chapter 1, Service Calls and Product Support).

Hardware issues

If This Happens	Try This
Workstation display, hard drive, motherboard, speakers, keyboard, or mouse failure	Contact hospital Biomedical or IT department and/or GE Service and Product Support.
Client Bridge serial cable, wireless antenna or power supply failure	Contact hospital Biomedical or IT department and/or GE Service and Product Support.
Paging system transmitter failure/damage, or pager battery failure/damage	Contact hospital Biomedical or IT department and/or GE Service and Product Support.

E

Technical specifications

PG300 device

Models supported	Intelesens PG300 (PG300) Vital Signs Monitor

Power requirements

Type	Lithium-ion
Capacity	1 Ah
Battery operating cycle	24 hours operation (using 5 minute sample interval)
Recharge time (100%)	4 hours (max)
Battery life (typical)	500 cycles of 24 hours

Alarms and indicators

Green / orange LED	LED illuminated orange indicates communication pending. This may be due to the device waiting for the server to respond or due to the monitor being out of WLAN range. LED illuminated green indicates device connected to WLAN and transmitting.
Blue LED	LED illuminated indicates Leads OFF condition.
Device buzzer	Buzzer sounding indicates: 3 beeps – device successfully connected to WLAN 3 beeps – device switching OFF 1 beep every 2 minutes – device out of WLAN range

Data Transmission

Type	Wi-fi™ 802.11 b/g
Range	50 m

ECG

Sample rate	360 samples per second
Frequency range	0.5 to 40 Hz
Signal amplitude	+/- 5 mV
Resolution	12 bit

Respiration

Sample rate	120 Hz
Resolution	12 bit

Operating conditions

Operating temperature	5 to 40°C (41 to 104°F)
Relative humidity	5 to 95% (non-condensing)
Altitude	-382 to 3011 m (-1253 to 9878 ft)

Transport and storage conditions

Temperature	-40 to 70°C (-40 to 158°F)
Storage life	1 year @ -20° to 20°C (-4°F to 68°F)
	3 months @ -20°C to 45°C (-4°F to 113°F)
	1 month @ -20°C to 60°C (-4°F to 140°F)
Protect from liquids at all times	
Altitude	-382 to 3011 m (-1253 to 9878 ft)

Device physical properties

Length	9.6 cm (3.8 in)
Width	7.1 cm (2.8 in)
Depth	1.9 cm (0.7 in)
Weight	46 g (1.6 oz) (without battery) 84g (2.9 oz) (with battery fitted)

PG300 battery charger

Operating conditions

Temperature	0°C to 40°C (32°F to 104°F)
Relative humidity	5 to 95% (non-condensing)
Altitude	-16 m to 3048 m (-50 ft to 10000 ft)

Transport and storage conditions

Temperature	-20°C to 49°C (-4°F to 120°F)
Relative humidity	5 to 95% (non-condensing)
Storage life	2 years

Device physical properties

Dimensions	(H x W x D) 23.7 x 18.0 x 4.7 cm (9.3 x 7.1 x 1.8 in)
Weight	0.88 kg (1.9 lb)

Power requirements

Input Voltage	100 VAC to 240 VAC
Frequency	50 Hz to 60 Hz
Current	1.0A
Output Power	20 W

Controls and Indicators

AC power LED Green	Power connected
Battery location LED Orange	Battery charging
Battery location LED Green	Battery fully charged

Surveillance Station components

Workstation configuration

Component	Minimum Requirement
Workstation	Intel® Core™ i5 Processor 3.20GHz
Video	Integrated Video Card with 2 Display Ports
RAM	4GB DDR3, 1333MHz
Input Peripherals	Space saving keyboard, scrolling mouse
Hard Disk	250GB 7,200 RPM 3.5" SATA, 6.0Gb/s Hard Drive with 8MB Cache
DVD-ROM	8X Slimline DVD-ROM, Data Only
USB 2.0 Ports	5 Ports: Support for Keyboard, Mouse, Printer, Flash Drive and spare port
10/100 base Network RJ-45 Port	Support for network connection
Operating System	Microsoft Windows 7 Professional (32-bit)

Display Specifications

Video Output	1200 x 1920 @ 60Hz (Portrait orientation)

Power Specifications

Power Supply	Standard 240W PSU

Un-interruptible Power Supply (UPS)

Output Power Capacity	210 Watts / 350 VA
Output Connections	Minimum (3) Surge Protection and (3) Battery Backup
Output (Nominal) Voltage	120V AC

Environmental specifications

Operating Conditions

Operating Temperature	10 to 35° C (50 to 95° F)
Relative Humidity	20 to 80% (non-condensing)
Altitude	15.2 to 3048 m (–50 to 10,000 ft)

Transport and storage conditions

Temperature	40°C to 65°C (-40°F to 149°F)
Relative Humidity	10 to 90% (non-condensing)

Physical specifications

Height	29.0 cm (~11.4 inches)
Depth	31.2 cm (~12.3 inches)
Width	9.3 cm (~3.7 inches)
Weight	6.0 kg (13.2 lb)

FCC compliance

FCC Part 15 Class B

Display monitor specifications

Monitor Size	27” LCD
Monitor Orientation	Portrait View
Monitor Resolution	1200 x 1920
Monitor Port	VGA, DMI, or Display

Wired Client Bridge

Number of Ports	1
Speed	10/100 Mbps
Ethernet connection	8-pin RJ45
Serial Standards	RS-232/422/485 (selectable by DIP Switch)
Serial Connection	DB9 female
Data Bits	7, 8
Stop Bits	1, 2
Parity	None, Even, Odd, Space, Mark
Input Voltage	DE-311: 9 to 30 VDC
Baud Rate	9600, 19200bps

Wireless Client Bridge

Standard compliant	IEEE 802.11b and/or IEEE 802.11g
Authentication	WEP, Shared Key, WPA and WPA2
Encryption	WEP 64-bit/128 bit, AES, TKIP, TKIP+AES
CPU	150Mhz
Memory	Flash 8MB, SDRAM 16MB
Tx Power	11b 14dBm / 11g: 13dBm
Rx Sensitivity	-66dBm @ 54 Mbps, -80 dBm @ 11Mbps
Transmission Rate	Supports up to 54 Mbps with auto fallback
Transmission Distance	Supports up to 300 meters @ 12 Mbps in an open area
Topology	Infrastructure, Ad-Hoc
Ethernet Port	10/100M LAN (Bridge Configuration port)
Serial Port	RS-232
Baud Rate	9600, 19200bps
Data Bits	7, 8
Stop Bits	1, 2
Parity	None, Even, Odd, Space, Mark
Software Protocols	TCP, DHCP Client, Telnet

FCC Compliance

- ANSI/UL 60950-1
- CAN/CSA C22.2 No. 60950-1-03
- CENELEC EN 60950-1

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