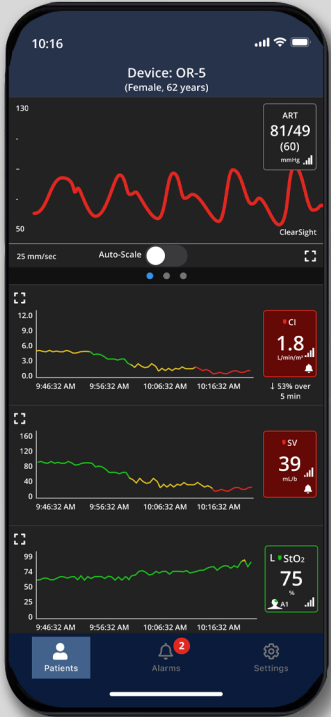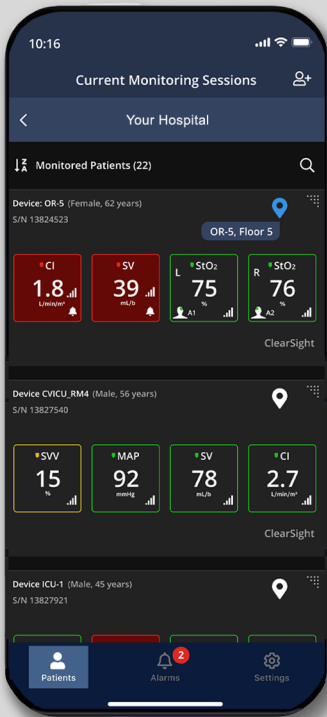# Viewfinder Remote App

User Guide

Edwards Lifesciences Viewfinder Remote App User Guide

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Software version: 1.3

Release Date: SEPTEMBER 2021

Using This Guide

The Edwards Lifesciences Viewfinder remote app user guide is comprised of three sections. Figures in this guide are intended for reference only and may not be an exact replication of the screens as a result of continuous software improvements.

Section	Description
1	*Introduction*
2	*Viewfinder Remote App Navigation*
3	*Viewfinder Remote App Settings*

Contents

1

Introduction

1.1 Overview

The Edwards Viewfinder remote mobile application provides clinicians with current patient hemodynamic data from connected Edwards HemoSphere advanced monitoring platforms to assist in patient care. The Viewfinder remote application is part of the Edwards Viewfinder network. The Viewfinder remote app functions as a supportive visual aid for patient status communication between clinicians and allows them to view multiple patient monitoring sessions at once from their mobile device. The near real-time updates to patient monitoring sessions include non-invasive hemodynamic parameter data, physiological alarm notifications, historical data, graphical trend data, and blood pressure waveform data. Clinicians can assess a patient's hemodynamic status remotely to expedite consultations and reduce the risk of exposure for patients and health care providers. The Viewfinder hub must be correctly installed, provisioned, and paired to HemoSphere advanced monitor(s) before use of the Viewfinder remote mobile application. For questions on Viewfinder hub installation, contact your Viewfinder Technical Administrator, or your Edwards representative.

CAUTION   The HemoSphere advanced monitor is the primary display device of a patient's hemodynamic data. The Viewfinder remote application should only be used as a secondary display of a patient's physiological data. Any medical decisions should be made in conjunction with clinical signs and symptoms of the patient, and with direct view of data on the HemoSphere advanced monitor.
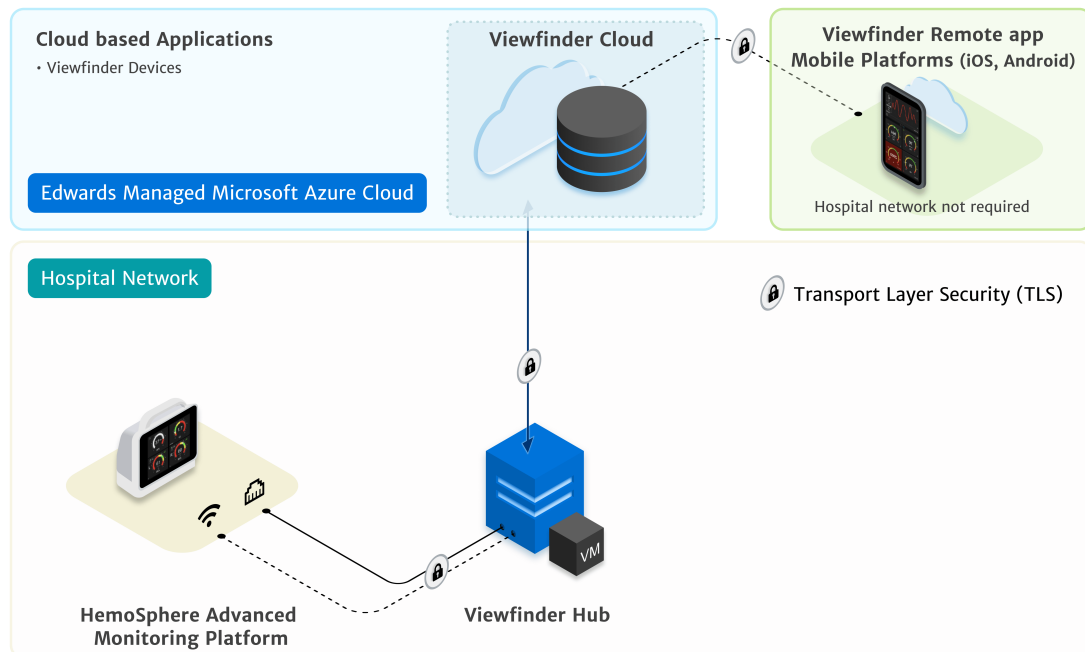
Edwards

Figure 1-1 Viewfinder network features overview

1.1.1   Compatibility and System Requirements

The Viewfinder remote app is compatible with:

- iPhone XR/iPhone XS Max/iPhone 11/iPhone 12/iPhone 12 Pro Max; iOS software version requirement: 14.4

- Galaxy S9+/Galaxy S10+; Android software version requirement: 10.0

1.1.2   User Registration

Only registered users can sign on and access the Viewfinder remote application once installed. The Viewfinder remote application is compatible with HemoSphere advanced monitor software versions 2.2 or later. Contact your hospital Clinical Supervisor for access. The HemoSphere advanced monitor software version is listed on the monitor's startup screen. Refer the HemoSphere advanced monitor operator's manual for more information.

1.1.3   HemoSphere Advanced Monitor

For instructions related to the HemoSphere advanced monitor, refer to the HemoSphere advanced monitor operator's manual.

1.2 Intended Use

Viewfinder remote is a mobile application which provides supplemental remote near real-time display of non-invasive hemodynamic parameters measured by a connected HemoSphere advanced monitoring platform. Viewfinder remote allows clinicians to view continuous monitoring data and alarms/alerts remotely for multiple patients. All displayed data is generated by connected HemoSphere advanced monitoring platforms, and not by Viewfinder remote. Viewfinder remote is intended for use by clinicians as a supportive visual aid, and not as a replacement for in-person patient monitoring with connected HemoSphere advanced monitoring platforms.

1.3   Installation

1.3.1   iOS Installation

Installing the Viewfinder remote app on your iOS device is done from the Apple App Store. Refer to your Viewfinder Clinical Administrator or Supervisor for more information.

1.3.2   Android Installation

Installing the Viewfinder remote app on your Android device is done from the Google Play store. Refer to your Viewfinder Clinical Administrator or Supervisor for more information.

1.3.3   Initial Sign-In

Use the sign-in information sent to you from your administrator. See "Cybersecurity" on page 3 for information on best password practices.

1.3.4   Software Updates

After initial installation, notification of software updates are communicated through the email associated with your account.

1.4   Cybersecurity

This section provides general cybersecurity instructions for Viewfinder remote application users to minimize both the loss of any patient data and the overall impact of any potential cybersecurity risks. It is important to note that any user of the Viewfinder remote application take measures to protect the privacy of a patient's personal information in accordance with country-specific regulations, and consistent with the facility's policies for managing this information. Steps to be taken to safeguard this information and the general security of the Viewfinder remote application include:

Authentication. Limit Viewfinder remote application user registration to authorized clinicians. Application access is protected by requiring all users to choose a unique username and password combination for login. In addition, a multi-factor authentication code is required for each login. Ensure the password you choose is strong and not shared with others. A strong password has a minimum length of 10 characters with the following characteristics:

1 10-64 character count
2 At least one lowercase character
3 At least one uppercase character
4 At least one number, 0-9
5 At least one special character

Active Use. Users of the application should take measures to limit the exposure of patient health information present within the application. Users should not take screenshots of the information displayed by the application. Do not leave an active application with a logged-in user session unattended.

Device Security. Jailbroken and/or Rooted mobile devices should not be used to install the Viewfinder remote application. In addition, precautions should be taken to install the application only on known trusted devices. Ensure that the device used for multi-factor authentication is secure and notification settings are turned off when the device is locked.

Password Reset. Users are expected to have access to the registered email and phone numbers in order to reset the Viewfinder remote application password using the "Forgot Password" feature on the login screen. The use of Viewfinder remote application interface outside of its intended purpose could pose cybersecurity risks.

1.5   Hospital Clinical Roles

Below is a summary of Viewfinder remote app roles. The clinical user role is the primary clinical user of Viewfinder remote app. Clinical user access is granted by the clinical administrator or supervisor. To receive access to additional hospital accounts, contact your hospital's Viewfinder clinical admin or supervisor. Each hospital also has technical roles related to Edwards Viewfinder network access and connectivity. For problems with connectivity, contact your hospital's Viewfinder technical admin or technical supervisor.

Viewfinder Remote Role	Roles per hospital (#)	Granted by	Example of corresponding hospital title	Description/Capabilities
Clinical Admin	n≥1	Edwards Account Representative	CMO, Director/Department Head	Manages all clinical accounts as primary Edwards clinical contact.
Clinical Supervisor	n≥1	Clinical Admin Edwards Account Representative	Department Head (e.g., Director of Anesthesia), Nursing Manager	Manages clinical users within assigned department.
Clinical User	n≥1	Clinical Supervisor (per department) or Clinical Admin	Clinicians (Doctors/Nurses)	Access clinical applications available to the account. Access is only available to patient monitor sessions within assigned department(s).

1.6   User Interface
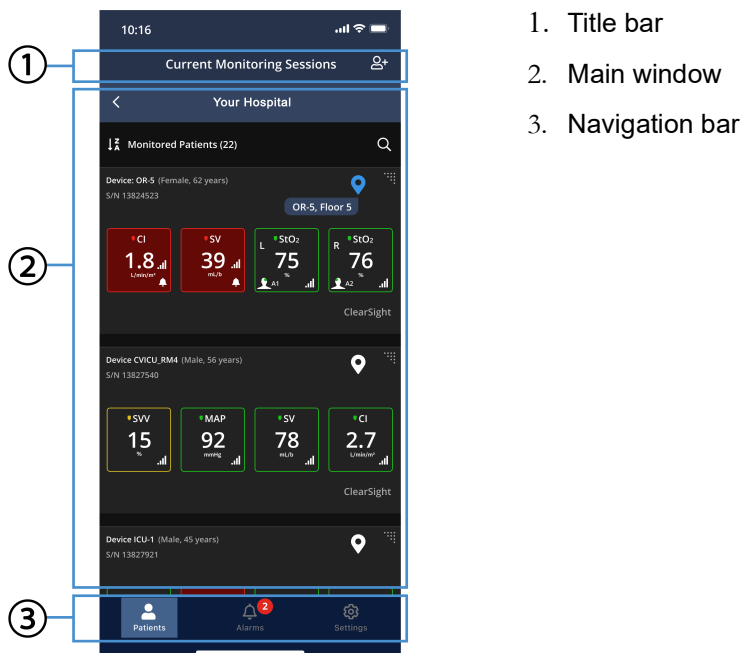
1. Title bar

2. Main window

3. Navigation bar

Figure 1-2 Screen overview

Title Bar. This displays a brief description of the currently viewed window. On most screens, the back button is available to touch and navigate to the previously displayed screen.

Main Window. A display of monitored data, patient alarms and faults, or settings depending on the screen selected from the Navigation Bar.

Navigation Bar. This menu is shown on most screens and allows you to navigate through **Patients** (current monitoring sessions as shown in figure 1-2), **Alarms**, and **Settings**.

The HemoSphere advanced monitoring platform provides hemodynamic parameters through compatible Edwards ClearSight finger cuffs and tissue oximetry (StO_2) with compatible FORE-SIGHT ELITE sensors. Current active patient monitoring sessions and associated demographic data can be viewed with the Viewfinder remote app software.

Once logged on, you can select those accounts and monitoring sessions for which you have access. See "Select Account and Patient Monitoring Sessions" on page 7.

1.7 Symbols

Table 1-1 User Interface Symbols
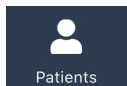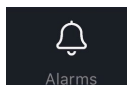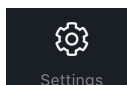
Symbol	Description
Navigation Bar	
Patients	Patients
Alarms	Alarms
Settings	Settings
Navigation Icons	
	Look up patient session
	Add patient monitoring session
	Expand selection
	Reduce selection
	Adjust time scale
	View patient information
Parameter Tile Icons	
	SQI (signal quality indicator)
	Parameter alarming
	Parameter alarming – alarm silenced

Table 1-1 User Interface Symbols (continued)

Symbol	Description
	Alarm silenced
A1	Tissue oximetry sensor channel and location
Additional Icons	
	Toggle setting "on" For the Alarms/Faults silence toggle setting, green indicates that all audible alarms are silenced.
	Silence individual alarm or patient session alarms by swiping left
	Alarm silenced for individual alarm or patient session
	Remove patient monitoring session

1.8   Monitored Parameters

For a list of non-invasive monitored parameters, refer to the HemoSphere advanced monitor operator's manual.

1.9   Abbreviations

Acronyms and abbreviations used in this guide are listed below in Table 1-2.

Table 1-2 Acronyms and Abbreviations

Abbreviation	Definition
SQI	signal quality indicator

2

Viewfinder Remote App Navigation

Contents

2.1 Select Account and Patient Monitoring Sessions

After logging into Viewfinder remote app for the first time, select a site and choose which patient monitoring sessions to display for that site.

1 Select site after logging in for the first time. This step is only applicable for those accounts that have access to multiple sites.
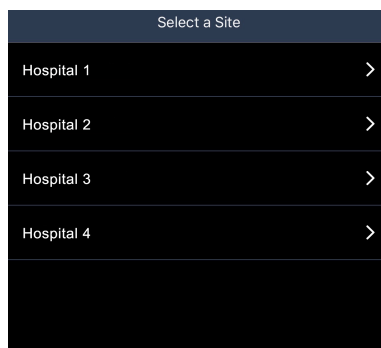
Figure 2-1 Select a Site

2   To add patient sessions, touch **Add Monitoring Session**. The add sessions icon can be selected at any time from the **Current Monitoring Sessions** window.

Figure 2-2 Add Monitoring Session

3   Scroll through the list to find a patient, or search by device name, serial number, or location.

4   Touch the plus icon to add the patient monitoring session to your list of sessions.

5   To confirm, touch **Add**. To return to the patient monitoring list, touch **Cancel**.

2.1.1   Remove Patient Monitoring Session

A patient monitoring session can be removed from the list of current monitoring sessions by swiping left and touching the red trash can icon.
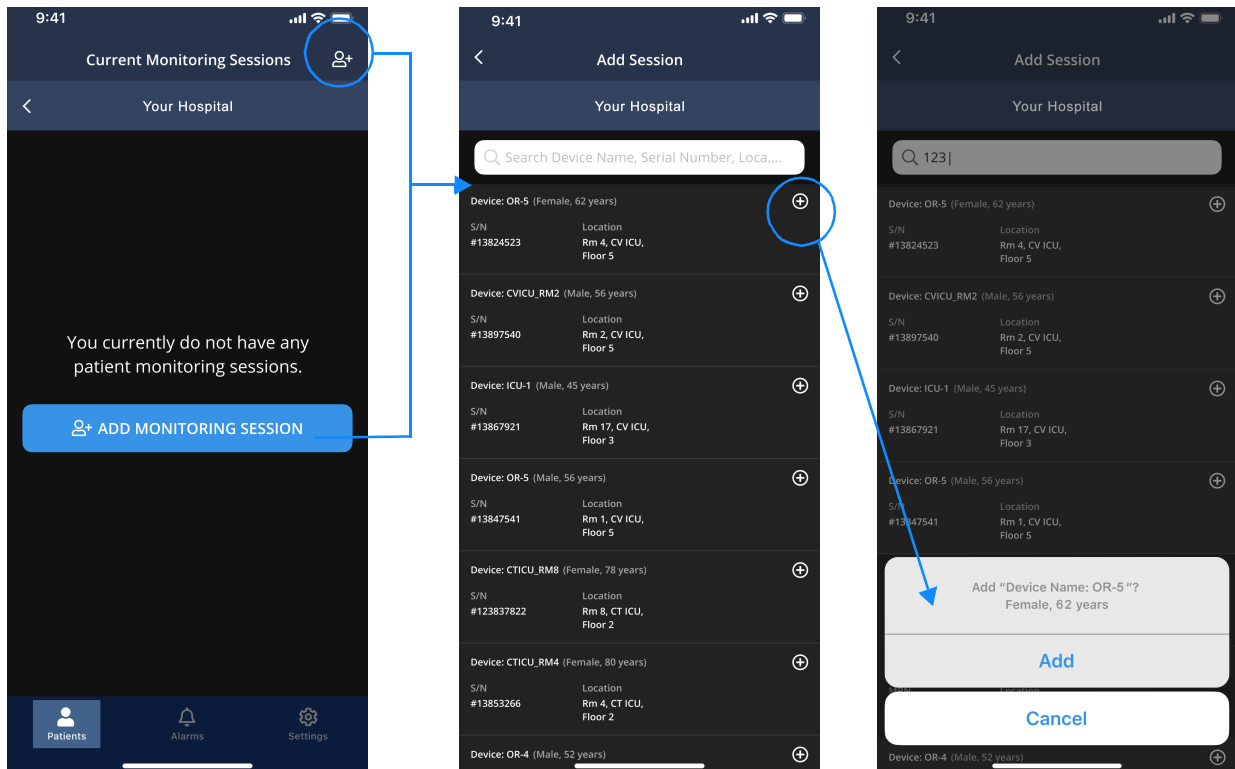

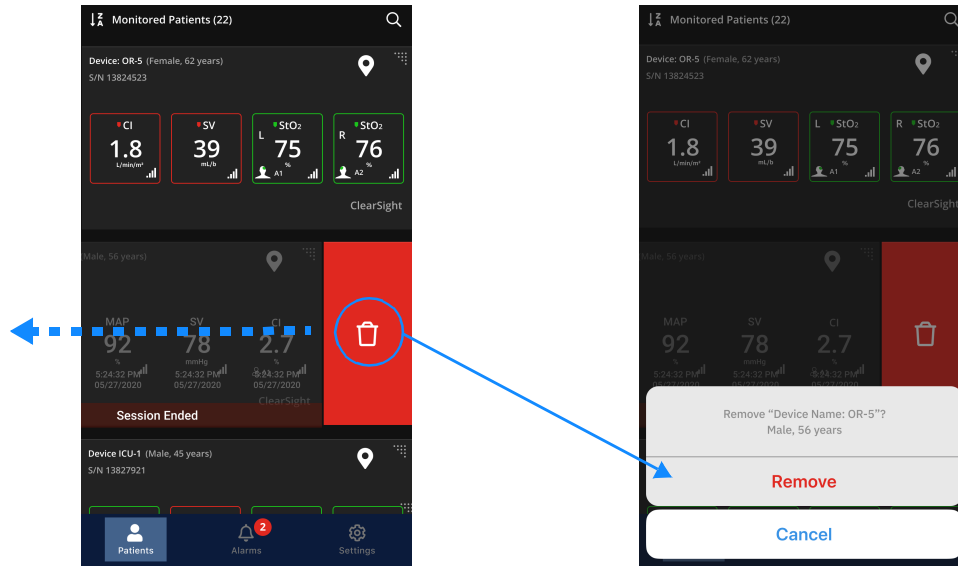**Figure 2-3 Delete Viewfinder Remote Session**

Touch **Remove** to confirm, or **Cancel** to return to the Current Monitoring Sessions.

2.2   Viewing Patient Monitoring Sessions

To select and view details on an individual patient monitoring session, touch anywhere on the patient's summary tile from within the **Current Monitoring Sessions** screen.
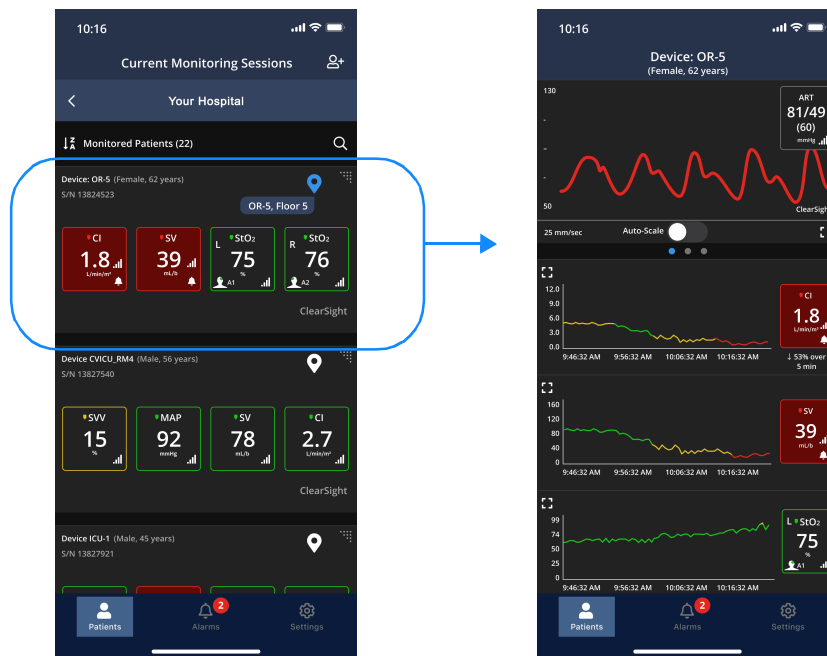

Figure 2-4 View Individual Patient Monitoring Session

The monitoring views on Viewfinder remote app are similar to those found on the HemoSphere advanced monitor. Four key parameters along with a live blood pressure waveform, when available, can be viewed on each monitor view. Parameter tiles are located on the right side of most monitoring screens. Individual patient sessions can be viewed in three ways: graphical trend, tabular trend, and cockpit. To change between these three monitor views, swipe across the screen.

2.2.1   Parameter Tile

A parameter tile displays the parameter name, value, and units. The color of the target indicator and parameter tile outline indicate the patient's current status. The color changes as the patient's status changes. Alarming parameters are shaded red. The tiles may display the following additional information:
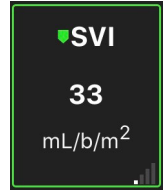
Alarm status: If there is a physiological alarm for that parameter, the tile is shaded red and a bell symbol appears.

StO$_2$ sensor channel and location: For parameter tiles displaying tissue oximetry (StO$_2$), the channel and sensor location is displayed. Refer to the HemoSphere advanced monitor operator's manual for more information.

SQI bar: The SQI (signal quality index) bar is a reflection of the signal quality during tissue oximetry or non-invasive monitoring. Signal quality is based on the near-infrared light tissue perfusion index for tissue oximetry or the quality of the pressure waveform signal from the plethysmograph sensor of the finger cuff. Refer to the HemoSphere advanced monitor operator's manual for more information on these indicator levels.

NOTE   If the SVV Filtering Exceeded Indicator symbol is displayed on the HemoSphere advanced monitor's SVV parameter tile during monitoring, it will not be displayed on the Viewfinder remote app. During times of high pulse rate variability, confirm the SVV value directly on the HemoSphere advanced monitor to check if this indicator is active.

2.2.2   Alarms/Targets

Touch any parameter tile to access alarm/target settings for that parameter. See "Physiological and Technical Alarms" on page 12 for more information on alarms.

NOTE   If the application is running in the background, there is no push notifications for any patient alarms or fault messaging.

All alarm/target settings are configured on the connected HemoSphere advanced monitor.

2.2.3   Graphical Trend

The graphical trend screen displays the current status and history of monitored parameters. When the target range for the parameter is enabled, the graph color codes the plot line, green indicating within the target range, yellow indicating the value is outside the target range but within the physiological alarm range, and red indicating the value is outside the alarm range. The colors match those of the clinical target indicator (parameter tile outline) on the key parameter tiles in the graphical trend graph when targets are enabled for the parameter.

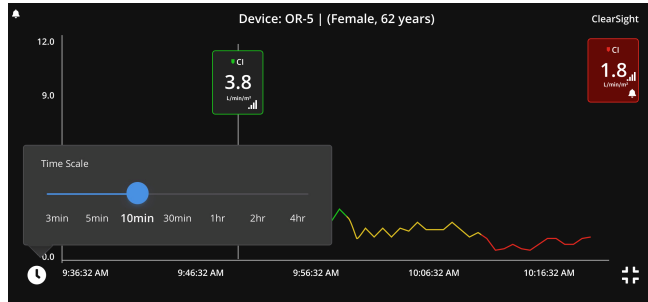Touch the expand icon [icon] to see a full screen view of any graphical trend parameter tile.

Figure 2-5 Full screen graphical trend parameter tile with time scale menu

Touch the clock icon [icon] to change the **Time Scale** (x-axis scale) for the monitored data.

Touch the trend graph at any particular time point along the plot to display the numeric value of the monitored data.

Touch the reduce icon [icon] to return to the main graphical trend screen.

To access other patient monitoring screens, swipe across the screen.

2.2.4   Cockpit

This monitoring screen, shown to the right, displays large parameter globes with the values of the parameter being monitored. Cockpit parameter globes graphically indicate alarm/target ranges and values, and utilize needle indicators to show where the current parameter value falls. Similar to standard parameter tiles, the value within the globe flashes when the parameter is alarming.

The key parameter globes shown on the cockpit screen display a more complex target and alarm indicator than the standard parameter tile. The full display range of the parameter is used to create a gauge from the graphical trend minimum to maximum settings. A needle is used to indicate the current value on the circular gauge scale. When target ranges are enabled, red (alarm zone), yellow (warning target zone), and green (acceptable target zone) are used to indicate the target and alarm regions within the circular gauge. When target ranges are not enabled, the circular gauge area is all gray in color and target or alarm indicators are removed. The value indicator arrow changes to indicate when the values are out of the gauge scale limits.
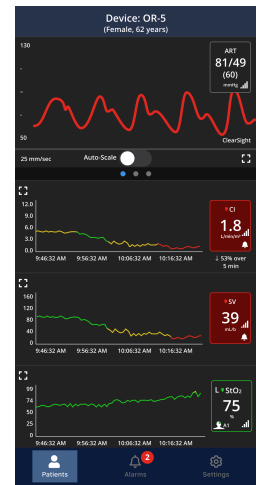
2.2.5   Tabular Trend

The tabular trend screen displays selected key parameters and their history in a tabular format. The parameter tile is displayed on the right side of each parameter panel. Touch the expand icon [icon] to see a full screen view of any tabular trend parameter panel.

Touch the clock icon [icon] to change the **Time Scale** (x-axis scale) for the monitored data.

Touch the reduce icon [icon] to return to the main tabular trend screen.

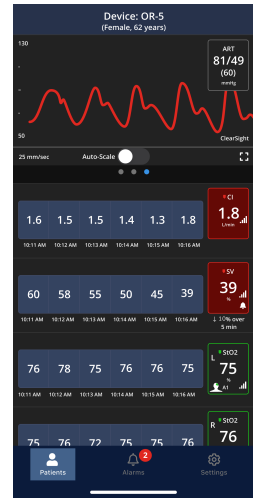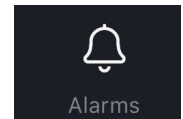## 2.3 Physiological and Technical Alarms

All patient monitoring session alarms can be viewed on the Alarms tab. Alarms are categorized by patient, by **Active** or Old, and by physiological (**Parameter Alarms**) or technical (**Fault Alarms**).

CAUTION	Viewfinder remote app is not intended to replace the alarm system on the corresponding HemoSphere advanced monitoring platform. Alarms are not generated or managed on the Viewfinder remote application. Confirm all alarms directly on the HemoSphere advanced monitor which serves as the primary source for alarm conditions.

The HemoSphere advanced monitor records both technical and physiological alarms.

- Physiological alarms: These are set by the clinician and signify the upper and/or lower alarm ranges for configured key continuous parameters.
- Technical alarms: This alarm signifies a device fault or alert.

Physiological or parameter alarm thresholds are set on the connected HemoSphere advanced monitor. The alarm settings for a key parameter can be viewed by touching the parameter tile. All technical alarms have an associated text displayed on the status bar of the monitor. The fault or alert text is also displayed within the Alarms tab of the Viewfinder remote app. For a full list of technical alarms, refer to the HemoSphere advanced monitor operator's manual.

2.3.1   Silence Individual Active Alarms or Patient Session

A patient monitoring session or individual alarm is silenced by swiping left and touching the yellow alarm icon. 🔔

IMPORTANT NOTE   Silencing alarms on the Viewfinder remote application does not affect alarm settings on the HemoSphere advanced monitor. When alarms are silenced within Viewfinder remote, the connected monitor still has audible alarms.
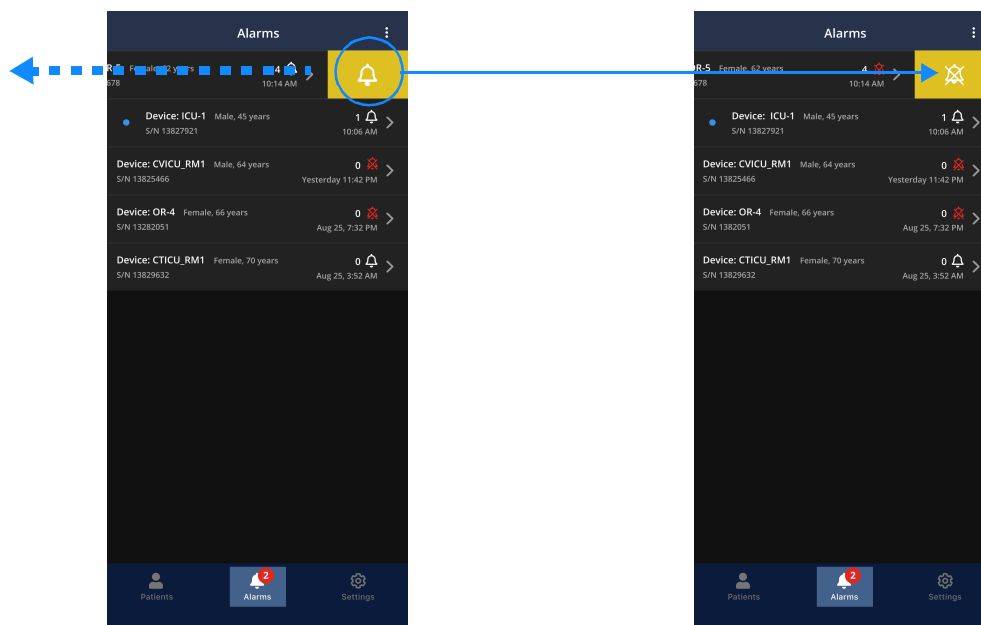

Figure 2-6 Silence Active Alarm

If a patient monitoring session is silenced, all parameter tiles display an alarm silence icon. To silence alarms for all patient monitoring sessions, toggle the **SILENCE ALL** switch on the **Settings** tab. See "Alarm Settings" on page 14.
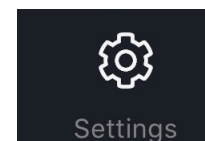
<div style="text-align: right">

3

</div>

Viewfinder Remote App Settings and Troubleshooting

Contents

3.1   Global Settings

From the **Settings** tab, all alarms can be silenced and current software version information, help, and policies can be obtained.

3.1.1   Alarm Settings

To silence all alarms, toggle the **Alarms/Faults** switch to green under **SILENCE ALL**.

3.1.2   System Options

Touch **About** to view the software version.

3.2   Help and Policies

This section on the **Global Settings** screen lists the following:

- Terms of Use
- Privacy Statement
- Help

For more information on help, see the following section.

3.3   Troubleshooting

The help topics outlined below and displayed in the app Help section are associated with common error conditions.

The Viewfinder hub is intended to operate across the hospital network. Unanticipated failure or alteration of network components (including but not limited to: disconnection or malfunctioning of a networking device/switch/router/ethernet cable) may result in loss of connectivity of Viewfinder hub.

3.3.1 Quality of Service (QoS)

The Viewfinder remote application is designed to run on commercial mobile devices and utilizes the mobile device's cellular or Wi-Fi connection to receive data from a connected HemoSphere advanced monitor. The Viewfinder remote design leverages the QoS and security measures of the host mobile device's wireless sub-system to assures timely, reliable, accurate, and secure information transfer.

The host mobile device cellular or Wi-Fi signal strength and throughput are dependent on various conditions including: relative location of the device to the cellular service provide or Wi-Fi infrastructure, quality of cellular service, quality of Wi-Fi service, other networks or interfering radio signals in the same or adjacent channel/frequency, and network disruptions. When installed on representative commercially available mobile devices, the Viewfinder remote app exhibits normal functionality with a 20dBm unintended signal broadcast at an adjacent channel.

In the event of network delay or disruption between host mobile device and connected HemoSphere monitor, the Viewfinder remote application notifies the user of the issues causing delay in receipt of data. If incoming messages are delayed by more than 8 seconds from the time they were transmitted from the HemoSphere advanced monitor, or there are any network disruptions, alert messages indicating the type of network or data latency issue are displayed to the user on Viewfinder remote app.

3.3.2 Error Messages

Table 3-1 System Errors

Message	Possible Causes	Suggested Actions
Connectivity lost. Viewfinder network unreachable.	Poor Internet connection Poor cell signal strength	Move to a location that has better Wi-Fi or cellular reception Check Internet settings Contact your **Viewfinder technical administrator** or **superviso**r to verify Viewfinder Hub and HemoSphere monitor connections If problem persists, contact Edwards technical support
Connectivity lost.	Poor Internet connection Poor cell signal strength	Move to a location that has better Wi-Fi or cellular reception Check Internet settings Contact your **Viewfinder technical administrator** or **superviso**r to verify Viewfinder Hub and HemoSphere monitor connections If problem persists, contact Edwards technical support
Connectivity has been lost, please try closing the app and restarting or using the Help feature under settings.	Poor Internet connection Poor cell signal strength Viewfinder Hub disconnected	Move to a location that has better Wi-Fi or cellular reception Check Internet settings Check Viewfinder Hub Server Contact your **Viewfinder technical administrator** or **superviso**r to verify Viewfinder Hub and HemoSphere monitor connections If problem persists, contact Edwards technical support
You are already logged in on another device. Please logout from other device and try again.	User account is currently active on another device	Logout from same account on other device and try again If problem persists, contact Edwards technical support

3.3.3   Additional Information

For Information about:	
Access to additional hospital accounts	Please contact your hospital's Viewfinder technical administrator or contact Edwards technical support at Tech_Support@edwards.com to request access to an additional hospital site.
Viewfinder remote app hardware and OS software compatibility	Viewfinder Remote is compatible with iPhone iOS software version 14.4 and Android OS software version 10.0
Locating patient session	Please check to ensure your patient is being actively monitored using an Edwards HemoSphere advanced monitoring platform. If your patient is being actively monitored and you are still unable to pair with your session, please contact your local Viewfinder technical administrator or Tech_Support@edwards.com
Audio for faults/alarms	There are multiple methods to silence audio for alarms: 1. Silence a patient session: From the Alarms tab, swipe left on a patient session to silence all alarms and faults for that session. 2. Silence active alarms/faults: From a patient's individual alarm log, swipe left to silence an active alarm from continuing to sound. 3. **"Silence All"** under Global Settings: Switching the toggle under "Silence All" to 'on', indicated by a green switch, will disable audible alarms and faults from occurring for all patients you are monitoring within the app.
Modifying parameters	Viewfinder remote app currently does not support modification to the key parameter selection. It is a mirror of what is currently being displayed on the connected HemoSphere advanced monitor. If you wish to select a different parameter, please modify the parameters in the corresponding HemoSphere advanced monitor.
Alarm threshold settings	Viewfinder remote app currently does not support modification to the alarm threshold settings. The alarm threshold settings displayed through Viewfinder remote app match alarm settings configured on the connected HemoSphere advanced monitor. If you wish to make modifications to the alarm threshold settings and how alarms are received within the app, please modify these settings in the corresponding HemoSphere advanced monitor.

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