

# AcuityLink® Clinician Notifier

---



---

## Directions for use

Software version 1.5x

© 2013 Welch Allyn. All rights are reserved. To support the intended use of the product described in this publication, the purchaser of the product is permitted to copy this publication, for internal distribution only, from the media provided by Welch Allyn. No other use, reproduction, or distribution of this publication, or any part of it, is permitted without written permission from Welch Allyn.

Welch Allyn assumes no responsibility for any injury to anyone, or for any illegal or improper use of the product, that may result from failure to use this product in accordance with the instructions, cautions, warnings, or statement of intended use published in this manual.

Welch Allyn, Acuity, AcuityLink, Propaq and MicroPaq are registered trademarks of Welch Allyn.

For patent information, please visit [www.welchallyn.com/patents](http://www.welchallyn.com/patents).

Adobe, Adobe Reader and Adobe Acrobat are registered trademarks of Adobe Systems Incorporated.

Software in this product is copyright Welch Allyn or its vendors. All rights are reserved. The software is protected by United States of America copyright laws and international treaty provisions applicable worldwide. Under such laws, the licensee is entitled to use the copy of the software incorporated with this instrument as intended in the operation of the product in which it is embedded. The software may not be copied, decompiled, reverse-engineered, disassembled or otherwise reduced to human-perceivable form. This is not a sale of the software or any copy of the software; all right, title and ownership of the software remain with Welch Allyn or its vendors.

For information about any Welch Allyn product, visit [www.welchallyn.com/about/company/locations.htm](http://www.welchallyn.com/about/company/locations.htm).

Manual 80018558 Ver A



Welch Allyn Protocol, Inc.  
8500 SW Creekside Place  
Beaverton, Oregon 97008-7101 USA

**EC REP**

Regulatory Affairs Representative  
Welch Allyn Limited  
Navan Business Park  
Dublin Road, Navan  
County Meath, Republic of Ireland

[www.welchallyn.com](http://www.welchallyn.com)



**WelchAllyn®**

# Contents

---

|  |           |
|--|-----------|
| <b>1 - Introduction</b> . . . . .  | <b>1</b>  |
| Intended use . . . . .   | 1         |
| Conventions . . . . .  | 2         |
| General warnings and cautions . . . . .  | 3         |
| Related documents . . . . .  | 5         |
| <b>2 - Overview</b> . . . . .  | <b>7</b>  |
| Welcome! . . . . .   | 7         |
| System components . . . . .  | 8         |
| Clinician Notifier workflow . . . . .  | 9         |
| Common page components . . . . .   | 10        |
| <b>3 - Get started</b> . . . . .   | <b>13</b> |
| Start the Clinician Notifier program . . . . .                                       | 13        |
| Log in to the Clinician Notifier program . . . . .                                   | 14        |
| Home page . . . . .  | 15        |
| Assign patients to yourself . . . . .  | 16        |
| Set up a patient's ID in the Acuity System . . . . .                                 | 18        |
| <b>4 - View patient information</b> . . . . .  | <b>21</b> |
| View the status of Acuity System patients in your unit . . . . .                     | 21        |
| View a list of recent alarms . . . . .   | 24        |
| View a list of active alarms sent to your device . . . . .                           | 26        |
| View a realtime waveform . . . . .   | 28        |
| View a patient's history of alarms . . . . .   | 30        |
| View details of an alarm . . . . .   | 32        |
| <b>5 - Respond to alarms and alerts</b> . . . . .                                    | <b>35</b> |
| Patient alarms delivered to mobile devices . . . . .                                 | 35        |
| Two possible alarm delivery modes . . . . .  | 36        |
| 11:00:00 . . . . .   | 37        |
| 11:00:30 . . . . .   | 37        |
| 11:01:00 . . . . .   | 37        |
| Alarm and alert notifications . . . . .  | 38        |
| Respond to patient alarms . . . . .  | 41        |
| Respond to equipment alerts . . . . .  | 44        |
| <b>6 - Log out of Clinician Notifier to change units or end your shift</b> . . . . . | <b>49</b> |
| <b>7 - Troubleshooting and maintenance</b> . . . . .                                 | <b>51</b> |
| Contact information . . . . .  | 51        |
| Troubleshooting . . . . .  | 51        |

Maintenance ..... 56

**Index ..... 59**

## 1

# Introduction

---

## Intended use

The AcuityLink<sup>®</sup> option is Welch Allyn's mobile alarm management solution. It consists of Clinician Notifier software for non-proprietary mobile devices and administrative software for the Welch Allyn Connectivity Server (WACS).

Mobile devices running the Clinician Notifier software deliver patient alarm information and realtime waveforms gathered from patient monitors connected to the Acuity<sup>®</sup> Central Monitoring System. The devices are not intended for use as primary alarm notification devices. Devices running Clinician Notifier software are not directly connected to patients.

The AcuityLink option is designed to extend the patient monitoring functions of the Acuity Central Monitoring System. The software enables administrators to track the status of clinician-patient assignments, and it enables clinicians to track, respond to and view Acuity System patient alarms, view historical alarm details and waveforms, and view realtime patient waveforms. The mobile devices can be used for barcode scanning to enter patient ID and room number.

The AcuityLink option is to be used by authorized health care professionals using standard institutional procedures and good clinical practice guidelines for patient monitoring. Staff training in the operation of the AcuityLink option is essential for optimal use. Users should be skilled at the level of a technician, nurse, physician, health care provider or medical specialist, with the knowledge and experience to acquire and interpret patients' vital signs data.

Individuals using the AcuityLink option should be familiar with its operation as described in this manual, and they should understand all warnings and cautions in the manual.

# Conventions

## Symbols

On the product



The CE Mark and Notified Body Registration Number signify that the product meets all essential requirements of European Medical Device Directive 93/42/EEC.



On the product, means "Consult the accompanying documentation."

In this document



**WARNING** Indicates conditions or practices that could lead to illness, injury, or death.



**Caution** Indicates conditions or practices that could damage the equipment or other property.

## Electronic navigation within this document

If you are reading this document on a computer screen, you can click blue text and art links to jump to another topic, and you can return to the previous page with one click.

Blue links

See "[Clinician Notifier workflow](#)" on page 9.

Click blue text to jump to the listed cross reference.



Click pages with blue borders to jump to a full description of the page.

"Return to the previous view" button



Click this button to jump to the page that you were previously viewing. This button is in the Adobe® Reader® or Adobe Acrobat® border.

# General warnings and cautions

## Warnings

Related to system components and configuration



**WARNING** Use only accessories approved by Welch Allyn. Visit [www.welchallyn.com](http://www.welchallyn.com). The use of any other accessories can result in inaccurate patient data, can damage the equipment, and can void your product warranty.

**WARNING** Always use accessories according to the standards of your facility and according to the manufacturer's directions.

**WARNING** Preserve Clinician Notifier program files and maintain mobile device settings that were configured during installation of AcuityLink Clinician Notifier software. Modifying, deleting or replacing any Clinician Notifier files or changing any of the following device settings can result in sub-optimal Clinician Notifier performance, including inhibition of patient alarm delivery: alarm clock, backlight, external power, power off, screen alignment and orientation, time settings, volume, wake-up and wireless network connection.

Related to patient alarm notification



**WARNING** If your system administrator has used the server to set *only auditory* alarming for all mobile devices in your unit, the mobile devices will not vibrate to indicate Clinician Notifier patient alarms, even if a user sets a mobile device to vibrate.

**WARNING** Depending upon the alarm delivery holdoff configured at your facility, mobile devices running the Clinician Notifier program might not indicate certain short-lived events, such as couplets.

**WARNING** Connecting mobile devices to the Internet, or running too many programs in the foreground or background while the Clinician Notifier program is running, can greatly reduce the battery life and memory of the devices, thereby compromising alarm delivery.

**WARNING** Non-Clinician Notifier audio or vibratory notification, barcoding, passwords or popup windows can interfere with effective Clinician Notifier program performance, including alarm notification.

If you notice similar interference with the Clinician Notifier program when you accidentally tap certain mobile device buttons, contact a biomedical engineer regarding re-programming the buttons or locking the mobile device keypad.

**WARNING** *Always* recharge a mobile device when it is not in use and at first notification of low batteries. A device with low batteries might not indicate or appropriately clear all of a patient's alarms. Allowing batteries to fully discharge can result in depletion of the backup battery and loss of Clinician Notifier configurations.

## Related to close physical surveillance and specific patient populations



**WARNING** Do not rely solely on mobile devices running the Clinician Notifier program to indicate patient alarms and patient monitor equipment alerts. Always continue to monitor patients at patient monitors and the Acuity Central Station, and respond to patient monitor equipment alerts. In these examples, mobile devices do not indicate patient alarms:

- A clinician is not assigned to the mobile device.
- The mobile device is turned off or the battery is depleted.
- The assigned clinician has exited the Clinician Notifier program.
- The assigned clinician is logged out of the Clinician Notifier program.
- The mobile device is not communicating with the Welch Allyn Connectivity Server.
- The Welch Allyn Connectivity Server is not communicating with the Acuity Central Station.
- The patient monitor is not communicating with the Acuity System.
- The patient is disconnected from the patient monitor.
- Your facility's AcuityLink Clinician Notifier option includes only the barcoding feature.

**WARNING** Ensure that Acuity System patients are kept under close surveillance, especially patients prone to arrhythmia events. Use AcuityLink software only in conjunction with close surveillance by trained clinicians.

## Caution



**Caution** U. S. Federal law restricts this device to sale by or on the order of a physician.

## Related documents

---

### **Welch Allyn Connectivity Server (WACS):**

Welch Allyn Connectivity Server (WACS) CD-ROM (English):

*Welch Allyn Connectivity Server Directions for Use*

*Welch Allyn Connectivity Server Programmer's Guide*

*AcuityLink Clinician Notifier Directions for Use*

### **AcuityLink Clinician Notifier:**

AcuityLink Clinician Notifier software CD (English):

*AcuityLink Clinician Notifier Software Installation Instructions*

---

### **Acuity and Mobile Acuity LT Central Monitoring Systems:**

#### **Directions for Use**

Acuity and Mobile Acuity LT Central Monitoring Systems Directions for Use and In-Service Guide CD-ROM (multilanguage):

*Acuity and Mobile Acuity LT Central Monitoring Systems Directions for Use*

*Acuity Central Monitoring System In-Service Guide* (English)

#### **Mobile Acuity LT Installation Guide (printed)**

*Mobile Acuity LT System Installation Guide* (En, Fr, Ger, Sp, It, Pol)

#### **Quick Card**

*Acuity System Icons* (English, printed)

---

### **Welch Allyn patient monitors:**

*Micropaq Monitor Directions for Use* CD-ROM (multilanguage)

*Propaq LT Monitor Directions for Use* CD-ROM (multilanguage)

*Propaq CS Monitor Directions for Use* CD-ROM (multilanguage)

*Propaq Encore Monitor Directions for Use* CD-ROM (multilanguage)

*Welch Allyn 1500 Patient Monitor Directions for Use* CD-ROM (multilanguage)

---



## 2

## Overview

---

Welcome!

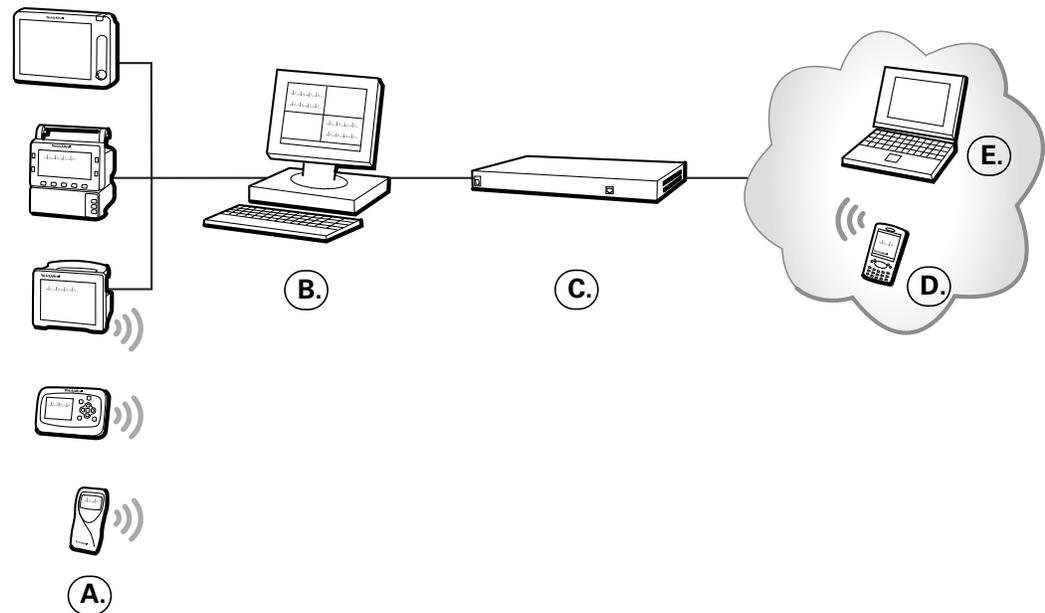


We hope that you enjoy the expanded flexibility for patient monitoring that the AcuityLink™ Clinician Notifier program provides.

Using the Clinician Notifier program, you can do these things for all Acuity Central Monitoring System patients in your unit, right at your mobile device.

- At a glance, view the status of all patients in your unit
- Receive alarms for patients whom you have specified, and respond to the alarms, system-wide
- View alarm details and waveforms
- View realtime waveforms
- View alarm histories for up to 96 hours (depending upon configuration), even after patient disconnection from the Acuity System
- Electronically scan or manually tap in ID and room numbers to confirm patients in the Acuity System (an optional feature).

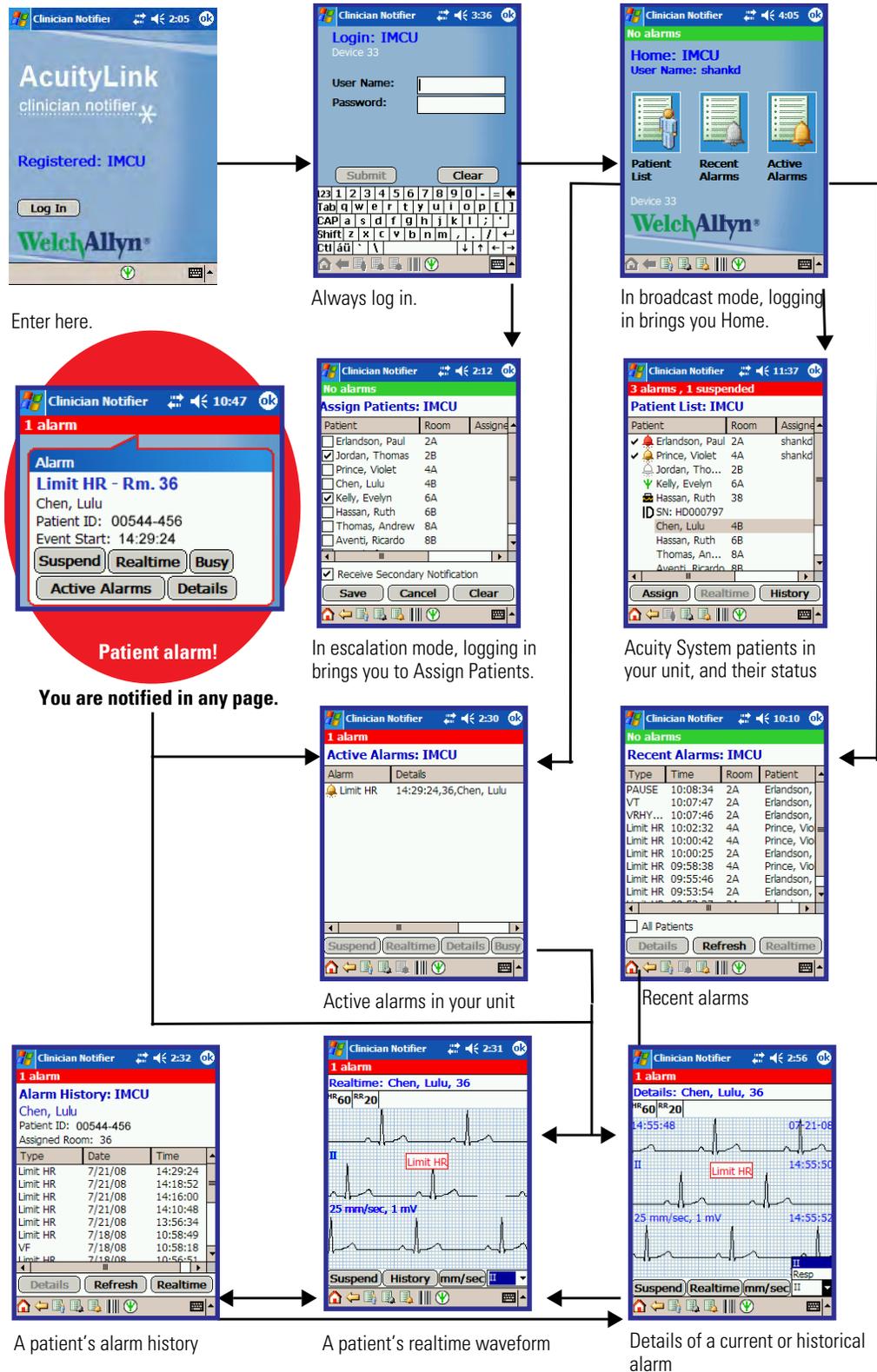
## System components



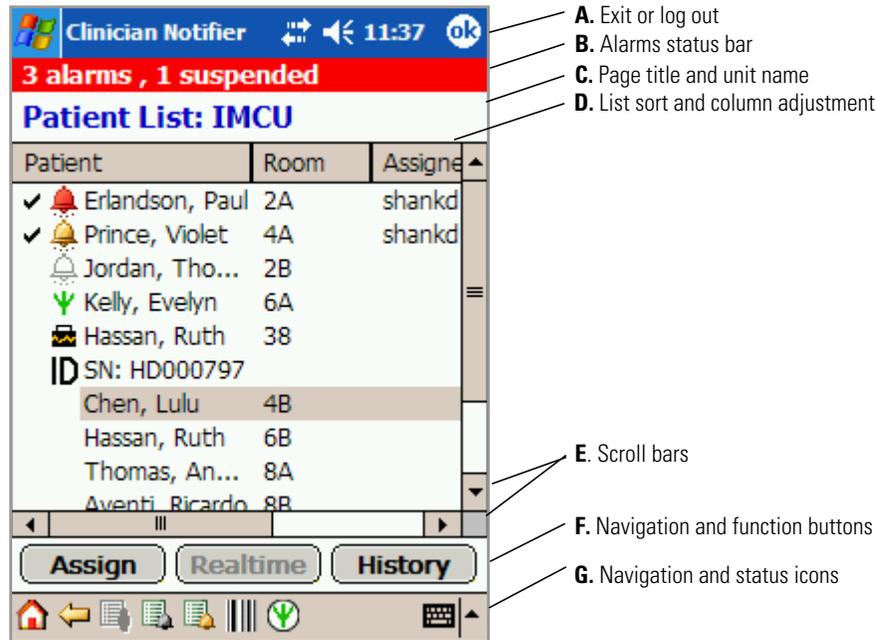
- |   |   |
|---|---|
| A. Welch Allyn patient monitors                                     | Wireless and hardwired monitors measure a variety of vital signs. Monitors include the Welch Allyn 1500 Patient Monitor, Propaq Encore, CS, LT, and the Micropaq.   |
| B. Acuity Central Station   | Monitors all connected patients, provides arrhythmia analysis (an optional feature), stores patient information and displays alarms and alerts.   |
| C. Welch Allyn Connectivity Server (WACS)                           | Supports bi-directional communication between Acuity Central Stations and a variety of external systems and software modules. The server has one or more optional software modules installed on it, such as the AcuityLink option.  |
| D. Network and mobile device running the Clinician Notifier program | Network carries information to the Acuity System and carries patient data to the hospital information system (HIS/CIS).<br>Mobile devices running AcuityLink Clinician Notifier software enable you to receive patient alarms, suspend them and view alarm details and history. You can also view realtime waveforms. |
| E. Laptop computer for hospital administrators                      | Enables hospital administrators to oversee the AcuityLink system.   |

# Clinician Notifier workflow

When you tap Clinician Notifier navigation icons and buttons, you follow these pathways. To read more information about a page, click on any page in this illustration.



## Common page components



| Function                           | Description   |
|------------------------------------|---|
| A. Exit or log out                 | Tap  to log out, and tap it again to exit the Clinician Notifier program.  |
| B. Alarms status bar               | <p>Red: Your mobile device has received notification of one of these events:</p> <ul style="list-style-type: none"> <li>One or more active Acuity System patient alarms. If any of the alarms have been suspended, the number suspended is also listed.</li> <li>Disconnection from the WACS network or the Acuity System.</li> </ul> <p>Orange: All active patient alarms on your device are suspended.</p> <p>Green: Your device has no notification of active Acuity System patient alarms.</p> <p>Tap a red or orange status bar to navigate to the Active Alarms page.</p> |
| C. Page title and unit name        | Each page has a blue title.   |
| D. List sort and column adjustment | <p>Tap some column headings to sort the list by the column title. Your assigned patients always sort to the top.</p> <p>Click and drag a column border to adjust the width of the column. Some pages have a fourth column that is out of view.</p>  |
| E. Scroll bars                     | Click the vertical scroll arrow to view the entire list. Click the horizontal scroll arrow to view a fourth column.   |
| F. Navigation and function buttons | Buttons serve different purposes. Some take you to another page, and others perform a function within the page.   |

| Function                       | Description   |
|--------------------------------|---|
| G. Navigation and status icons | <p><b>Navigation icons:</b> Tap these to move from page to page.</p> <ul style="list-style-type: none"> <li> Home</li> <li> Back</li> <li> Patient List</li> <li> Recent Alarms</li> <li> Active Alarms</li> <li> Set Up Patient ID</li> </ul> <p><b>Status icons:</b> The far right icon indicates connection status.</p> <ul style="list-style-type: none"> <li> Mobile device is communicating with the WACS network.</li> <li> Mobile device is not communicating with the WACS network.</li> </ul> |

## OK button



The location of the OK button, which is used to log out of Clinician Notifier, might be in a different area based on the model or configuration of your PDA. The graphic shown above indicates the two locations.



# 3

## Get started

### Start the Clinician Notifier program

Use a fully charged device.

Mobile devices can run a variety of programs. If you do not see a Clinician Notifier page on the device, you must start the program.

#### To start the Clinician Notifier program

1. In the upper left corner of the device screen, tap .

The Windows Start menu appears.

2. Tap  **Clinician Notifier**.

The AcuityLink Clinician Notifier splash page appears.



**Note** If  is not visible on your mobile device, perform a soft reset of the device. For soft reset instructions, see [“General performance”](#) on page 51.

## Log in to the Clinician Notifier program

Always log in to the Clinician Notifier program each time you accept a mobile device. This ensures that alarms can be delivered to the device, and that the device and patients are assigned to *you*.

The system allows you to be logged in to the Clinician Notifier program on only one mobile device at one time. If there is a conflict, the system notifies you when you attempt to log in.



AcuityLink Clinician Notifier page



Login page

### To verify that the prior clinician logged out

1. If you receive a mobile device displaying a Clinician Notifier page that differs from one of the above pages, you must log out of the program:
  - a. Tap .
 

A confirmation popup window appears.
  - b. Tap **Yes**.
 

You are logged out of the Clinician Notifier program.

### To log in to the Clinician Notifier program

1. Verify that the AcuityLink Clinician Notifier page lists your current unit.
 

If the device is not registered to your current unit, contact your system administrator. Patients listed on a device correspond with the unit registration of the device.
2. Tap **Log In**.
 

The Login page appears.
3. Tap in the user name given to you by your system administrator.
4. If you see a Password field, tap in your password.
5. Tap **Submit**.
 

You are sent to the Home page or the Assign Patients page, depending upon your unit configuration.

You are now logged in, and you can receive patient alarms.

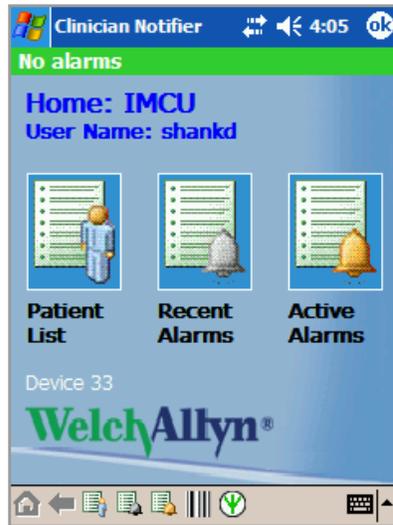
# Home page

The Home page is a launching point to several commonly used pages.

## To view the Home page

1. From the bottom of any page, tap .

The Home page appears.



2. Verify that the user name on the page is your name.

If another name is shown, you must log out:

- a. Tap , and then tap **Yes**.

You are logged out of the Clinician Notifier program.

- b. Log in using your user name and password.

## To navigate to another page

1. Click one of these buttons:

- To view the list of Acuity System patients in your unit, tap .

The Patient List appears.

- To view all recent alarms sent to your mobile device or unit, tap .

The Recent Alarms page appears.

- To view all active alarms sent to your mobile device, tap .

The Active Alarms page appears.

## Assign patients to yourself

The Assign Patients page is available if your unit is configured in escalation mode.

The page lists patients who are monitored by the Acuity System in your unit. The list includes only patients with ID numbers confirmed in the Acuity System.

In the Assign Patients page, you can do these things:

- Assign patients to yourself to receive first notification of their alarms (primary notification).
- For other patients, indicate that you will receive alarms that other clinicians have not suspended (receive secondary notification).

For details about primary and secondary alarm notification, see [“Escalation mode”](#) on page 38.

Patients remain assigned to you unless you log out of the Clinician Notifier program for longer than two hours.

If one of your assigned patients is disconnected from Acuity System monitoring, the patient remains in your Assign Patients list.

**Note** If the Assign Patients page is not available, your unit is configured in broadcast mode, and you cannot assign patients. You receive *all* alarms delivered to mobile devices in your unit.

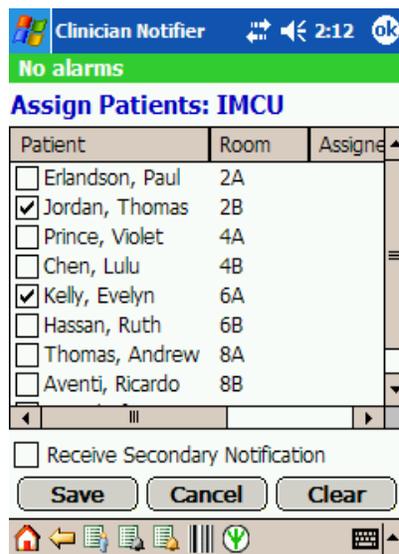
### To navigate to the Assign Patients page

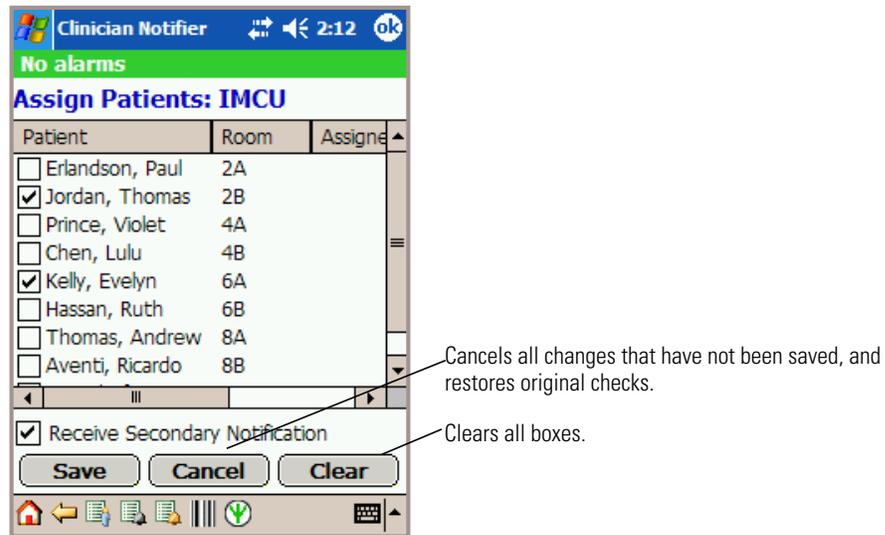
1. From the bottom of any page, tap .

The Patient List page appears.

2. Tap **Assign**.

The Assign Patients page appears.





### To Assign patients to yourself

1. Verify that the unit listed at the top of the page is the unit in which you are currently working.  
 If the device is assigned to another unit, contact your system administrator.
2. Assign patients:
  - a. Check boxes next to patients for whom you want to receive primary (first) alarm notification.
  - b. To receive alarms for all other patients with unsuspended alarms, check the box next to **Receive Secondary Notification**.  
 If you do not check this box, you still receive final broadcast alarms. Final broadcast alarms are escalated to all clinicians if secondary notification alarms are not suspended.
3. Tap **Save**.  
 Your selections are registered, and your patients sort to the top of the list.
4. Tap **Done**.  
 You navigate to the previous page or the Home page, depending upon how you arrived at the Assign Patients page.

## Set up a patient's ID in the Acuity System

If the mobile devices in your unit have barcoding capability and your Welch Allyn Connectivity Server includes the Barcode Scanner option, you can use the Set Up Patient ID page to enter patient information into the Acuity Central Monitoring System.

You can tap in the information or scan information using the barcode scanner on your mobile device.

If you enter a room number in addition to the required ID numbers, there is no need to confirm the patient information at the Acuity Central Station.

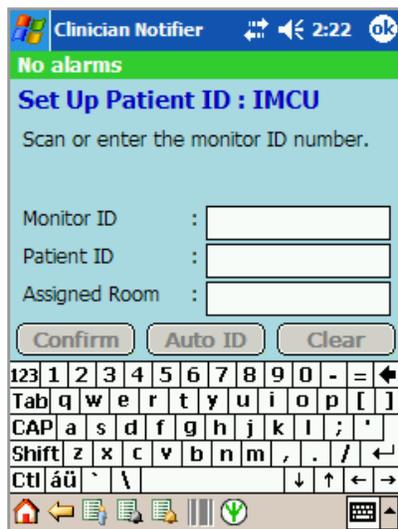
**Note** Before you use the barcode scanner, close any other programs on the mobile device that utilize the scanner. If another such program runs in the background or foreground, the scanner does not perform as expected for the Clinician Notifier program.

### To navigate to the Set Up Patient ID page

1. From the bottom of any page, tap .

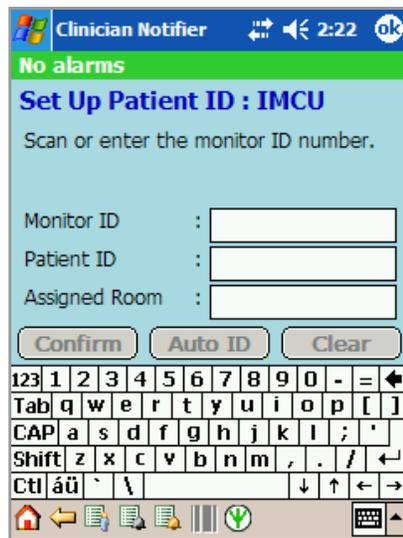
The Set Up Patient ID page appears.

If  is grayed out, your Welch Allyn Connectivity Server does not include the Barcode Scanner option.



**Note** If you navigate away from this page before you tap Confirm, for example, if you respond to an alarm popup window, your entries are not entered in the Acuity System.

**Note** In a multi-unit environment, barcode patient ID can be performed by any Clinician Notifier device on the network, as long as one Clinician Notifier device is registered to each unit.



### To enter patient information and confirm patient identity at the patient monitor

For scanning instructions, refer to the mobile device manufacturer's Directions for Use.

1. If there is information for another patient in the fields, tap **Clear**.  
The fields are cleared.
2. Enter patient information.
  - a. Scan or tap in the monitor ID.  
If necessary, tap **Tab** to advance to the next input area.
  - b. Scan or tap in the patient ID.  
If no patient ID number is available, tap **Auto ID**. Clinician Notifier assigns a unique identification number that can be amended later.  
If necessary, tap **Tab** to advance to the next input area.
  - c. (Optional) Scan or tap in the patient's room number.
3. Tap **Confirm**.  
The information is sent to the Acuity Central Station, but it is not yet confirmed.
4. Confirm the identity of the patient.
  - If the displayed patient name or ID is correct, press **YES**.  
The patient is listed in The Patient List page and Assign Patients page.
  - If the displayed patient name or ID is incorrect, begin again at Step 1.
5. (Optional) Begin again at Step 1 to enter and confirm additional patient IDs.

**Note** When confirming a patient not on your unit, the patient's ID will not be visible on the Clinician Notifier device after confirmation, but will be visible on the patient's monitor and the central station.

**To navigate to another page**

1. Tap an icon along the bottom of the page.

# 4 View patient information

## View the status of Acuity System patients in your unit

The Patient List page lists these Acuity System patients in your unit:

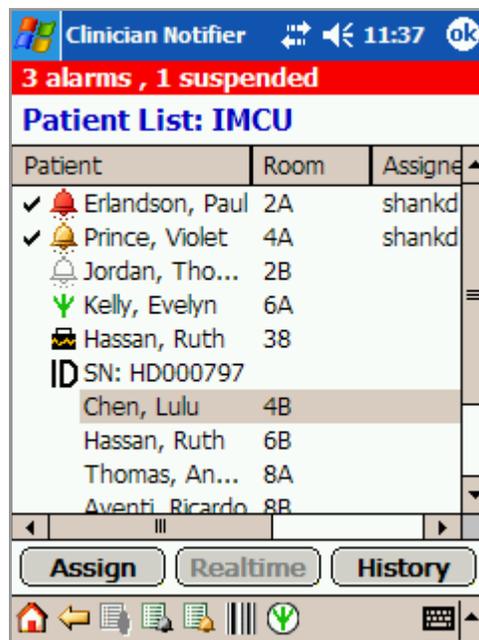
- Currently monitored patients
- Patients disconnected from the Acuity System for up to 24 hours.

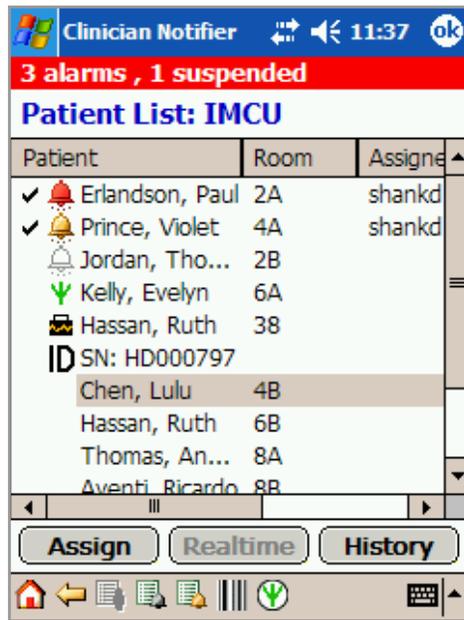
Patients discharged from the Acuity System are not listed.

### To navigate to the Patient List page

1. From the bottom of any page, tap  .

The Patient List page appears.





### To view the status of Acuity System patients in your unit

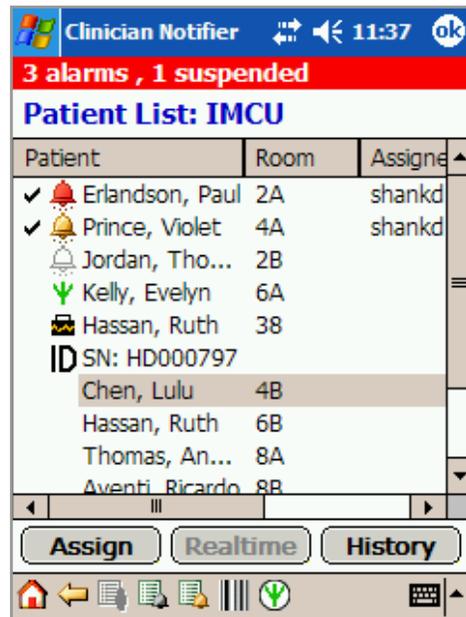
1. View the status icon next to each patient.

#### Status icon key

---

|             |  |
|-------------|--|
| ✓           | Patient is assigned to you in the Assign Patients page (escalation mode, only).  |
|             | Patient is having a lethal arrhythmia event.   |
|             | Patient is in alarm (other than a lethal arrhythmia event).  |
|             | Patient's alarm notification is suspended for 90 seconds.  |
|             | Patient is monitored by a wireless patient monitor.  |
|             | Patient is monitored by a hardwired patient monitor.   |
| ID          | Monitored patient is not identified by name or patient ID number.  |
| Blank space | Patient is not actively monitored by the Acuity System.  |
|             | The patient's monitor has been disconnected from the Acuity System and the patient data is still retained by the system. |

---



### To navigate to another page

1. Click one of these buttons:

- To view a patient's alarm history: Tap the patient name, and then tap **History**.  
The Alarm History page appears.
- To view a patient's realtime waveform: Tap the patient name, and then tap **Realtime**.  
The Realtime page appears.
- To assign patients to yourself: Tap **Assign**.  
The Assign Patients page appears

If Assign is grayed out, your unit is configured in broadcast mode and you cannot assign patients. You receive *all* alarms delivered to mobile devices in your unit.

## View a list of recent alarms

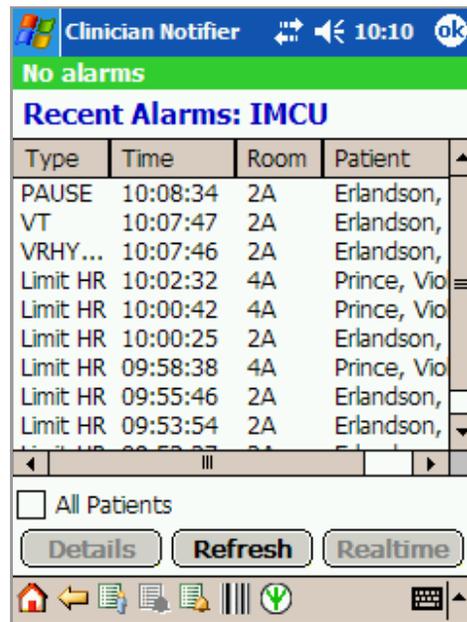
The Recent Alarms page displays recent active and inactive alarms. You can display alarms sent to your device or alarms sent to all mobile devices in your unit.

Your system administrator determines the number of events retained in the page and the length of time for which they are retained.

### To view a list of recent alarms

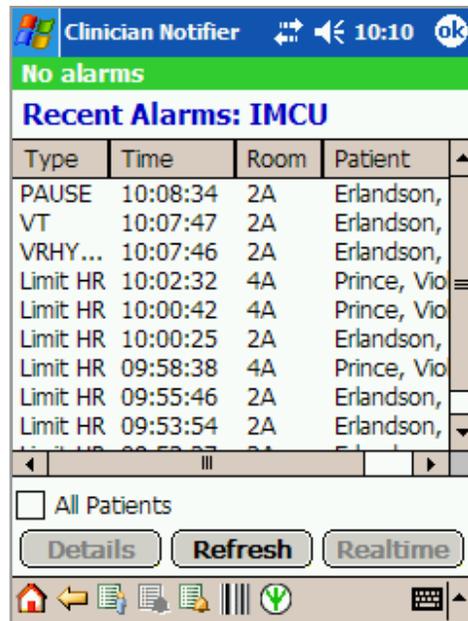
1. From the Home page or from the bottom of any page, tap .

The Recent Alarms page appears.



2. Determine which alarms to display.
  - To display only alarms sent to your mobile device, clear the box next to All Patients.
  - To display alarms sent to mobile devices in your entire unit, check the box next to **All Patients**.
3. Tap **Refresh** often.

The page is refreshed with the latest information.



### To navigate to another page for more information

1. Tap the alarm listing in which you are interested.
  2. Tap one of these buttons.
    - Tap **Details** to view details of an alarm.  
The Details page appears.
    - Tap **Realtime** to view a patient's realtime waveform.  
The Realtime page appears.  
If Realtime is grayed out, the patient is not connected to the Acuity System.
- In both of these pages, if the patient is in alarm, you can suspend the alarm.

## View a list of active alarms sent to your device

The Active Alarms page displays all active patient alarms on your mobile device, including suspended alarms and alarms for which you have tapped Busy.

Only a patient's highest priority active alarm is listed.

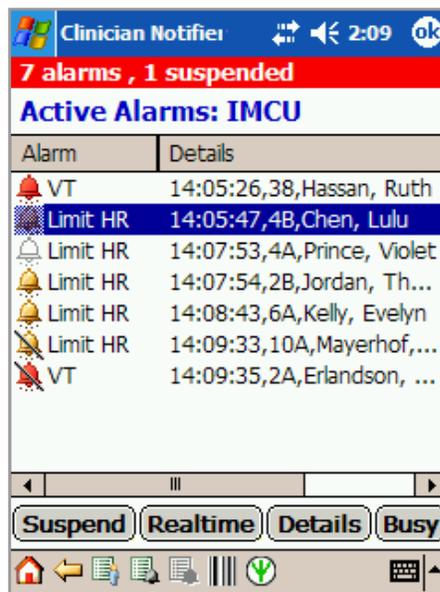
### To navigate to the Active Alarms page

1. Take one of these steps:



- Tap a red or orange alarms status bar.
- From the bottom of any page, tap .

The Active Alarms page appears.

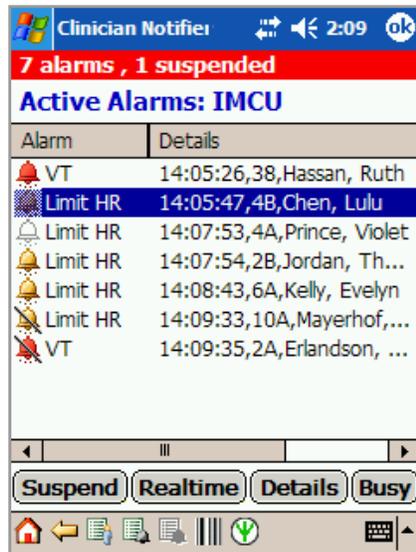


### To view a list of active alarms sent to your device

1. View the status icon and assigned room number next to each alarm.

#### Status icon key

|   |   |
|---|---|
|    | Lethal arrhythmia event   |
|    | Patient alarm (other than a lethal arrhythmia).                   |
|   | You have responded to this alarm by indicating that you are busy. |
|    | Alarm is suspended for 90 seconds.                                |



### To respond to an alarm

1. Tap the alarm listing.
2. Tap one of these buttons:
  - Tap **Suspend** to suspend the alarm.

The Suspend button changes to Resume. If you want to resume the alarm, tap Resume.

Notification of all alarms for this patient is suspended for 90 seconds on all mobile devices that received the alarm. However, new lethal arrhythmia alarms and apnea alarms for the patient interrupt the suspend state.

Tones are also suspended for this patient at the Acuity Central Station and the patient monitor.

- Tap **Busy** to indicate that you are busy.

Notification for this alarm stops *on your device only*.

If someone suspends the alarm and it remains active after the 90 second period, notification returns to your device.

### To navigate to another page for more information

1. Tap the alarm listing in which you are interested.
2. Tap one of these buttons.
  - Tap **Details** to view details of an alarm.

The Details page appears.

- Tap **Realtime** to view a patient's realtime waveform.

The Realtime page appears.

If Realtime is grayed out, the patient is not connected to the Acuity System.

In both of these pages, if the patient is in alarm, you can suspend the alarm.

## View a realtime waveform

The Realtime page displays the realtime waveforms and vital-sign numerics of patients connected to the Acuity System.

All of a patient's waveforms that are shown at the Acuity Central Station display are available in this page.

### To navigate to the Realtime page

1. From the bottom of any page, tap .

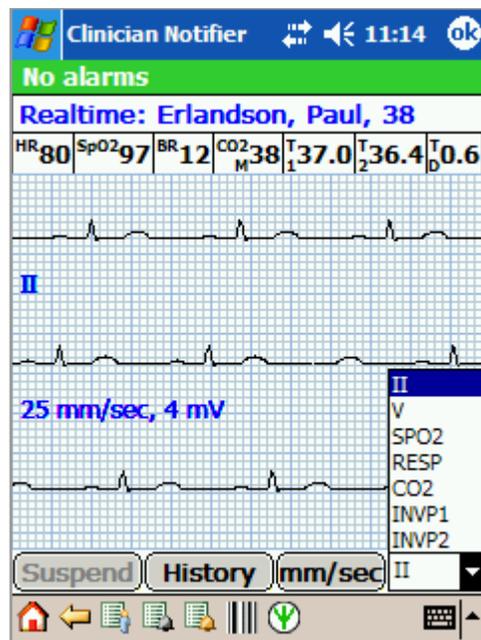
The Patient List page appears.

2. Tap a patient name.

3. Tap **Realtime**.

The Realtime page appears.

If Realtime is grayed out, the patient is not connected to the Acuity System.

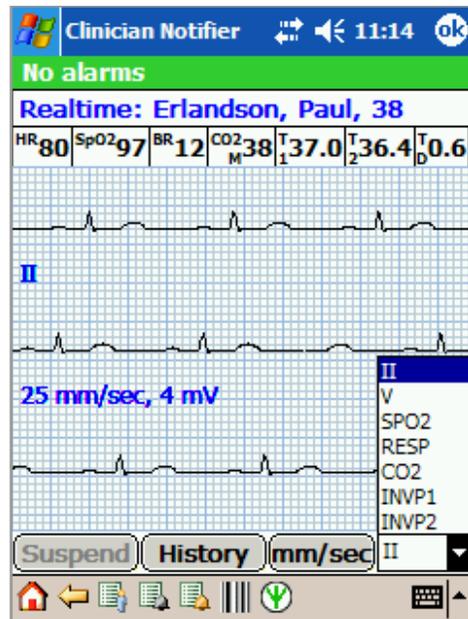


Pull-down menu:

HR: Heart rate  
 SpO2: Blood oxygen saturation  
 BR: Breath rate from CO2 source  
 RR or RESP: Respiration rate form ECG source  
 CO2 M: Mainstream CO2  
 CO2 S: Sidestream CO2  
 IPI: Integrated Pulmonary Index  
 T1: Temperature 1  
 T2: Temperature 2  
 TD: D between T1 and T2  
 INVP1 or IBP1 or P1: Invasive pressure 1  
 INVP2 or IBP2 or P2: Invasive pressure 2  
 INVP3 or IBP3 or P3: Invasive pressure 3  
 INVP4 or IBP4 or P4: Invasive pressure 4

### To adjust the realtime display

1. Adjust the display.
  - To change the lead source or vital-sign source of the waveform: Tap the **pull-down menu**, and then tap your selection.
  - To scroll to additional vital-sign numeric values: Tap in the **numerics area** above the top waveform.
  - To change the waveform amplitude: Tap anywhere in the **grid**.
  - To change the waveform sweep speed: Tap **mm/sec**.



### To suspend the patient's alarm

If the patient is in an alarm state, you can suspend the alarm in this page.

1. Tap **Suspend**.

The Suspend button changes to Resume. If you want to resume the alarm, tap Resume.

Notification of all alarms for this patient is suspended for 90 seconds on all mobile devices that received the alarm. However, new lethal arrhythmia alarms and apnea alarms for the patient interrupt the suspend state.

Tones are also suspended for this patient at the Acuity Central Station and the patient monitor.

### To view the patient's alarm history

1. Tap **History**.

The patient's Alarm History page appears.

## View a patient's history of alarms

The Alarm History page displays one patient's most recent Acuity System alarms, including some alarms that did not occur on your mobile device. For details about alarm listings that did not cause an alarm on your device, see "Patient information pages" on page 55 in the Troubleshooting chapter.

Your system administrator determines the number of events retained in the page and the length of time for which they are retained.

The times listed in this page can be several seconds later than the times listed in Acuity System windows for the same alarms.

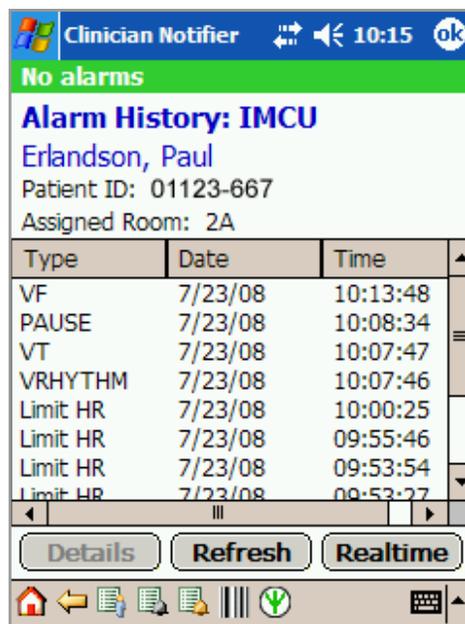
### To view a patient's history of alarms

1. From the bottom of any page, tap .

The Patient List page appears.

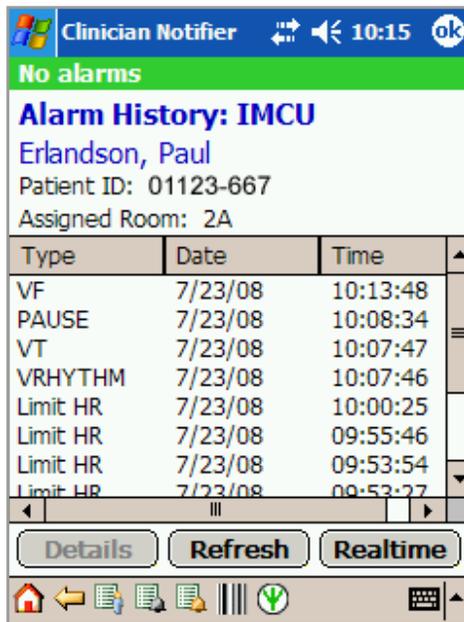
2. Tap the patient's name, and then tap **History**.

The Alarm History page appears.



3. Tap **Refresh** often.

The page is refreshed with the latest information.



### To navigate to another page for more information

1. Tap the alarm listing in which you are interested.
2. Tap one of these buttons.
  - Tap **Details** to view details of an alarm.  
The alarm Details page appears.
  - Tap **Realtime** to view a patient's realtime waveform.  
The patient's Realtime page appears.  
If Realtime is grayed out, the patient is not connected to the Acuity System.

## View details of an alarm

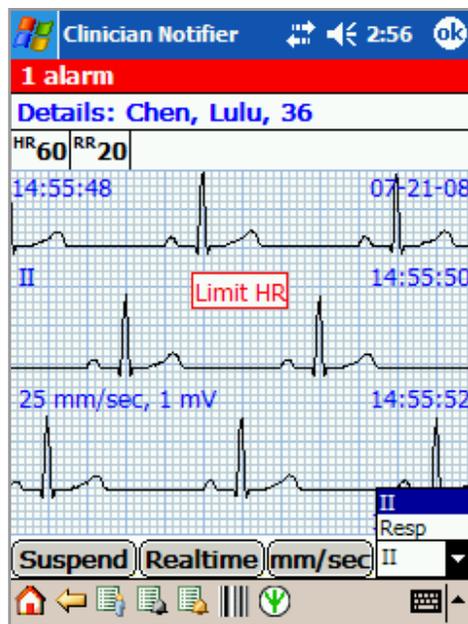
The alarm Details page displays details of one current or historical alarm.

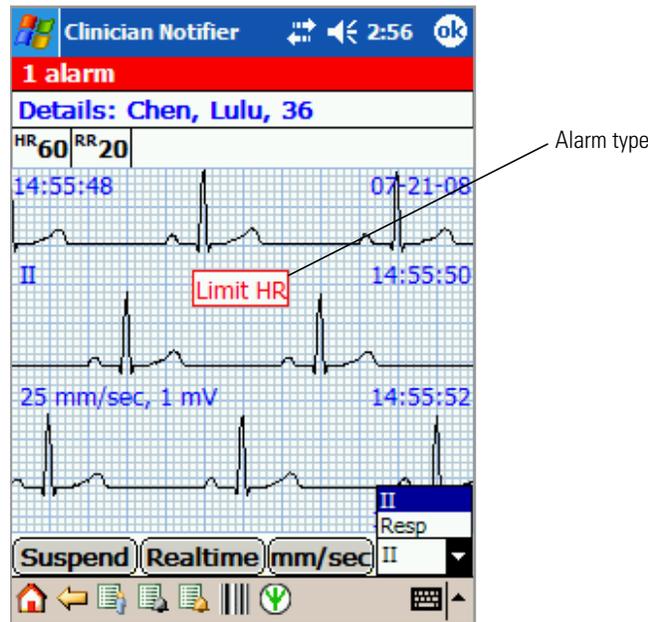
A patient's alarm details are available for a certain number of hours after the patient is disconnected from the Acuity System. This is a unit-wide configuration.

The page displays up to nine seconds of waveform, depending upon your display choices.

### To navigate to the alarm Details page

1. From any page, tap .  
The Patient List page appears.
2. Tap the patient name to highlight it, and then tap **History**.  
The patient's Alarm History page appears.
3. Tap the alarm listing to highlight it, and then tap **Details**.  
The alarm Details page appears.





### To adjust the Details display

- Adjust the display.
  - To change the lead source or vital-sign source of the waveform: Tap the **pulldown menu**, and then tap your selection.
  - To change the waveform amplitude: Tap anywhere in the **grid**.
  - To change the waveform sweep speed: Tap **mm/sec**.

### To suspend the patient's alarm

If the patient is in an alarm state, you can suspend the alarm in this page.

- Tap **Suspend**.

The Suspend button changes to Resume. If you want to resume the alarm, tap Resume.

Notification of all alarms for this patient is suspended for 90 seconds on all mobile devices that received the alarm. However, new lethal arrhythmia alarms and apnea alarms for the patient interrupt the suspend state.

Tones are also suspended for this patient at the Acuity Central Station and the patient monitor.

### To view the patient's realtime waveform

- Tap **Realtime**.

The patient's Realtime page appears.

If Realtime is grayed out, this patient is not connected to the Acuity System.



# 5

## Respond to alarms and alerts

---

### Patient alarms delivered to mobile devices

Mobile devices running the Clinician Notifier program are capable of delivering notification of all Acuity System patient alarms. Your system administrator configures which alarm types are delivered and the minimum duration that an alarm condition must persist before the alarm is delivered.

However, *all* of a patient's most recent Acuity System alarms are listed in the patient's Alarm History page, even if some of them did not cause an alarm on your device.

### Alarms always delivered to mobile devices

- Lethal arrhythmia events (ventricular fibrillation, asystole and ventricular tachycardia)

### Alarms delivered to mobile devices only if designated

- Apnea
- Arrhythmia events that have been marked as high or medium-level events in the Arrhythmia Alarms Setup window at the Acuity Central Station
- ST segment offset events that have been marked as high or medium-level events in the ST Analysis Setup window at the Acuity Central Station
- Heart rate/pulse rate (HR/PR)
- CO<sub>2</sub>: Mainstream CO<sub>2</sub> (MCO<sub>2</sub> or CO<sub>2</sub>M), Sidestream CO<sub>2</sub> (SCO<sub>2</sub> or CO<sub>2</sub>S)
- IPI: Integrated Pulmonary Index
- SpO<sub>2</sub>
- Invasive blood pressure 1, 2, 3 or 4 (INVP 1, IBP1 or P1; INVP 2, IBP2 or P2; INVP 3, IBP3 or P3; INVP 4, IBP4 or P4)
- NIBP
- Respiration rate (RR)
- Breath rate (BR)
- Temperature (T1, T2)



**WARNING** Depending upon the alarm delivery holdoff configured at your facility, mobile devices running the Clinician Notifier program might not indicate certain short-lived events, such as couplets.

**Note** Some Acuity Systems provide visual alarm latching for certain types of arrhythmia alarms, even after the alarm conditions have ceased. The visual indications remain latched at the Acuity Central Station display until they are acknowledged. Alarm latching only occurs at the Acuity Central Station.

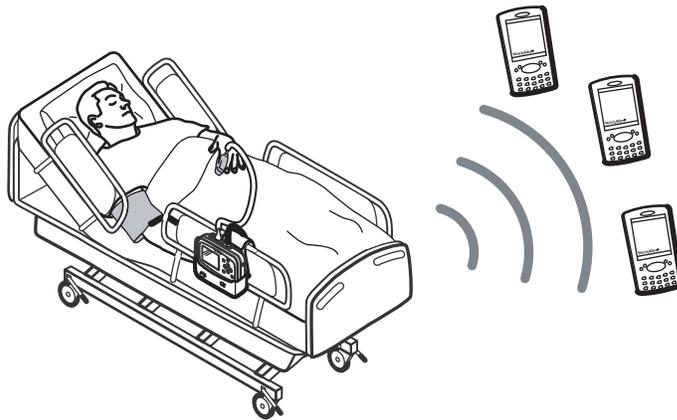
## Two possible alarm delivery modes

All of the mobile devices in your unit are configured to respond to patient alarms in the same way, in either broadcast mode or escalation mode.

Devices must be logged in to the Clinician Notifier program to receive alarms.

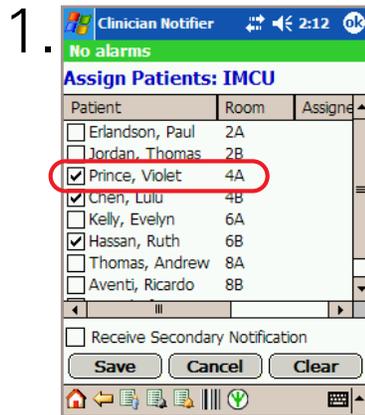
### Broadcast mode

In broadcast mode, all mobile devices in your unit receive alarm notification simultaneously when an alarm occurs for any patient.



## Escalation mode

In escalation mode, a patient alarm is delivered to clinicians' mobile devices in the order shown below. Timing can vary, depending on selections made by your system administrator.



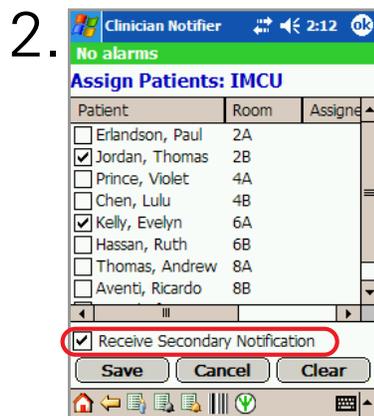
11:00:00

### Primary notification

Violet Prince's patient monitor and the Acuity Central Station indicate that she is in an alarm state.

Seconds later, the alarm occurs on the mobile devices of primary responders—clinicians in the unit who have checked Violet Prince.

No one in the unit suspends her alarm tone.



11:00:30

### Secondary notification

Violet's alarm tone continues at the bedside monitor and the Acuity Central Station, and it escalates to mobile devices of secondary responders—clinicians in the unit who have checked Receive Secondary Notification.

No one in the unit suspends her alarm tone.



11:01:00

### Broadcast notification

Violet's alarm tone continues at the patient monitor and the Acuity Central Station, and it broadcasts to all active mobile devices in the unit.

**Note** A patient's alarms immediately escalate if the patient is unassigned for primary or secondary notification.

## Alarm and alert notifications

If you are logged in to the Clinician Notifier program, you can receive these patient alarm notifications and equipment alert notifications on your mobile device:

- Visual:
  - Alarm pop-up windows
  - Alarms status bar at the top of the page
  - Some devices include a red LED light
- Auditory
- Vibratory (if your device has vibratory capability)

If you tap items in the Clinician Notifier program after an alarm is delivered, you see the alarm listed in the red alarms status bar at the top of the screen, as usual. However, tones, vibration and additional popup windows are delayed until 10 seconds after you stop tapping, so that you can finish your work without interruption.

## Visual notification

### Popup windows



Clinician Notifier patient alarm and equipment alert windows pop up in the foreground of your device screen, even if you are viewing another program and the Clinician Notifier program is running in the background.

### Alarms status bar



You can tap a red or orange status bar to navigate to the Active Alarms page, where all active alarms are listed.

The status bar at the top of the device screen turns red when one or more alarms are sent to your device.

The listing in the bar shows how many alarms are occurring on your device, and how many are suspended.

If more than one alarm occurs at once for the same patient, only one of the patient's alarms is counted in the status bar.

If all listed alarms are suspended, the bar is orange.

## Tones and vibration

Unit-wide configuration dictates whether you receive tones and vibration, only tones or only vibration.

### Tones

There are five distinct alarm and alert tones:

**Table 1. Clinician Notifier alarm and alert indications**

| Alarm type  | Tone   |
|---|--|
| Lethal arrhythmia events<br>(VTACH, ASYS, VFIB)   | BEEP BEEP BEEP BEEP...<br>Four loud beeps followed by a brief pause                          |
| High-level arrhythmia and ST events<br>(as specified at the Acuity Central Station display)   | BEEP BEEP BEEP...<br>Three loud beeps followed by a brief pause                              |
| Apnea events  |  |
| Vital-sign alarms   | BEEP beep...<br>A pair of beeps (one high beep and one lower beep) followed by a brief pause |
| Medium-level arrhythmia and ST events<br>(as specified at the Acuity Central Station display) |  |
| Low battery   | BEEP...<br>A single beep followed by a long pause  |
| Network and Acuity System Disconnect alerts   | Chirp!<br>A single "chirp" followed by a 20-second pause                                     |

### Vibration

Some mobile devices have vibratory capability. Vibrations repeat, as follows: Two vibrations, followed by a 20 second pause.



**WARNING** If your system administrator has used the server to set *only auditory* alarming for all mobile devices in your unit, the mobile devices will not vibrate to indicate Clinician Notifier patient alarms, even if a user sets a mobile device to vibrate.

## Respond to patient alarms

There are two types of patient alarm popup windows:

- Single alarm popup window
- Multiple alarms popup window

### Single alarm

If only one alarm is active on your mobile device, this Alarm popup window appears in the foreground of your screen.

If more than one alarm occurs at once for the same patient, the patient's highest priority alarm is indicated in the popup window.

A single alarm popup window is always associated with a tone, vibration or both.



Event Start time indicates the time that the notification occurs. If the event re-occurs after suspension, Event Start time indicates the re-occurrence time.

#### To temporarily stop alarm notification

- Tap **Suspend** to suspend the alarm.

The Suspend button changes to Resume. If you want to resume the alarm, tap Resume.

Notification of all alarms for this patient is suspended for 90 seconds on all mobile devices that received the alarm. However, new lethal arrhythmia alarms and apnea alarms for the patient interrupt the suspend state.

Tones are also suspended for this patient at the Acuity Central Station and the patient monitor.

- Tap **Busy** to indicate that you are busy.

Notification for this alarm stops *on your device only*.

If someone suspends the alarm and it remains active after the 90 second period, notification returns to your device.



### To navigate to another page to view related information

In any of these pages, you can choose to suspend the alarm.

- Tap **Realtime** to view the patient's realtime waveform.  
The Realtime page appears.
- Tap **Details** to view details of the alarm.  
The alarm Details page appears.
- Tap the **alarms status bar** or tap **Active Alarms** to view all active alarms on your mobile device.  
The Active Alarms page appears.

## Multiple Alarms

If more than one patient's alarm is active on your mobile device, a Multiple Alarms popup window appears in the foreground of your screen.

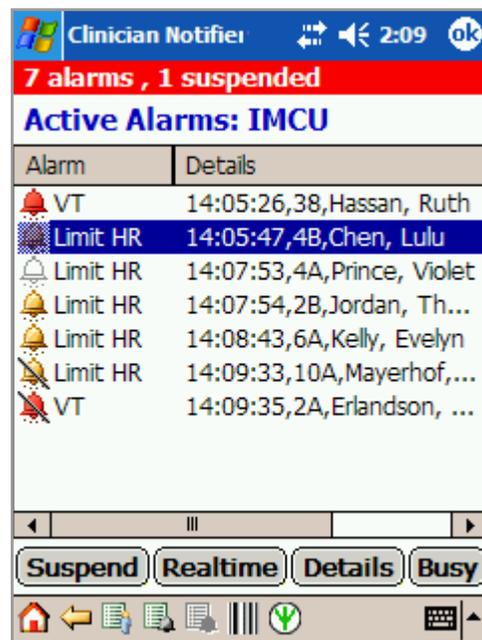
A multiple alarms popup window is always associated with a tone, vibration or both.

### To respond to a Multiple Alarms popup window



1. Tap **Active Alarms** or tap the **alarms status bar**.

The Active Alarms page appears, listing all active alarms on your mobile device.



For instructions on how to utilize this page, see "View a list of active alarms sent to your device" on page 26.

# Respond to equipment alerts

Under the following circumstances, your mobile device displays Clinician Notifier equipment alert popup windows.

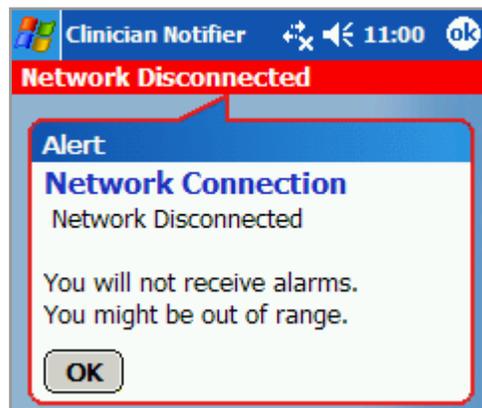
## Disconnection alerts

### Network Disconnected Alert

The Network Disconnected popup window occurs if your mobile device is not communicating with the Welch Allyn Connectivity Server (WACS).

The popup window is always associated with a “chirp” tone. The chirp repeats every 20 seconds.

 appears in the bottom right corner of your mobile device screen.



### To respond to a Network Disconnected popup window

1. Tap **OK**.
2. Walk within the usual area of clinical operation.

The message and tone remain until the communication problem is resolved.

If you think that you are within range and the message remains, contact your system administrator.

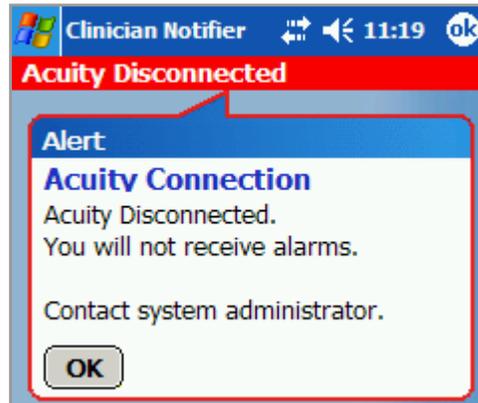
3. If the Log In page appears, re-log in using the same user name and password that you used before the disconnection.

Your patients remain assigned if you have been logged out for less than two hours.

## Acuity Disconnected Alert

The Acuity Disconnected popup window occurs if the Welch Allyn Connectivity Server (WACS) is not communicating with the Acuity System server.

The popup window is always associated with a “chirp” tone. The chirp repeats every 20 seconds.



### To respond to an Acuity Disconnected alert

1. Tap **OK**.
2. Contact your system administrator.  
The tone remains until the communication problem is resolved.
3. If the Log In page appears, re-log in using the same user name and password that you used before the disconnection.

Your patients remain assigned if you have been logged out for less than two hours.

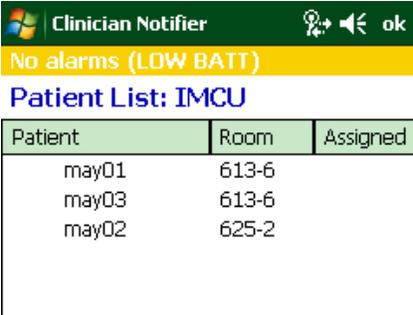
## Low battery alerts

Mobile device low battery alerts are associated with a single beep tone, followed by a long pause.

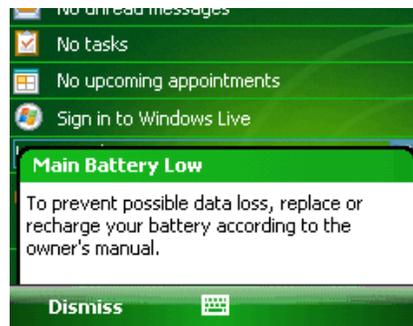
 **WARNING** Connecting mobile devices to the Internet, or running too many programs in the foreground or background while the Clinician Notifier program is running, can greatly reduce the battery life and memory of the devices, thereby compromising alarm delivery.

 **WARNING** Always recharge a mobile device when it is not in use and at first notification of low batteries. A device with low batteries might not indicate or appropriately clear all of a patient's alarms. Allowing batteries to fully discharge can result in depletion of the backup battery and loss of Clinician Notifier configurations.

## Main Battery Low alerts

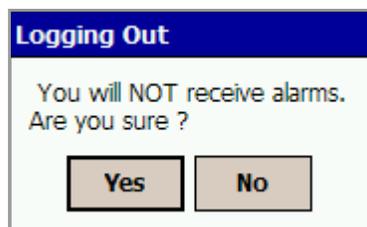


| Patient | Room  | Assigned |
|---------|-------|----------|
| may01   | 613-6 |          |
| may03   | 613-6 |          |
| may02   | 625-2 |          |



### To Respond to a Main Battery Low popup window

1. In the popup window, tap **OK**.
2. If you do not see a Clinician Notifier program window on your mobile device screen, tap , and then tap  **Clinician Notifier**.  
A Clinician Notifier screen appears.
3. Tap  in the upper right corner of the screen.  
A confirmation popup window appears.



4. Tap **Yes**.  
You are logged out of the Clinician Notifier program.

5. Turn off the device.
6. Recharge the device, or replace the battery with a fully charged battery. For instructions, see ["Mobile device battery"](#) on page 56.
7. Log in to a new mobile device.

Your patients remain assigned to you if you re-log in within two hours.

## 6

## Log out of Clinician Notifier to change units or end your shift

When a device is logged out of the Clinician Notifier program, it does not deliver patient alarms.

Plan to log out of the Clinician Notifier program in these situations:

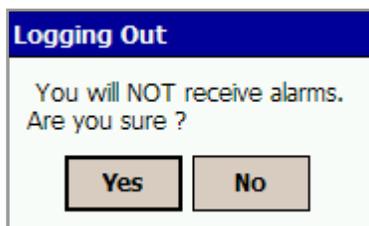
- To enter a period during which you do not want to be notified of patient alarms
- To recharge the device battery
- To move to another unit during your shift. Since mobile devices are assigned to only one unit, you must log in to a new device at the new unit.
- Before the device is handed over to another clinician (so that the Welch Allyn Connectivity Server disassociates you from the device)

If you re-log in within two hours, in the same unit, your patients remain assigned to you. If you log in to a device in a different unit, you must assign patients to yourself, as usual.

**Note** If  is not visible on your mobile device, perform a soft reset of the device. For soft reset instructions, see ["General performance"](#) on page 51.

### To log out of the Clinician Notifier program and recharge the mobile device

1. If you do not see a Clinician Notifier program window on your mobile device screen, tap , and then tap  **Clinician Notifier**.  
A Clinician Notifier screen appears.
2. Tap  in the upper right corner of any screen.  
A confirmation popup window appears.



3. Tap **Yes**.  
You are logged out of the Clinician Notifier program.

**Note** If an alarm occurs during the logout process, and if the Logging Out popup recedes, tap  until the Logging Out popup window re-appears.

4. Recharge the device as specified by the device manufacturer.



# 7

## Troubleshooting and maintenance

### Contact information

If you encounter a problem that cannot be corrected by ordinary operating procedures described in this manual, please contact Welch Allyn Technical Services.

|                            |   |
|----------------------------|---|
| Phone (within the U.S.A.): | 1-800-289-2501  |
| Phone (worldwide):         | +1 503-530-7500, ask for Technical Service  |
| Fax:                       | +1 503-526-4970   |
| email                      | solutions@welchallyn.com  |
| Internet                   | <a href="http://www.welchallyn.com/support/default.htm">http://www.welchallyn.com/support/default.htm</a> |

### Troubleshooting

#### General performance

| Problem  | Explanation   |
|--|---|
| The mobile device does not turn on.  | <p>It is possible that the battery or backup battery of the mobile device is low or depleted, or that it has reached end of life.</p> <p>Replace the main battery and attempt to fully charge the device. If the problem continues, contact your facility's Biomedical Engineering department.</p>  |
| There is a delayed response or no response when I attempt to use my mobile device. | <p>Perform a soft or warm reset, according to the mobile device manufacturer's instructions. This is usually accomplished by inserting the stylus into a small hole on the back side of the mobile device, or by pressing a combination of buttons.</p> <p>If the problem continues after the mobile device has been reset, it is possible that the mobile device internal backup battery has reached end of life.</p> <p>If necessary, contact your facility's Biomedical Engineering department.</p>  |
| Battery life of some devices seems short.  | <p> <b>Warning:</b> Connecting mobile devices to the Internet, or running too many programs in the foreground or background while the Clinician Notifier program is running, can greatly reduce the battery life and memory of the devices, thereby compromising alarm delivery.</p> <p><i>Always</i> recharge a mobile device when it is not in use and at first notification of low batteries. A device with low batteries might not indicate or appropriately clear all of a patient's alarms. Allowing batteries to fully discharge can result in depletion of the backup battery and loss of Clinician Notifier configurations.</p> |

| Problem  | Explanation   |
|--|---|
|  and  are not visible along the top of the mobile device screen. | <p>This occurs with certain mobile devices under these conditions: The device is running a software program that utilizes a full screen when a Clinician Notifier alarm pops up.</p> <p>Avoid using programs that utilize a full screen.</p> <p>To log out of the Clinician Notifier program and exit the application in this situation, perform a warm (or soft) reset according to the device manufacturer's instructions. This is usually accomplished by inserting the stylus into a small hole on the back side of the mobile device, or by pressing a combination of buttons.</p> <p>If necessary, contact your facility's Biomedical Engineering department.</p> |

## Unfamiliar pages

| Problem   | Explanation  |
|---|--|
| A Checking for Update status page appears instead of the Log In page.   | <ol style="list-style-type: none"> <li>1. Move the mobile device into the usual area of clinical operation.</li> <li>2. If the page remains, confirm that the mobile device radio is turned on.</li> <li>3. If the page still remains, contact your facility's Biomedical Engineering department.</li> </ol> |
| A Status page with a Proceed button appears instead of the Log In page. | It is possible that the backup battery of the mobile device is low or depleted. Contact your facility's Biomedical Engineering department.   |

## Login and patient setup

| Problem   | Explanation  |
|---|--|
| In the Home page, another clinician's user name is listed.  | You must log out and log in. See " <a href="#">Log out of Clinician Notifier to change units or end your shift</a> " on page 49.   |
| I would like to assign myself a patient, but the patient is not listed in the Assign Patients page. | <p>This indicates one of four circumstances:</p> <ul style="list-style-type: none"> <li>• The patient is not yet connected to the Acuity System.</li> <li>• The patient does not have a confirmed patient ID. You can assign and confirm a patient ID at the Acuity Central Station. If your AcuityLink option includes the Barcode Scanner option, you can enter and confirm a patient ID via your Clinician Notifier Set Up Patient ID page. For instructions, see "<a href="#">Set up a patient's ID in the Acuity System</a>" on page 18.</li> <li>• The patient was assigned to you and you logged out for longer than two hours. Now the patient is disconnected from the Acuity System.</li> <li>• If none of the listed patients are in your unit, the device is assigned to another unit. Contact your system administrator.</li> </ul> |
| Sometimes when I log out and then log in again, my patients do not remain assigned to me.           | Your patients remain assigned if you log in again within two hours. In the Patient List and Assign Patients pages, your assigned patients are indicated by check marks.  |

## Alarm and alert notification

| Problem   | Explanation  |
|---|--|
| The Acuity System sometimes indicates alarms that the mobile devices do not indicate.   | <p>Your system administrator has selected which types of Acuity System alarms are delivered to the mobile devices in your unit.</p> <p>An administrator also specifies an alarm delivery hold-off period. If the alarm condition is resolved before the specified period, your mobile device does not notify you of the alarm.</p> <p>In addition, low-level arrhythmia alarm, as determined in the Arrhythmia Alarms Setup window at the Acuity Central Station, are not delivered to mobile devices.</p> |
| I notice that sometimes alarm popup windows and tones don't appear, but the alarms status bar shows an alarm.   | <p>If you are tapping items in the Clinician Notifier program when you receive an alarm, you see the alarm listed in the red alarms status bar at the top of the screen, as usual.</p> <p>However, popup windows, tones and vibration are delayed until 10 seconds after you stop tapping, so that you can finish your work without interruption.</p>  |
| I try to turn off the sound on my mobile device, but it still emits a low-level tone for patient alarms.  | <p>A tone always occurs in these situations:</p> <ul style="list-style-type: none"> <li>• The devices in your unit do not have vibratory capability.</li> <li>• Vibration is turned off for your unit by your system administrator.</li> </ul>   |
| I try to turn on vibration at my mobile device, but it does not vibrate for alarm notification.   | <p>Your system administrator has configured the devices in your unit to audio only. You cannot enable vibration for patient alarms.</p>  |
| I try to turn on sound at my mobile device, but it still only vibrates for patient alarms.  | <p>Your system administrator has configured the devices in your unit to vibrate only. You cannot enable sound for patient alarms.</p>  |
| I try to turn off vibration at my mobile device, but it still vibrates for patient alarms.  | <p>Your system administrator has configured the devices in your unit to vibrate. You cannot disable vibration for patient alarms.</p>  |
| <p>Everything seems to be fine with the WACS system, but  appears on the map at the Acuity Central Station display. It appears in the Acuity Central Station location on the map. What does this mean?</p> | <p>No mobile devices running the Clinician Notifier program are reachable in that Acuity System unit.</p> <p>This occurs in these circumstances:</p> <ul style="list-style-type: none"> <li>• All devices are out of range.</li> <li>• All devices are turned off.</li> <li>• No clinicians are logged in to the Clinician Notifier program in that unit.</li> <li>• The WACS server is unavailable.</li> </ul> <p>Contact your system administrator.</p>  |

| Problem   | Explanation  |
|---|--|
| Alarm notification does not seem to be reliable.                                | <p data-bbox="743 279 800 327"></p> <p data-bbox="821 268 1422 499"><b>Warning:</b> Preserve Clinician Notifier program files and maintain mobile device settings that were configured during installation of AcuityLink Clinician Notifier software. Modifying, deleting or replacing any Clinician Notifier files or changing any of the following mobile device settings can result in sub-optimal Clinician Notifier performance, including inhibition of patient alarm delivery: alarm clock, backlight, external power, power off, screen alignment and orientation, time settings, volume, wake-up and wireless network connection.</p> <p data-bbox="821 533 1422 636">Connecting mobile devices to the Internet, or running too many programs in the foreground or background while the Clinician Notifier program is running, can greatly reduce the battery life and memory of the devices, thereby compromising alarm delivery.</p> <p data-bbox="821 665 1422 741">Non-Clinician Notifier audio or vibratory notification, barcoding, passwords or popup windows can interfere with effective Clinician Notifier program performance, including alarm notification.</p> |
| An alarm popup window interrupted my logout sequence, and now I cannot log out. | If you tap within an alarm popup window after you have tapped OK to log out, tap  until the Logging Out popup window re-appears. To log out, tap <b>Yes</b> .   |

## Patient information pages

| Problem   | Explanation   |
|---|---|
| In the Patient List page, there are no patient icons, only blank spaces. I am certain that the patients are currently monitored within the Acuity System.                             | If all patient icons are blank, there could be an Acuity System network problem. Contact your system administrator.   |
| The Active Alarms page sometimes lists an alarm that I did not see. I remember seeing alarm notification for the patient around the same time, but it was for a lower priority alarm. | The Active Alarms page only shows a patient's highest priority active alarm. Some of these higher priority listings might not cause an alarm popup window to occur, because only lethal arrhythmia alarms and apnea alarms interrupt an alarm suspension period   |
| The Recent Alarms page and Alarm History page show a different number of alarms than the Acuity Central Station display shows for the same patient.                                   | <p>These pages include arrhythmia events that have been deleted from Acuity Central Station review windows and printouts.</p> <p>Only a patient's first alarm is shown in the Recent Alarms page in these circumstances:</p> <ul style="list-style-type: none"> <li>• When a lower priority alarm occurs while another alarm is asserting or suspended</li> <li>• When a higher priority alarm occurs while another alarm is suspended, but the new alarm is neither a lethal arrhythmia nor apnea alarm.</li> </ul>  |
| In the Alarm History page for one of my assigned patients, alarms are listed that I did not receive.  | <p>Under these circumstances, these alarms are listed in the Alarm History page without ever having appeared on the mobile device as an alarm:</p> <ul style="list-style-type: none"> <li>• An alarm type for which your system administrator has specified non-alarm delivery, unit-wide. This can occur with any type of alarm except lethal arrhythmia events.</li> <li>• A low-level arrhythmia alarm, as specified in the Arrhythmia Alarms Setup window at the Acuity Central Station. This type of alarm is never sent to mobile devices.</li> <li>• An alarm condition that was resolved before the alarm delivery hold-off period. The period is specified by your system administrator</li> <li>• A higher priority alarm that occurred when another alarm was suspended. The new alarm did not interrupt the suspend period because it was neither a lethal arrhythmia event nor an apnea alarm.</li> <li>• A lower priority alarm that occurred while another alarm was asserting or while another alarm was suspended.</li> <li>• A multiple listing for the same alarm. This occurs if the alarm's popup window was replaced by another alarm that later ceased. The original alarm was still active after the popup window receded.</li> </ul> |
| Some information or Clinician Notifier buttons are missing from certain pages   | If the mobile device is in landscape orientation mode, change the mode to portrait mode.  |

# Maintenance

For further maintenance instructions, refer to the directions for use provided by the mobile device manufacturer.



**WARNING** Connecting mobile devices to the Internet, or running too many programs in the foreground or background while the Clinician Notifier program is running, can greatly reduce the battery life and memory of the devices, thereby compromising alarm delivery.



**WARNING** Always recharge a mobile device when it is not in use and at first notification of low batteries. A device with low batteries might not indicate or appropriately clear all of a patient's alarms. Allowing batteries to fully discharge can result in depletion of the backup battery and loss of Clinician Notifier configurations.

## Mobile device battery

### Main battery

#### To recharge the battery

1. If you do not see a Clinician Notifier program window on your mobile device screen, tap , and then tap  **Clinician Notifier**.  
A Clinician Notifier screen appears.
2. Tap  in the upper right corner of any page.  
A confirmation popup window appears.
3. Tap **YES**.  
You are logged to log out of the Clinician Notifier program.
4. Recharge the device as specified by the device manufacturer.

#### To replace the battery

Replace the battery when it no longer holds a charge.

1. Turn off the device.
2. Remove the battery.
3. Insert a fresh battery according to the device manufacturer's instructions.
4. Recycle the battery according to your local protocol.

## Internal backup battery

If a mobile device does not turn on after an attempt has been made to fully charge the device, or if a mobile device screen continues to freeze after soft resets, it is possible that the mobile device internal backup battery has reached end of life.

Consult the mobile device manufacturer's directions for use.

## Clean the mobile device

Clean the mobile device according to the manufacturer's directions for use and standard hospital practice.



# Index

---

## A

Active Alarms page, 26  
     troubleshooting, 55  
 Acuity disconnected alert, 45  
 Alarm Details page, 32  
 Alarm History page, 30  
     troubleshooting, 55  
 Alarms and alerts, 21  
     Active Alarms page, 26  
     Alarm Details page, 32  
     Alarm History page, 30  
     alarm popup, 41  
     alarms status bar, 10, 39  
     delivery modes, 36  
     Details page, 32  
     equipment alerts, 44  
     indicators, 38  
     latching, 35  
     low battery, 46  
     multiple alarms popup, 43  
     Recent Alarms page, 24  
     respond to, 41  
     setting notification for patients, 16  
     types delivered, 35  
 Assign patients, troubleshooting, 52  
 Assign Patients page, 16  
 Auto ID button, 19

## B

Bar, alarms status, 39  
 Barcode scanner, 18  
 Battery  
     draining charge, 3  
     low battery alerts, 46  
     recharge before discharge, 3  
     Troubleshooting, 51  
 Broadcast mode, 36  
 Buttons  
     missing, troubleshooting, 51, 55  
     navigating with, 9

## C

Cleaning the mobile device, 57  
 Components, system, 8  
 Configurations, maintain settings, 3

## D

Details page, 32  
 Disconnection alerts, 44  
 Documents, related, 5

## E

Equipment alerts  
     low battery, 44  
     Network or Acuity Disconnected, 44  
 Escalation mode, 36  
 Exit the program, 10

## H

History, alarms, 30  
 Home page, 15  
 Home page,  
     troubleshooting, 52

## I

Icons  
     in Patient List page, 22  
     navigation and status, 10  
     status, 21  
 ID  
     auto ID, 19  
     enter patient, 18  
 Intended Use, 1

## L

Links, blue, 2  
 Lists, sorting, 10  
 Login, troubleshooting, 52

Login page, 14  
 Log out of the program, 10, 49  
 Low battery alerts, 46

## M

Mobile device, 1  
   maintain configuration settings, 3  
 Multiple Alarms popup, 43

## N

Network Disconnected alert, 44

## O

Overview, 7

## P

### Pages

Active Alarms, 26  
 Alarm History, 30  
 alarm popup, 41  
 alarms, multiple, popup, 43  
 Assign Patients, 16  
 common components of, 10  
 Details (Alarm), 32  
 Home, 15  
 Login, 14  
 navigating with buttons, 9  
 Patient List, 21  
 Realtime, 28  
 Recent Alarms, 24  
 Set Up Patient ID, 18  
   workflow, 9  
 Password entry, 14  
 Patient ID  
   auto ID, 19  
   set up, 18  
 Patient List page, 21  
   troubleshooting, 55  
 Patient setup, troubleshooting, 52  
 Patient status, view, 21  
 Popup windows, 39  
   alarm, 41  
   equipment alert, 44  
   multiple alarms, 43  
 Program, start, 13

## R

Realtime page, 28  
 Realtime waveform, 28

Receive Secondary Notification button, 17  
 Recent Alarms page, 24  
   troubleshooting, 55  
 Reset mobile device, 51

## S

Scanner, 18  
 Setup of patients, troubleshooting, 52  
 Set Up Patient ID page, 18  
 Shift, end, 49  
 Sorting lists, 10  
 Start, program, 13  
 Status, view patient, 21  
 Status bar, alarms, 39  
 Status icons, 21  
 Suspend, alarm tone, 41

## T

Technical Service, Welch Allyn, 51  
 Tones, alarm and alert  
   remain, 44, 45  
 Tones and vibration, 40  
 Troubleshooting, 51  
   Patient information screens, 55

## U

Units, change, 49  
 User name, 14

## V

Vibration and tones, 40

## W

WACS (see Welch Allyn Connectivity Server), 8  
 Waveforms, realtime, 28  
 Welch Allyn  
   Connectivity Server, 8  
   Technical Service, 51  
 Workflow, page, 9