

# VISENSIA®

**Version 4**

**Clinical  
User Guide**

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## Introduction

This guide contains all the information you need to operate Visensia.

Visensia is intended for use by trained medical personnel and assumes prior knowledge of the operation of multi-parameter patient monitors.

The day-to-day administration of the system is detailed in the Administration and Configuration User Guide (Part No. 011-0710-LMAN).

## Visensia Overview

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Visensia is an advanced physiological monitoring system that monitors vital signs to provide early warning of patient deterioration.

Visensia has been designed as an accessory to standard patient monitors or medical information systems. Visensia is a client-server computer program, with the client running in a web browser as a Web Application.

Visensia operates by forming an aggregate score of patient status based on five vital signs:

- Heart Rate, Respiratory Rate, Temperature, Blood Pressure, and Arterial Oxygen Saturation.

The aggregate score, the Visensia Index (VSI), is displayed on a scale of 0.0 - 5.0, with 0.0 representing the normal end of the scale and 5.0 representing extreme physiological deterioration.

An audible and visual alert is provided when the Visensia Index (VSI) exceeds a defined threshold value.

The Visensia Index is calculated whenever new data is received.

## Visensia Index (VSI)

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The Visensia software calculates the Visensia Index (VSI) based on a non-linear combination of up to five vital sign parameters: heart rate, arterial oxygen saturation, respiration rate, temperature, and blood pressure. The Visensia Index works by comparing the patient's vital signs against a model of normality for a population of patients from a similar environment. The Visensia Index represents a single measure of the patient's condition.

The Visensia Index will update every time new physiological data is received for that patient.

## Intended Use

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Visensia with alert is intended to be used as a Clinical Decision Support System (CDSS), by Clinicians caring for non-paediatric patients routinely monitored by multi-parameter devices.

Visensia is indicated to receive data from multi-parameter devices, Electronic Medical Records (EMR) and Clinical Information Systems (CIS), and to provide the Clinician with a patient status index (Visensia Index) based on a weighted average of five vital signs: heart rate, respiration rate, temperature, oxygen saturation and blood pressure.

The Visensia Index is a single measure of a patient's condition and represents how different the patient's vital signs are with respect to normality enabling recognition of patient deterioration to help drive clinical management. When a Visensia alert has activated, it means that the Visensia Index has reached and/or surpassed the default threshold, highlighting the patient's condition to the clinician for an appropriate response.

Visensia is an adjunct to and is not intended to replace any part of the hospital's device monitoring or electronic data management systems.

## Safety Information

Users should read and adhere to all Warnings, Cautions and Notes listed here and in the associated sections throughout this manual.

**Do not use Visensia before readings these instructions**

### Warnings:

#### Intended Use

- ▲ Visensia software must not be used outside of its intended use.
- ▲ Visensia software is not for paediatric use.
- ▲ Visensia is an adjunct to and is not intended to replace vital sign monitoring.

#### Alerts

- ▲ When Visensia Alerts are silenced, there is no notification of a potentially clinically significant change in the patient’s status. Observe the patient by other means when VSI Alerts are silenced.

### Cautions:

#### Intended Use

- ▲ Federal (U.S.) law restricts this system to sale by or on the order of a physician.

#### Alerts

- ▲ Vital Sign Warnings are not intended to be used as a primary alert mechanism.
- ▲ Vital Sign Warnings are not a replacement for any primary alerting systems or procedures already in place.

#### General

- As a Web application, Visensia is reliant on running via a compatible Web Browser with good network connectivity to ensure access to patient data.
- Visensia has been verified on the following browsers and versions.

Compatible Web Browsers	Verified Version
Chrome	V87
Firefox	V84
Microsoft Edge	V87

Your system administrator will provide you access to Visensia via a dedicated display or a web link for your computer or laptop.

- If you cannot access the system due to poor network connectivity, attempt to login via another workstation with known network connectivity.

**Note:** While browsers remain largely compatible between versions, full compatibility can only be guaranteed with the listed version.

**Note:** The various dashboards as used by Visensia have been designed to work best on a desktop computer or laptop with a minimum screen resolution of 1024 x 768.

## Data Protection/ Privacy

Clinicians and other users of the Visensia system should be aware that, in collecting and recording patient names and data, they are responsible for complying with all applicable data protection and/or privacy laws and regulations.

**Note:** All patient names and data used throughout this guide are fictitious.

## Trademarks

Visensia® is a registered name of OBS Medical.

## Licensing

Visensia uses a licensing system that provides copy protection, security, algorithm functionality and allows registered clinical users to login and view monitored patients via the various dashboards.

An activated license determines how many beds can be monitored at any given time. It is important to ensure the Visensia system has enough licenses in place for all monitored beds.

If your system admin has not yet activated the software license, clinical users will not be able to login to view the dashboards.

If the activated licence has expired, or there are more beds monitored than adequately covered by a license, then the Visensia Index will not be calculated. A yellow border will be displayed – highlighting the Visensia Index cannot be calculated for the additional beds.

ICU		3	0 VSI Alert
BED-08 1008 HARRIS, Joanne 0.8 No Alert ▲ (2)	BED-03 1003 GONÇALES, Raúl 0.1 No Alert	BED-11 1011 EDWARDS, Mark No Alert	
BED-05 1005 O'GARA, Rónán 0.2 No Alert ▲ (1)	BED-06 1006 WRILEY, Lisa 0.0 No Alert	G-2020 12346789 DOE, John No Alert	
BED-01 1001 SMITH, Simon 0.1 No Alert ▲ (2)	BED-07 1007 KERR, Melissa 0.1 No Alert	Manually Add Patient	
BED-02 1002 JARVIS, Mathew 0.1 No Alert	BED-09 1009 CLEEVES, Ann 0.0 No Alert		
BED-04 1004 STEPHENS, John 0.1 No Alert	BED-10 1010 SHARP, Lesley No Alert		

**Note:** Please inform your System Administrator if you are unable to access the system due to Licence Invalid message.

**Note:** Please inform your System Administrator if you notice the borders for some patient tiles displayed in yellow, indicating the existing Algorithm License requires a review as the VSI Index is not being computed due to a License issue.

**Note:** Algorithm functionality which is dependent on licensed regional requirements will be outlined during the installation and configuration process.

**Note:** Images used within this manual are provided for reference purposes only. Screens may differ based on system configuration and available parameters.

# Getting Started

## Logging In

Depending on your organisations IT security policy, you will be issued login credentials.

Typically, you will receive a unique **Username** and **Password**.



Input your login credentials as required and press **Login**.

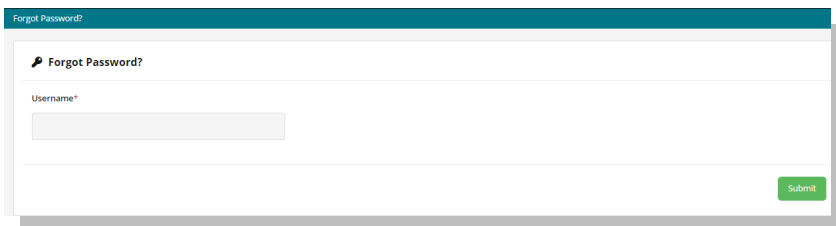
You should now be able to access the system and its various features as per the User Role assigned to you.

You can **Logout** of the system at any time by selecting the logout button, located top right of every dashboard.

## Forgotten Password

If you cannot recall your Password, select **Forgot Password** link.

1. Type in your **Username** and press **Submit**



2. A password reset link will be sent to your registered email. Navigate to your email, select the reset password link, and follow the instructions as required
3. Using your new login credentials attempt to login again

**Note:** Depending on the systems configuration the “Forgot Password” link maybe disabled. You will need to contact your System Administrator to reset your password if this is the case.

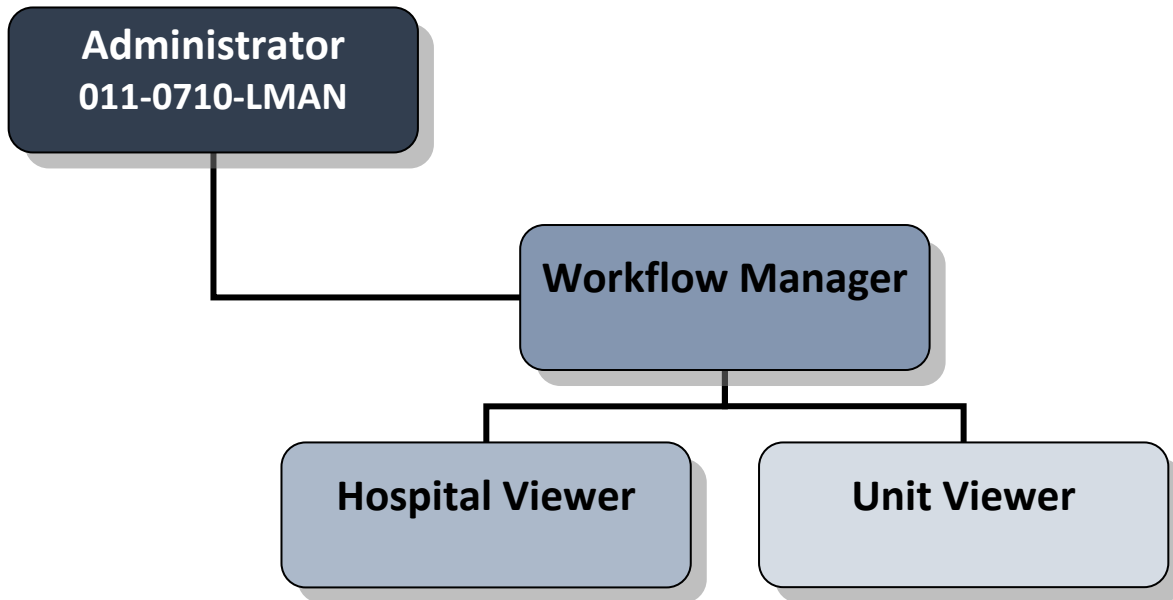
**Note:** If you have forgotten your Username, you will need to inform your System Administrator to reset your account and password as per your sites IT protocols.

# Users

## User Roles

All system Users are allocated a **Role** which controls the level of access they have to the various functions and scope of the system.

Roles are arranged by hierarchy, allowing certain users to administer lower levels of users.



Role	Scope
Administrator	Manage Installation, Licences, Inputs, Configurations, Users, Default Algorithm and Vitals Thresholds ( <b>Part No. 011-0710-LMAN</b> )
Workflow Manager	Staff Assignment, ADT Functionality, Clinical Workflow
Hospital Viewer	Clinical Workflow – Multiple Care Units, ADT Functionality
Unit Viewer	Clinical Workflow – Single Care Unit

Each **Role** has specific functions they can action on the system as outlined in Table 1: Roles / Functions Matrix.

Table 1: Roles / Functions Matrix

	Administrator	Workflow Mgr	Hospital Viewer	Unit Viewer
<b>Functions</b>				
<b>Administration:</b>				
Manage Licences	X			
Manage Users	X			
Manage Care Units	X			
Manage Staff assigned to Care Units	X	X		
Manage Patients / Beds assigned to User		X		
<b>Patient Information:</b>				
View Visensia Index		X	X	X
View Vital Sign Data (Vitals / Trend Data)		X	X	X
View Notifications (VSI Alerts / Vitals Warnings)		X	X	X
<b>Manage VSI Alerts:</b>				
Adjust Default VSI Alert Threshold	X			
Silence VSI Alert		X	X	X
Clear VSI Silenced Alert		X	X	X
<b>Manage Vital Signs:</b>				
Manually Input Vital Sign Data		X	X	X
Adjust Vitals Upper / Lower Notification Thresholds		X	X	X
Adjust Vital Sign Timeouts		X	X	X
<b>ADT Functionality (Standalone):</b>				
Manually Admit Patient			X	
Manually Transfer Patient		X	X	X
Manually Discharge Patient		X	X	X
Edit Patient Demographic Information		X	X	X
<b>Dashboards:</b>				
View Multiple Care Units – ‘Acuity List’		X	X	
View Single Care Unit – ‘Acuity List’			X	X
View ‘My List’ for assigned Patients / Beds			X	X
View ‘Drill Down’ for selected Patient / Bed		X	X	X
View “Protected Health Information”		X	X	X

**Note:** The above listed options are configured on a per user basis to suite existing workflows. So, each role can have the function enabled or disabled as required.

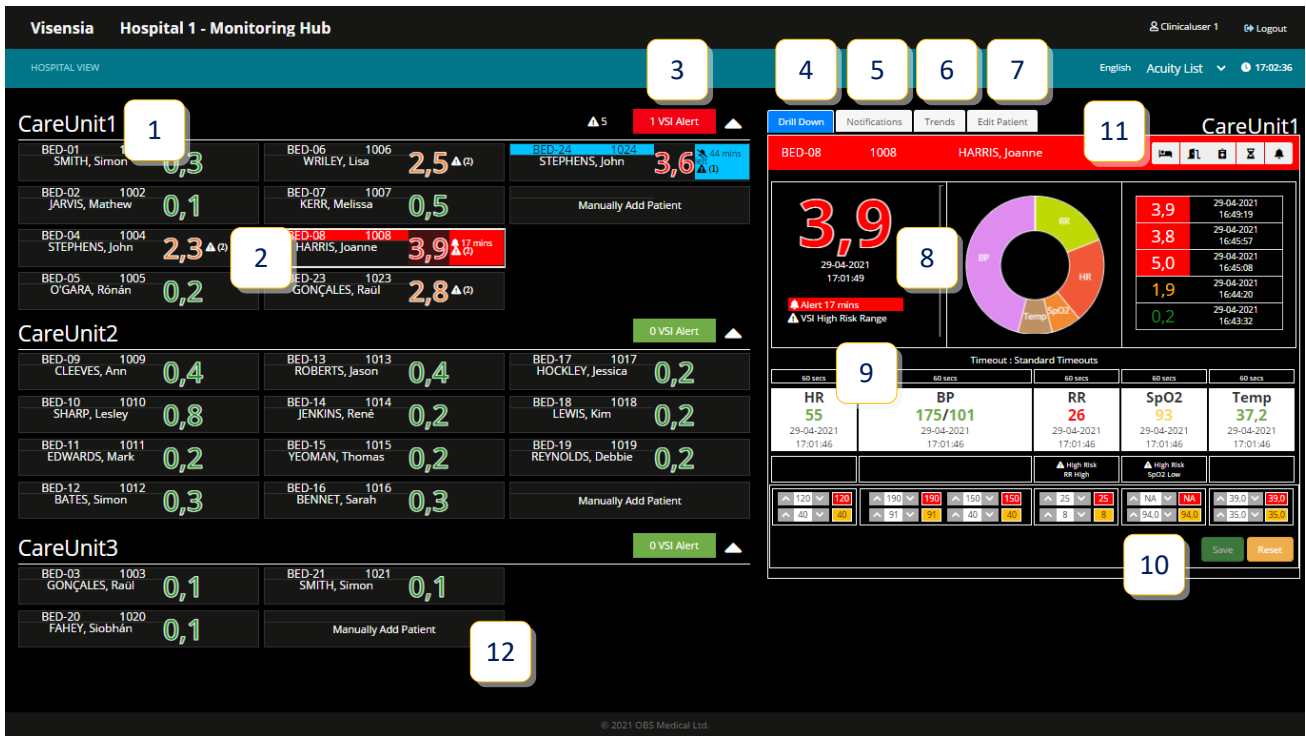


# Dashboards

This section describes the two types of Visensia dashboards and the main elements and features of each.

- **Hospital Viewer Dashboard**
  - Display **Patient Information Tiles** for multiple Care Units
- **Unit Viewer Dashboard**
  - Display **Patient Information Tiles** for a single Care Unit

By default, the dashboards are laid out in the following format:



1. Patient List (Acuity List / My List)	2. Patient Information Tiles
3. VSI Alert Notice Box	4. Drill Down
5. Notifications Tab	6. Trends Tab
7. Edit Patient Tab	8. VSI Chart
9. Vital Signs Chart and Timeouts	10. Vital Sign Threshold Settings
11. Drill Down Toolbar	12. Unit Specific Manual Admit Patient Button

<b>Warnings</b>	▲ Visensia software must not be used outside of its intended use
	▲ Visensia software is not for paediatric use
	▲ Visensia is an adjunct to and is not intended to replace vital sign monitoring

**Note:** As a Web application, Visensia is reliant on running via a compatible Web Browser with good network connectivity to ensure access to patient data.

**Note:** If you cannot access the system due to poor network connectivity, contact your administrator or attempt to login via another workstation with known network connectivity.

## Patient List

The **Patient List** allows you to display all received **Patient Information** for Care Units assigned to you, via the **Acuity List**, or to display individual Patients / Beds assigned to you via the **My List** option.

You can switch between **Acuity List** and **My List** as and when required by simply selecting the appropriate list from the **Patient List** drop down.

## Acuity List

The **Acuity List** displays all **Patient Information Tiles** for an assigned Care Unit.

The **Hospital Viewer Dashboard** displays multiple Care Units when set to **Acuity List**.



The **Care Units** and their associated **Patient Information Tiles** can be collapsed or expanded using the **^** or **v** to allow you to focus on a single Care-Unit at a time or to have an overview of all monitored patients.

The Patient List provides an overview of all monitored patients within a Care-Unit.

Selecting a **Patient Tile** will bring up more detailed information via the **Drill Down** display.

- **VSI Chart**
- **Vitals Chart**
- **Notifications Tab**
- **Trends Tab**
- **Edit Patient Tab**

**Note:** The Acuity List can be configured to automatically rank patients according to the **VSI, Admittance Time** or **Bed**.

**Note:** A **scroll bar** will automatically appear for Users who have been assigned multiple Units with large amounts of monitored patients so that they can easily review patients and their VSI status.

## My List

The **My List** allows you to display all Patient Information Tiles for Patients assigned to you.

- If Patients from Multiple Care Units are assigned to a User, they are not separated by Care Unit as seen in a Hospital Viewer Dashboard

The screenshot shows the Visensia Hospital A (London) interface. At the top, there is a navigation bar with 'Hospital A (London)' and a user profile 'Brett Nicolle'. A dropdown menu labeled 'My List' is highlighted in yellow. Below this, a grid of six patient information tiles is displayed, each showing a patient's name, bed number, and a numerical value with a trend indicator. The detailed view on the right for patient O'GARA, Rónán (1005) shows a large '1.7' value, a circular gauge chart, and a list of historical values. Below the gauge are five vital sign monitors: HR (58), BP (109/68), RR (19), SpO2 (95), and Temp (39.5). At the bottom, there is a row of status indicators for various parameters.

**Note:** The **My List** is only available if a Workflow Manager role is enabled and proactively maintained. Otherwise, this feature is disabled by default.

## Patient Information Tile

During normal operation, all dashboards will list patient information in the following format.

Location	Patient Identifier	VSI		- VSI Alert Icon, and Status duration	Border
LAST NAME, First Name		-- (0.0 to 5.0)		- VSI Silenced Alert Icon, and Time remaining	
				- Vitals Warnings Icon (No# of warnings)	

A white border will be displayed for a patient selected for viewing via the **Drill Down Display**. The patient information tile will change colour according to the VSI Alert Status.

Patient Tile Information (Location / Patient Identifier/ VSI)	
	<b>Red Fill</b> - Active VSI Alert and duration of active VSI Alert in HH:MM:SS
	<b>Blue Fill</b> - Silenced VSI Alert and time remaining before setting timeout in X Mins left
Border Information	
	<b>White Border</b> – Patient Selected for <b>Drill Down Display</b>
	<b>Yellow Border</b> – Algorithm License Expired or Exceeded Use Limit
<b>(--)</b> Is displayed when there is no value to be displayed	

The VSI Alert status is always displayed. The Vitals Warning Icon will only appear if a defined Vital Sign Threshold is breached.

**Note:** Visensia requires a minimum of three vital signs to calculate the Visensia Safety Index - VSI. A **Grey Marks (--)** will be displayed when the system is unable to calculate a Visensia Safety Index.

**Note:** Patient Name and Patient ID can be configured to be hidden or displayed according to organisations policy.

**Note:** Users with the authority to **“Input Patient Information”** will still be able to see the Patient Name and Patient ID from the **Edit Patient Tab** even if the PHI information is configured as hidden on the Patient List and Drilldown for that User.

<b>Warnings</b>		Visensia software must not be used outside of its intended use
		Visensia software is not for paediatric use
		Visensia is an adjunct to and is not intended to replace vital sign monitoring

## Drill Down

The **Drill Down** display is a fixed area on both the **Hospital Viewer** and **Unit Viewer** dashboards. When a patient is selected from either the **Acuity List** or **My List**, the **Drill Down display** will automatically populate.

1. VSI Index and Alert Status	2. Patient Trend Arrow
3. VSI Contributions Chart	4. VSI History Table
5. Drill Down Tool Bar	6. Current Vital Sign Timeout for VSI
7. Vital Sign Chart	8. Vital Sign Threshold Warnings
9. Vital Sign Threshold Options	



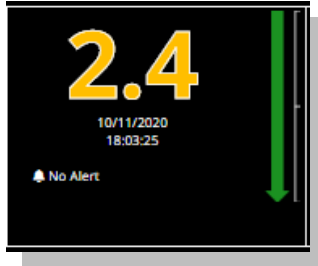
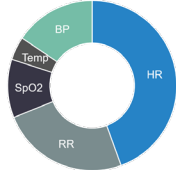
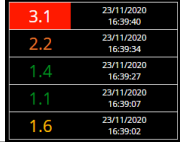
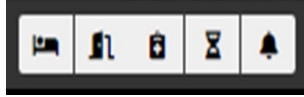




The **Drill Down** display provides additional information when reviewing a patient using the following tabs:

- **Notifications**
- **Trends**
- **Edit Patient**

**Note:** Visensia dashboards do not support zoom as part of the web application. Zooming may distort or hide certain features so display should be left at 100%.

## Drill Down

The Drill Down provides a snap overview of the patient and is made up of the following:

<ul style="list-style-type: none"> <li>○ <b>VSI Index</b></li> </ul> <p>The Visensia Index is displayed on a scale of 0.0 - 5.0, with 0.0 representing the normal end of the scale and 5.0 representing extreme physiological deterioration, along with the date and time of the calculation.</p>		
<ul style="list-style-type: none"> <li>○ <b>Patient Trend Arrow</b></li> </ul> <p>The PTI is an index, generated to measure deterioration (Red Arrow) or improvement (Green Arrow) in patient condition, based on the VSI, over a defined period of time. The larger the arrow the greater the change during the defined time period.</p>		
		
<p>Deterioration – Red Arrow</p>	<p>No Change</p>	<p>Improvement – Green Arrow</p>
<ul style="list-style-type: none"> <li>○ <b>VSI Contributions Chart</b></li> </ul> <p>Shows how much each current vital sign has contributed to the total amount of the Visensia Index; the larger the pie-slice the greater the contribution.</p>		
<ul style="list-style-type: none"> <li>○ <b>VSI History Table</b></li> </ul> <p>Shows a list of the last five VSI calculations along with the date and time for each calculated risk index.</p>		
<ul style="list-style-type: none"> <li>○ <b>Drill Down Tool Bar</b></li> </ul> <p>The drill down tool bar allows you carry out various functions via the main dashboard by displaying additional dialogue box for the selected function.</p>		
	<p><b>Transfer Patient</b></p>	<p>Select the Transfer Patient icon to reassign the selected patient to a new location within the Visensia System.</p>
	<p><b>Discharge Patient</b></p>	<p>Select the Discharge Patient icon to discharge the selected patient from the Visensia System.</p>
	<p><b>Manual Observations</b></p>	<p>Select the Manual Observations icon to manually document a set of vital sign observations for a selected patient.</p>
	<p><b>Vital Sign Timeouts</b></p>	<p>Select the Vital Sign Timeout icon to manually adjust the selected patients vital sign timeouts from a configured selection to suite the patients type of monitoring. i.e. Continuous, Episodic or Hybrid.</p>



### VSI Alert

Select the VSI Alert icon to either Silence an active VSI Alert, or to clear an Silence status for a patient as required.

- **Vitals Chart**

Displays the current vital signs for the patient, their values and the date and times at which the vital signs were recorded.

- **Vital Sign Warning Notifications**

The vital sign warning notifications are displayed below the Vitals Chart

- **Vital Sign Warning Thresholds (Unit & Patient Specific)**

The Upper and Lower vital sign warning thresholds area displayed below the Vitals Chart

**Note:** The **Vital Sign Warnings** are explained in more detail via **Vital Signs Warning section**.

## Notifications

The Notifications table details all historic VSI Alerts, VSI Silence Selections and Vital Sign Warning Threshold Breaches.

## Trends

The Trends Tab allows you to view all historic trend information for the VS-Index and Vital signs of a monitored patient.

- **VS-Index Trend Graph**

Shows a history of the index value for the patient, over a period of time, in graph form.

- **Vitals Trend Graphs**

Shows a history of the monitored vital signs for the patient, over a period of time in graph form.

You can configure the system to display the Trend Graphs and associated Upper/Lower Threshold limits using the **Trend Graph Configuration Icon**.

## Edit Patient

The Edit Patient Tab displays the selected Patients demographic information, VSI Warning Thresholds and the functionality to Transfer or Discharge a patient.

## VSI Warning Thresholds

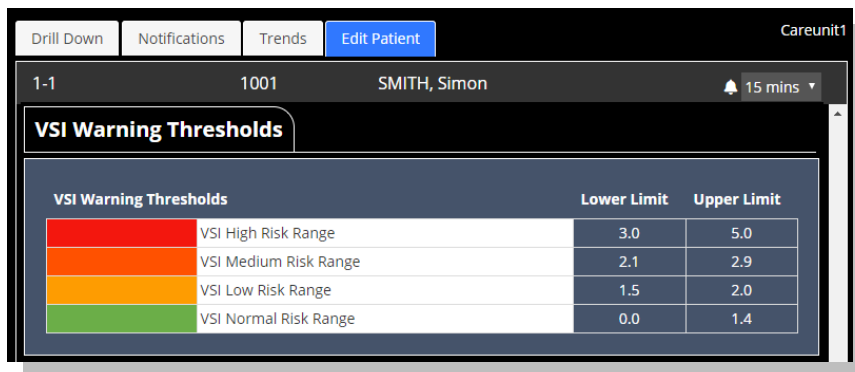
The VSI is **Colour Coded** according to the **VSI Warning Threshold Ranges** as configured by your Administrator for each monitored Care Unit. Each threshold range can be **enabled or disabled** as required.

The thresholds provide a clear indication of a patient’s risk of deterioration. The default settings are agreed and configured during installation and set-up according to clinical guidance and hospital protocols.

Enabled	VSI Warning Thresholds	Lower Limit	Upper Limit
✓	<b>High Risk Range</b>	<b>3.0</b>	5.0
✓	<b>Medium Risk Range</b>	2.1	2.9
✓	<b>Low Risk Range</b>	1.5	2.0
✓	<b>Normal Risk Range</b>	0.0	1.4

- A **VSI Alert** is generated when the **lower limit of the VSI High Risk Range Threshold** is reached or exceeded.

You can view the Care-Units default VSI Warning Thresholds using the **Drill Down display – Edit Patient TAB**.



**Note:** Any rapid increase in the VSI as highlighted by the Patient Trend Arrow, across Normal, Low and Medium threshold ranges, warrants further investigation and review of the patient’s status at the bedside.

**Note:** The VSI Warning Thresholds for High, Medium, and Low risk can only be amended by your Administrator.

## VSI Alerts

All dashboards will provide a **visual alert** when the **Visensia Index equals or exceeds the defined VSI High Risk Warning Threshold**.

- The **Patient Information Tile border** will begin to **flash red**.
- The VSI Alert status will change to an VSI Alert Icon and display how long the **Alert Status has been active for**.



**Note:** How the **VSI Alerts** and **VSI Warning Thresholds** are responded to are defined by your own Organisation / Care Units protocols.

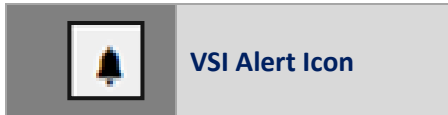


## Silence a VSI Alert

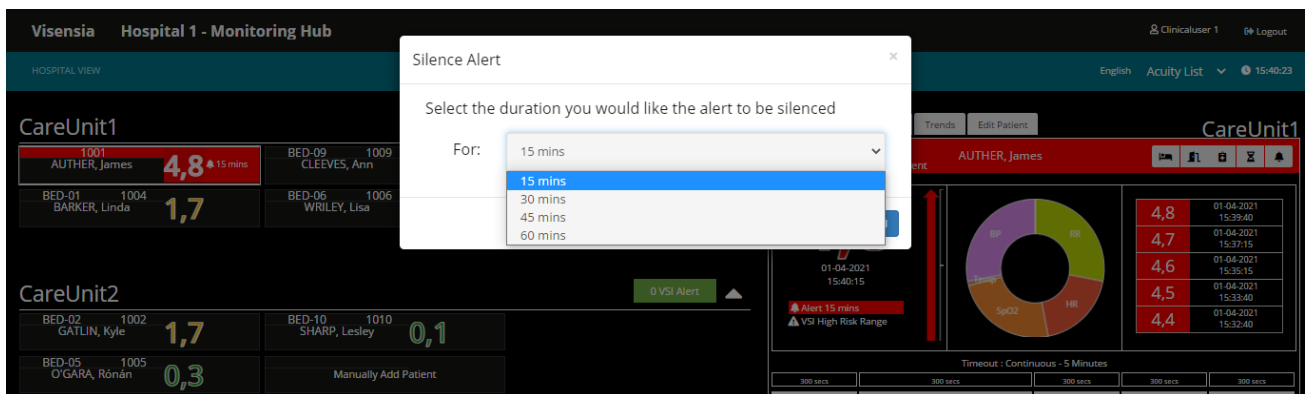
Silencing an VSI Alert acknowledges a clinical / technical response to the underlying cause of the VSI Alert has been carried out according to defined hospital protocol.

To silence an VSI Alert

1. Select the **Patient Information Tile** with the **Active VSI Alert**
2. Using the **Drill Down** display – select the **VSI Alert Icon** from the **Drill Down Tool Bar**



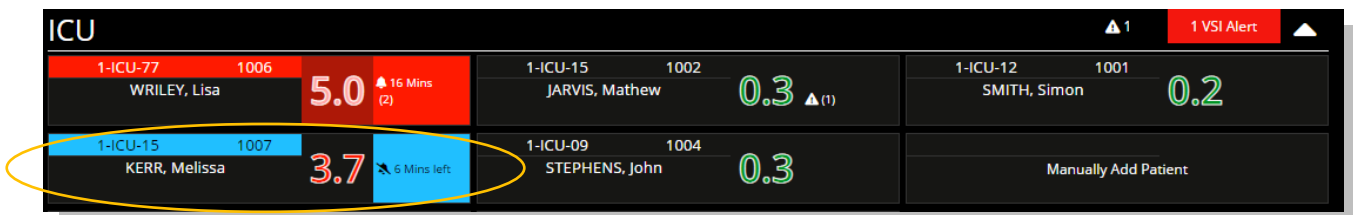
3. A dialogue box will be displayed showing you a list of available time periods to Silence the VSI Alert for



- The default Silence Options are:

15 Minutes	30 Minutes	45 Minutes	60 Minutes
------------	------------	------------	------------

4. Select the required time interval for the Silence Alert, and press the **Silence button** to apply the settings
5. The **Patient Information Tile** border will change from an **Alert Status** to the **Silence Alert Status** indicating the ViSIG Alert has been **Silenced**
6. The **Time Stamp** will now show time remaining, before the **Silenced Alert will time-out**



### Warnings

- ▲ When Visensia Alerts are silenced, there is no notification of a potentially clinically significant change in the patient's status. **Observe the patient by other means when VSI Alerts are silenced.**

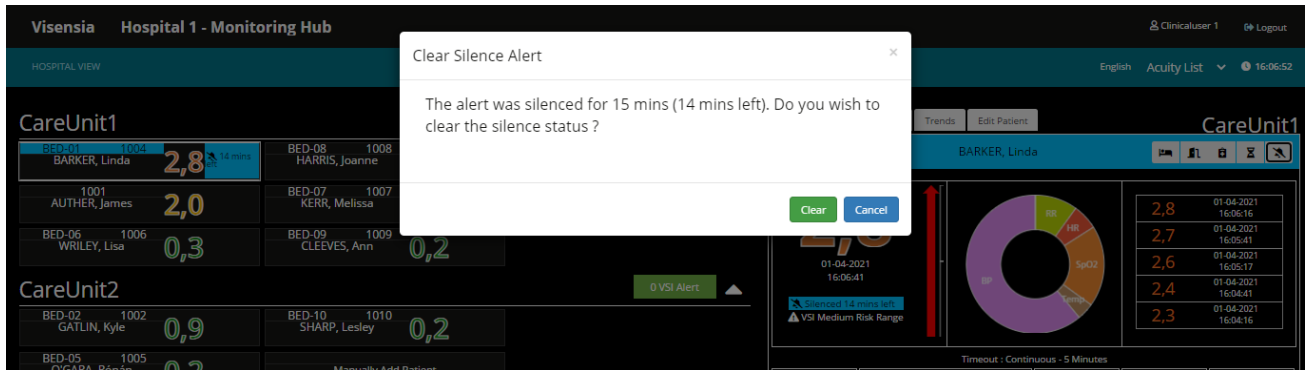
## Clear a VSI Silenced Alert

Using the **Drill Down** display

1. Select the **VSI Alert Icon (Silenced)** from the **Drill Down Tool Bar**



2. A dialogue box will be displayed confirming you wish to clear the silence status.



3. Select the **Clear** button
4. The **Silenced Alert Status** will now be removed

**Note:** If the **VSI** falls **below the defined High Threshold Lower Limit value**, then the **VSI Alert Status** (both Visual and Audible) is automatically cleared from the Patient List and Drill Down Tab.

**Note:** The actions of Silencing and Removing a Silenced Alert are documented via the Notifications Table.

## VSI Alert Notice Box

Each Care Unit listed has an associated '**VSI Alert Notice Box**'.



This allows caregivers to quickly identify any **VSI Alerts**, even if the Care Unit in question has been collapsed while reviewing patients in another Care Unit.

## Trends Charts

The Trend Chart shows, in graph form, a history of the selected patient's **VSI** and a history of the values for each monitored **Vital Sign**.

- You can configure the system to display the Trend Graphs and associated **Upper/Lower Threshold limits** using the **Trend Graph Configuration Icon**.
- You can temporarily change the **time interval for the historic graphs** by clicking the options available.



- You can expand the trend graph to full screen using the **expand graph icon** [ ]

Hovering your mouse pointer over individual trend graphs will reveal the values for each recorded vital for the date / time.



**Note:** The available time intervals displayed are defined by your Hospital Admin.

**Note:** Changing the time interval will cause the selected Trend Chart to be redrawn as required. The graph will also be redrawn every minute to include any additional vital sign data received.

## Vitals Chart

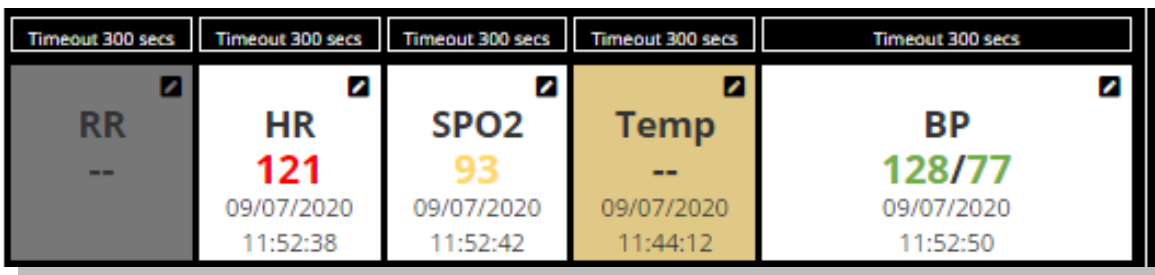
The **Vitals Chart** displays the current vital signs for the patient, their values, and the times at which the vital signs were recorded.

Not all vital signs may be shown, depending on how Visensia has been configured.

The associated vital sign data is color coded according to the Care Units default **Vitals Warning Thresholds**.

	<b>Upper Limit Warning Threshold</b> has been exceeded
	<b>Lower Limit Warning Threshold</b> has been exceeded
	Vital sign is between the Upper and Lower Limit Warning Thresholds

How long a Vital Sign is displayed via the chart and used by the Algorithm when calculating the Visensia Index, is highlighted in the Timeout box above the Vital Sign. In this example 300 seconds or 5 Minutes.



In addition, the box for each vital sign will change color to indicate whether data for the configured vital sign has ever been received in the past or stopped (timed out) for whatever reason.

	<b>Grey</b> – No data ever received for this vital sign.
	<b>Stone</b> – Data received in the past but has now stopped.
	<b>White</b> – Data is currently being received for associated vital sign.
--	<b>No available data</b> - Indicating that there is no valid data available, for example, if the vital signs have not been entered, or the vital sign has timed-out for consideration when calculating the current Visensia Index

You should always investigate the underlying causes as to why an expected vital is not being received or has stopped. Missing vital signs can affect the sensitivity and specificity of Visensia Index and Alerts.

More information about Timeouts and how to change them can be found in the **Vital Sign Timeout Settings section**.

<b>Cautions</b>	<ul style="list-style-type: none"> <li>▲ Vital Sign Warnings are not intended to be used as a primary alert mechanism.</li> <li>▲ Vital Sign Warnings are not a replacement for any primary alerting systems or procedures already in place.</li> </ul>
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## Vital Sign Warnings

Visensia can be configured to display warnings when monitored vital signs are outside of the systems defined thresholds. These warnings are indicated on the dashboard as a **visual warning icon** and **text indicator** within the **Patient List** and **Vitals Chart** as follows:

<b>Vital Sign Warning Icon:</b>	
<b>Vital Sign Warning Text:</b>	High Risk; "Vital Sign" High or Low

The **values** within the Vitals Chart will be colour coded according to which threshold has been breached. The defined thresholds are displayed below the Vitals Chart for each of the configured Vital Signs.

▲	Patient Specific Value (120)	▼	Value (120)	Care-Units Default <b>Upper Limit</b>
▲	Patient Specific Value (40)	▼	Value (40)	Care-Units Default <b>Lower Limit</b>

The image below highlights Heart Rate breaching the Upper Threshold and SpO2 breaching the lower Threshold.

The screenshot shows a Vitals Chart interface with the following data:

Timeout : Standard Timeouts				
60 secs	60 secs	60 secs	60 secs	60 secs
<b>HR</b> 121 01/06/2021 16:17:39	<b>BP</b> 128/77 01/06/2021 16:17:39	<b>Resp</b> --	<b>SpO2</b> 93 01/06/2021 16:17:39	<b>Temp</b> -- 01/06/2021 16:16:01
▲ High Risk HR High			▲ High Risk SpO2 Low	
▲ 120 ▼ 120 ▲ 40 ▼ 40	▲ 190 ▼ 190 ▲ 150 ▼ 150 ▲ 91 ▼ 91 ▲ 40 ▼ 40	▲ 25 ▼ 25 ▲ 8 ▼ 8	▲ NA ▼ NA ▲ 94.0 ▼ 94.0	▲ 39.0 ▼ 39.0 ▲ 35.0 ▼ 35.0
				Save Reset

Vital Sign Warnings information will be displayed as long as the vital sign remains outside of the defined upper / lower threshold limits.

**Note:** Which Vital Sign Warnings are shown, is configurable by your Hospital Administrator.

<b>Cautions</b>	▲ Vital Sign Warnings are not intended to be used as a primary alert mechanism
	▲ Vital Sign Warnings are not a replacement for any primary alerting systems or procedures already in place

## Adjusting Vital Sign Warning Thresholds

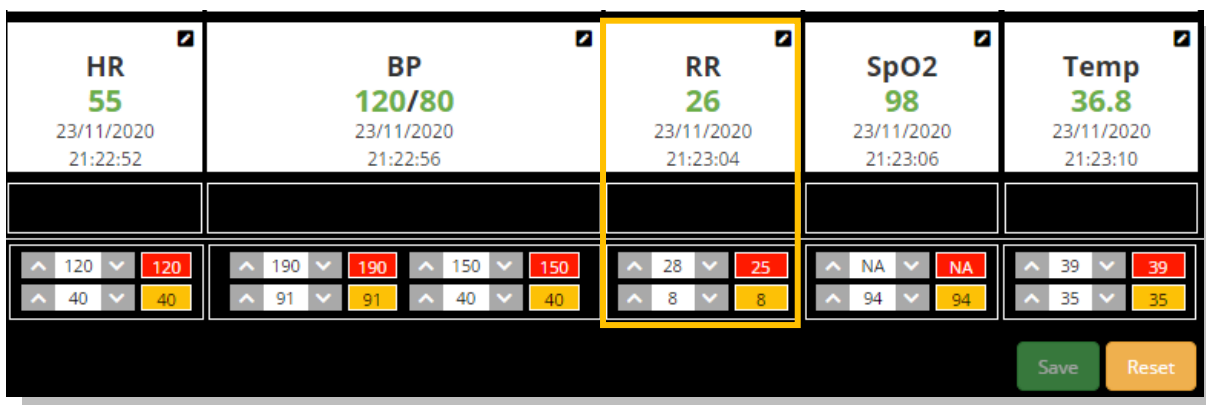
The systems default vital sign warnings thresholds can be adjusted on a per patient basis.

This can be actioned via the **Drill Down** display.

1. Adjust the **Upper** and **Lower Patient Threshold Limits** as required using the **^** or **v** buttons next to each Patient Specific Value.
2. **Hold down** the **^** or **v** buttons to rapidly change the threshold units until the new threshold limit is reached.

▲	Patient Specific Value (26)	▼	Value (25)	Care-Units Default <b>Upper Limit</b>
▲	Patient Specific Value (8)	▼	Value (8)	Care-Units Default <b>Lower Limit</b>

The image below highlights the **Patient Specific Upper Threshold for Respiration Rate** has been amended.



### 3. Select **Save**

- The **Drill Down** display will now update, and your new settings should be applied to the **Vitals Chart**. Previously triggered warnings should no longer be displayed.

**Vital Sign Warnings** will only trigger if the monitored vital sign breaches the newly defined patient specific threshold.

If you need to change the patient's thresholds back to the Care-Units default settings, complete steps 1 and 2 for the individual vital sign.

You can select the **Reset Button** to **re-apply all the Units default thresholds**.

**Note:** The vital sign warning indicators are not intended to be used as a primary alert mechanism. It is not a replacement for any primary alerting systems or procedures already in place.

**Note:** Remember to use the same units as the default threshold notification i.e. °C or °F for Temperature.

### Cautions

- ▲ Vital Sign Warnings are not intended to be used as a primary alert mechanism
- ▲ Vital Sign Warnings are not a replacement for any primary alerting systems or procedures already in place

## Notifications Chart

The Notification Chart details all historic VSI Alerts, Vitals Warnings and any interventions or changes made by Users.

1. Using the **Drill Down** display – select the **Notifications TAB**.  
A list of all logged VSI Alerts and Vital Sign Warnings is now displayed.
2. Filter the Notifications Table by selecting the option required and press **OK**
  - Algorithm Notifications (VSI Alerts, Threshold Breaches)
  - Vital Notifications (Threshold Breaches)
  - Patient Notifications (Admit, Transfer)

Unit	Location	Date	Type	Details	Duration	User
Unallocated	BED-23	11/09/2020 07:18:03	SysBP LOW	88.0	00:00:59	Super Admin
Unallocated	BED-23	11/09/2020 07:16:02	DiaBP LOW	37.0	00:05:59	Super Admin
Unallocated	BED-23	11/09/2020 07:08:00	SpO2 LOW	93.0	00:07:02	Super Admin
Unallocated	BED-23	11/09/2020 07:06:02	DiaBP LOW	37.0	00:09:00	Super Admin
Unallocated	BED-23	11/09/2020 07:04:02	SpO2 LOW	93.0	00:02:00	Super Admin
Unallocated	BED-23	11/09/2020 06:29:05	SysBP LOW	89.0	00:47:57	Super Admin
Unallocated	BED-23	11/09/2020 06:26:03	SysBP LOW	90.0	00:00:59	Super Admin
Unallocated	BED-23	11/09/2020 06:24:01	SysBP LOW	88.0	00:01:01	Super Admin
Unallocated	BED-23	11/09/2020 06:06:02	SysBP LOW	87.0	00:05:00	Super Admin
Unallocated	BED-23	11/09/2020 06:03:03	SysBP LOW	90.0	00:00:59	Super Admin

**Note:** Vitals Warnings (Threshold Breaches) mirror the default settings configured on the primary device - patient monitor used to collect the patient’s vital signs.

**Note:** The abnormal vital warning indicators as displayed within the Notifications Tab are not intended to be used as a primary alert mechanism. It is not a replacement for any primary alerting systems or procedures already in place.

### Cautions

- ▲ Vital Sign Warnings are not intended to be used as a primary alert mechanism.
- ▲ Vital Sign Warnings are not a replacement for any primary alerting systems or procedures already in place.

## Manually Input Vital Sign Data

Vital signs can be manually inputted for a selected patient as part of a routine observation round, or to supplement a patient monitoring device / solution that does not support that vital sign.

- Using the **Drill Down display** – select the **Manual Observation Icon** from the **Drill Down Tool Bar**



- A dialogue box will be displayed, with a list of Vital Signs that can be inputted.

- Input the value for each vital sign observed, and press **Add** button.

**Note:** There are validation checks to ensure the value inputted does not exceed the systems expected Maximum and Minimum amounts for the inputted vital sign. You will be required to input an expected value before being able to select Add.

- The dialogue box will disappear, and the updated Vitals Chart will now be updated to display the observed Vital Sign values and associated Timestamp.
- The **VSI** and **Contributions Chart** should update reflecting the effect of the manually updated vital on the VSI.

**Note:** You will only be able to enter a patient’s vital signs manually if your system has been configured to enable you to do so.

**Note:** Any manually entered vital signs will be overridden as soon as new vital sign data is received from a configured patient monitoring system that is outputting continuous vital sign data.



## Vital Sign Timeout Settings

**Preconfigured Vital Sign Timeouts** are available to apply to patients as part of your Units monitoring needs.

Timeouts ensure the last inputted Vital Sign is within a defined time window, before it is used by the Algorithm to calculate the Visensia Index.

Use the Vital Sign Timeout icon to manually adjust the selected patients vital sign timeouts from a configured selection to suite the patients type of monitoring.

Example TimeOuts:

Option	Monitoing Type	Timeouts Applied
1.	Continuous Monitoring	All vitals set to time out after 60 Seconds
2.	Episodic Monitoring	All vitals set to time out after 4 Hours
3.	Hybrid Monitoring (Mix of Continuous & Epesodic Vital Signs)	<ul style="list-style-type: none"> <li>- Some Vitals set to time out after 5 minutes</li> <li>- Some Vitals set to time out after 1 hour</li> </ul>

- Using the **Drill Down display** – select the **Vital Sign Timeout Icon** from the **Drill Down Tool Bar**



- A dialogue box will be displayed, with a list of pre-configured Timeout Groups
- Select the **appropriate Timeout option** for the monitored patient
- Select the **Change button** to apply the new Timeout setting
- The dialogue box will dissapear and the Vitals Chart will be updated to reflect the new TimeOut option chosen.

The screenshot shows the 'Change Timeout' dialog box with the following options:

- Standard Timeouts : RR:60, HR:60, SPO2:60, TEMP:60, SYSBP:60, DIABP:60
- Continuous - 5 Minutes : RR:300, HR:300, SPO2:300, TEMP:300, SYSBP:300, DIABP:300
- Episodic - 1 Hour : RR:3600, HR:3600, SPO2:3600, TEMP:3600, SYSBP:3600, DIABP:3600
- Hybrid Monitoring : RR:60, HR:60, SPO2:300, TEMP:3600,

The background interface shows a patient list for CareUnit1 and CareUnit2, and a vital signs chart for Linda Barker with a 'Timeout: Standard Timeouts' label.

### Cautions

- ▲ Vital Sign Warnings are not intended to be used as a primary alert mechanism
- ▲ Vital Sign Warnings are not a replacement for any primary alerting systems or procedures already in place

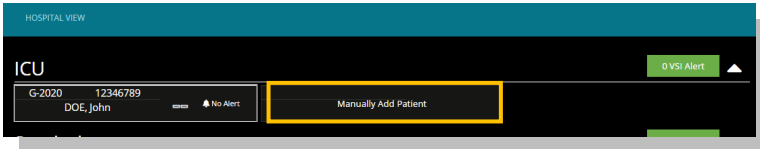
## Manually Admitting a Patient to a Care-Unit

Patients should automatically be admitted to a Care-Unit as part of an configured ADT set-up.

However, only **Users assigned the Hospital Viewer Role**, have the additional functionality to **Manually Add Patients (Admit)** to a Care-Unit via the Dashboard, if this feature has been enabled for them.

To **Manually Admit a Patient** as an **Hospital Viewer**:

1. Select the **Manually Add Patient** button from the associated Care-Units Patient List



2. The **Admit Patient** display is now shown for the Care-Unit selected

The screenshot shows a 'Create New Patient' form. It has the following fields: Patient ID \*, First Name \*, Last Name \*, DOB, Care Unit (pre-filled with 'ICU'), Room No, and Bed No. There are 'SAVE' and 'Back' buttons at the bottom right.

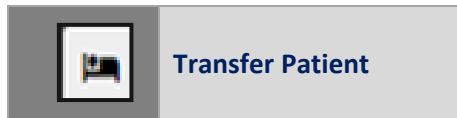
3. Enter the **Patient ID, First Name, Last Name, Date of Birth (DOB), Care Unit, Room No# and Bed Location No# as required** and select **Save**
4. The patient will now be added to the Care-Unit and should be visible in the **Patient List** for the Care-Unit
5. You can now **manually add vitals** for the patient via the **Drill Down Display** to calculate the VSI as required

**Note:** If ADT is configured for the Care-Unit in question, all ADT information matching **Patient ID** and **Patient Name** received will automatically override any manually entered patient information such as **Location** and **Vital Sign Data**.

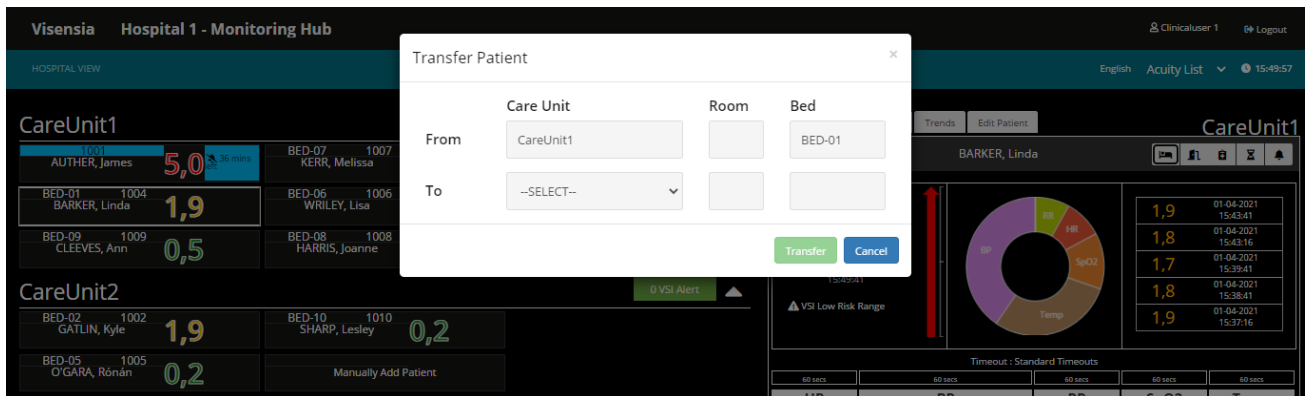
## Transferring a Patient to a different Care-Unit

Patients should automatically transfer between Care-Units as part of an configured ADT set-up. However if you wish to **Manually Transfer** a patient to a different Care-Unit then action the following:

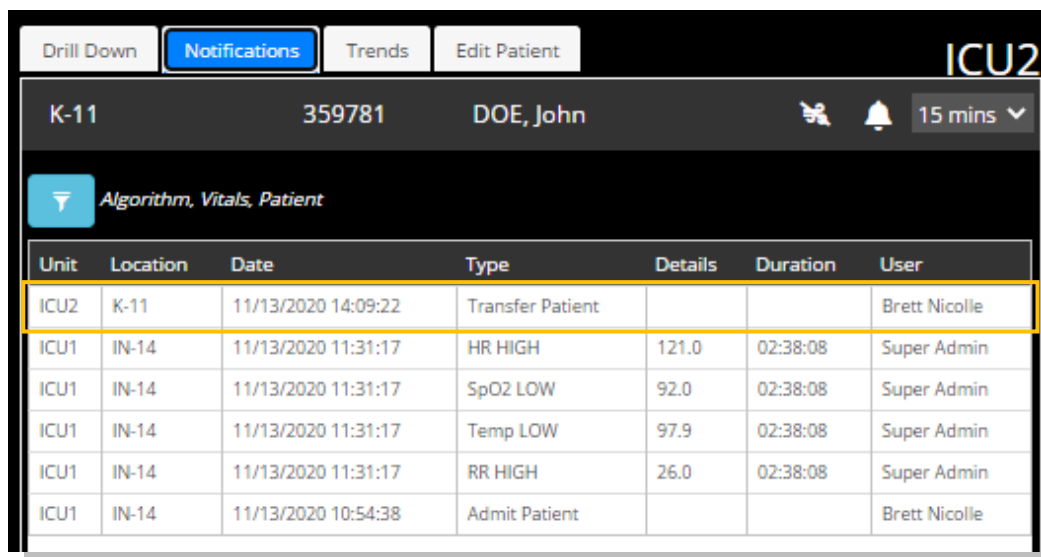
1. Select the Patient from the **Patient List** you wish to **Transfer**
2. Using the **Drill Down display** – select the **Transfer Patient Icon** from the **Drill Down Tool Bar**



3. A dialogue box will be displayed, with options to **transfer a patient From and To, a new Room and Bed location**



4. Select the Unit you wish to transfer the Patient to and input the Room and Bed location and select the **Transfer button**
5. The patient will now be transferred to the new Care-Unit and will be visible in the **Patient List** for that Care-Unit
  - The Notifications Table will detail the transfer request, as well as the User actioning the request



**Note:** All historic information for the monitored patient should still be accessible providing an overview of the patient journey.

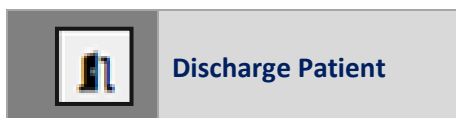
**Note:** Depending on the ViSIG system configuration, options to Admit, Transfer and Discharge patients manually via the Dashboard may be disabled and as such not displayed via the Hospital Viewer Dashboard.

## Discharging a Patient

Patients should automatically discharge from a care-unit via ADT functionality, which is configured during Installation and Set-up.

However if you wish to **manually Discharge** a patient from a Care-Unit then action the following:

1. Select the Patient from the **Patient List** you wish to **Discharge**
2. Using the **Drill Down display** – select the **Discharge Patient Icon** from the **Drill Down Tool Bar**



3. A dialogue box will be displayed, confirming you wish to **discharge the selected patient**

4. Select the **Discharge Button**
5. The patient should now be removed from the Patient List for the selected Unit
6. As the patient has now been discharged from the Visensia system, you can no longer access the Drill Down to review the Notifications Tab and associated Graphs and Charts.

**Note:** If ADT receives some information after you have manually discharged the patient, the system will automatically re-admit the patient to the Unit as per the ADT Message and update as per the message received.

**Note:** Until the configured ADT system sends out Discharge message, the patient could re-appear in the Patient List for the Care-Unit even if you have manually Discharged the patient as ADT takes priority.

## Workflow Manager Specific Functions

The role of **Workflow Manager** provides additional functionality to enhance clinical workflow.

Workflow Managers can view **Users** assigned to Care-Units. They can then assign patients to those Users according to the acuity of a patient or experience of the User.

The User can still toggle between **My List** and the **Acuity List** to view all patients monitored on the Care-Unit as required.

### Manage Patients assigned to User

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Workflow Managers can assign Patients to specific Users as part of their day-to-day responsibilities.

These patients will be visible in the Users **My List**.

1. Select **Manage Users Icon**
2. Select **Patient List**.
  - All monitored patients for that Care-Unit will be displayed
3. Select **Nurse List**.
  - All Nurses assigned to View the selected Care Unit will be displayed
4. Simply drag and drop the **available Patients** to the **available Nurses**
5. Select **Save**

Clinical Users who have had patients assigned to them can now view those patients via the **“My List”** on the Dashboard.

## Support

Please contact your **System Administrator** for any technical issues experienced.

You can access an electronic copy of this User Guide via:

<http://www.obsmedical.com/visensia-user-guides/>

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